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COMPANY:		BST				
TITLE:		INDEX OF	CONFIDENTIAL WO	RKPAPERS		
PERIOD:		TYE 12/31	/92			
DATE:		DECEMBE	ER 14, 1993			
AUDITOR:		BKY <sup>(</sup>				
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	DESCRIPTION		BATES	CONF		
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1	REPORT					
44	OVERVIEW OF WASSP PROCESS	4	N/A			
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44-2	D&T REPORT 3/93	44	N/A			
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45-3	WEIGHTING OF					
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			FO1A93W 0000004			
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46-3	PROCEDURES FOR					
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17-1	SAMPLE SELECTION	4	N/A			
7-2	SAMPLE FORMULAS	3	FO1A93W 0000109			
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18			A1/A			
		2	WA			
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			THRU			

FO1A93W 0000065

DOCUMENT NUMBER-DATE 00232 JAN-65 FPSC-RECORDS/REPORTING /

COMPANY: BST TITLE: INDEX OF CONFIDENTIAL WORKPAPERS PERIOD: TYE 12/31/92 DATE: **DECEMBER 14, 1993** AUDITOR: RKY ċ #OF BATES CONF WP NO. DESCRIPTION PAGES NO. Y/N 18 FO1A93W 0000066 48-2/1 WASSP PROCEDURES THRU FO1A93W 0000083 48-2/2 2 FO1A93W 0000084 WASSP PROCEDURES THRU FO1A93W 0000085 48-2/3 INTERVIEW SKILLS WORKSHOP 20 FO1A93W 0000088 THRU FO1A93W 0000107 48-3 SOURCE DOC'M 1 N/A 48-3/1 VERIFICATION OUTPUT 1 FO1A93W 0000202 48-3/1-1 WALS 3 FO1A93W 0000156 THRU FO1A93W 0000158 48-3/1-2 WALS 3 FO1A93W 0000159 THRU FO1A93W 0000161 48-3/1-2/1 SOURCE DOC'M 1 FO1A93W 0000162 48-3/1-2/2 SOURCE DOC'M 3 FO1A93W 0000165 THRU FO1A93W 0000167 48-3/1-3 WALS 3 FO1A93W 0000171 THRU FO1A93W 0000173 48-3/1-3/1 SOURCEDOC'M 1 FO1A93W 0000174 48-3/1-3/2 SOURCEDOC'M 2 FO1A93W 0000170 FO1A93W 0000169 48-3/2 VERIFICATION OUTPUT 1 FO1A93W 0000208 48-3/2-1 WALS 3 FO1A93W 0000131 THRU FO1A93W 0000133 48-3/2-2 WALS AND SOURCE DOC'M 4 FO1A93W 0000134 THRU FO1A93W 0000140 SOURCE DOC'M 48-3/2-2/1 4 N/A 48-3/4 PTR PROCEDURES FOR CORRECTIONS 4 N/A 48-3/5 EXAMPLE OFSAMPLE PRINTOUT 5 N/A 48-3/6 ONE MONTH PROFIEL 19 N/A DATA ANALYSIS SUMMARY 49 1 N/A THREE MONTH PROFILE 10 N/A 49-1 50 COST SAVINGS 1 N/A COST SAVINGS 4 N/A 50-1 50-1/1 COST SAVINGS 2 N/A 2 N/A 50-1/2 COST SAVINGS

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COMPANY:	BST	. h
TITLE:	OVERVIEW OF WASSP	PROCESS 140
PERICO:	TYE 12/31/93	
DATE:	DEC 9, 1993	NN 1171
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According to Deloite and Touche there are three primary modules utilized in the Wassp process (1) sample selection (2) Data collection (3) and Data Analysis.

PSC staff believes there are two further areas to the process, DISPATCH, AND PERFORMANCE OF WORK.

The following is an overview of all five areas. Details are on subsequent workpapers noted here.

1. DISPATCH

In order for the service technicians to get their work, the following process occurs:

Requests for telephone service (service orders) go through a system called SOCS and requests for maintenance go through a systems called LMOS. (Service Order Communications System -- Loop Maintenance Operations Systems)

The input into SOCS and LMOS go into Mapper and are dispatched to the technician from Mapper via the technic@ins's Computer Access Terminal (CAT), which they carry around with them. Work completed dispatched through Mapper are documented on the Display Craft Work Summary (DCWS)

Requests for Designed Circuits go through SOCS and requests for maintenance of designed troubles go through Work Force Administration Control (WFA-C).

The input here for service orders of Designed Ciruciuts and maintenance of these are dispatched through a system called RADS -6 (Route and Dispatch System and the technician receives via the CAT.

PSC staff visited the customer service office and observed how orders are taken and put into SOCS. Staff visited the Customer Rapair Service Analysis Bureau where trouble are taken and input into LMOS. Then staff visited an Installation and Maintenance Center (IMC) where service orders and troubles are dispatched from. Staff did not usit the officer where the RADs dispatch system  $\mathbf{E}_{\mathbf{k}}$ 

See wp no. 4 Sfor details of visits and observations and controls.

Staff questioned Rick King, Steve Venderberg, Steve Shaw and John Long how the troubles and service orders are dispatched out of Mapper. This is a complex program developed and maintained by AT&T. There are six criteria used to assign the troubles. They are 1) time to commitment, 2) Distance to Job, 3) Distance to Home, 4)Out of Service, 5)Subsequent Jobs and 5)Priority.

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COMPANY: BST TITLE: OVERVIEW OF WASSP PROCESS PERIOD: TYE 12/31/93 DATE: DEC 9, 1993 AUDITOR: RKY

WP NO.

44p2

Staff also questioned what controls were in place to make sure this was working properly and could not be manipulated.

See wp no.HS for details of disptach program and controls.

II. PERFORMANCE OF WORK

PSC staff rode in the truck with a service technician from the POTS category and a service technician from the cable repair category. Both are dispatched out the Mapper.

Staff observed how the technician accessed his jobs through the CAT, did his jobs, closed out jobs through the CAT, filled out his RF 152 time sheet and filled out his Work Activity Log for the sample.

See wp no46 for details of how service tech does his job and controls so that he fills out the from correctly.

III. Sample Selection

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According to D&T report dated March 1993 a Stat Sample of technicians is taken from the Payroll Master Data Base (PNDB). This is a BellSouth Data Base used to maintain employee information. The sample program called Extract stratified the universe of employees into homogenous categories based on state and JFC. The SAMPLER program selects random sample of techs to participate in work activity log portion. Those selected will participate for one week. The SAMPLER program also generates a random sample of the above techs to participate in the technical analyst interview (about 30% of sample). Logs for 3 days are selected for tech analyst review procedures. These procedures are described in wp No. -44-1 p. 14

Sample size and structure of sample has been designed so that a 3-month Network Technician Labor distribution Profile is targeted to achieve a 95% confidence level with a precision of +or - 3% foreach field reporting code. The precision corresponds to approximately + or - 15 minutes: Technicians selected are oversampled in the sample selection Module to account for days not there (vacation, illness, weekend/weekday shifts.)

Staff interviewed the statistician, Keith Johnson, who wrote the program for the sample and explained his program in detail. See WP. No # I for details of how the program works and the controls.

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COMPANY: RST TITLE: OVERVIEW OF WASSP PROCESS PERIOD: TYE 12/31/93 DATE: DEC 9, 1993 AUDITOR: RKY

WP NO.

44-1

- IV. A. DATA COLLECTION
  - B. TECHNICAL ANALYST PROCEDURES

Per Rick King, the program is generates a sample every month as explained above. He inputs the data that generate the sample.

Making the logofor

Per D&T the technical analyst sends prior to the week samples 1) a list of technicains selected 2) the appropriate logs, and 3) Instructions to the Technicians Manager. The Tech Manager gives to tech supervisor. According to ) ay conversations with Rick King, Steve Vanderberg and Steve Shaw, the technical analyst does not send the samples out, Rick King and Steve Vanderberg send the samples out. Also, in my conversations with Rick King, Steve Venderberg and Steve Shaw, the whole month of sample selection is sent to the tech manager at one time and sent to the tech supervisor at one time. Also, the tech supervisor motifies the tech to be sampled the Friday before his week.

Per D&I the tech's report time in 15 minute intervals on the logs. Staff observed this also. When completed the techs give logs to supervisor and any discrepancies resolved. The supervisor sends to the technical analyst for additional review.

See WP No. TV for PSC staff observations regarding data collection and controls and observations regarding technical analysts interviews and controls.

**U. DATA ANALYSIS** 

Per D&T, the data derived from the Logs are input into Wassp data base processor. INPUT program provides for input and storage of data by work group.

IMOUT program develops time distribution ratios and other data anlaysis for each work group. Wassp distributes the increments of hours reported to each FRC and calculated % of time assigned to each FRC.

According to ay conversations with Rick King, Steve Venderberg, and Steve Shaw, the profile for each month is a total of 3 months samples(not average). The profile is applied two months later. For example. October profile consists of Aug. Sept and Oct data. This profile is applied to December.

See wp no. (for detailed information re data analysis.

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COMPANY:BSTTITLE:OVERVIEW OF WASSP PROCESSPERIOD:TYE 12/31/93DATE:DEC 9, 1993AUDITOR:RKY

44, WP NO. P4

OTHER ITEMS OBSERVED

While reviewing D&T work staff noted that for cost saving analysis, D&T relied upon BST assumption that each service technician would save 15 minutes per day by not having to fill out the NTR forms.

WP SC staff questioned Rick King and Steve Vanderberg as to how they came up with the 15 minute assumption. They said that it was through observation, conversations and review with technicians. There was no formal study done. While PSC staff observed the time it took two technicians to fill out their forms and it appears that 15 minutes is reasonable, staff only saw two technicians and cannot draw a conclusion. Recommend that if use 15 minutes as time saver a formal study be performed and documented.

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## SUPPLEMENT TO THE SPECIAL STUDY OF THE WORK ACTIVITY STATISTICAL SAMPLING PROCESS JULY 1993

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Suite 1700 100 Peachtree Street Atlanta, Georgia 30303-1943. Telephone: (404) 220-1500 Facsimile: (404) 220-1583

July 14, 1993

BeilSouth Corporation 1155 Peachtree Street, N.E. Atlanta, Georgia 30367

Dear Sirs:

We are pleased to present the results of our special study to assess certain aspects of BellSouth Telecommunications, Inc.'s (BellSouth) Work Activity Statistical Sampling Process (WASSP).

#### BACKGROUND

The WASSP methodology is a statistically-based time reporting methodology proposed to replace existing time reporting methods utilized by certain groups of network technicians. WASSP is intended to enhance the measurement of work activities which form the basis for the separation of costs of network technicians' regulated telecommunications work activities from the costs of nonregulated work activities.

We have previously issued a report, dated March 5, 1993, pertaining to the assessment of the functionality of the WASSP methodology and other qualitative factors. This report is supplementary to the previously issued report and should be read with that understanding.

The remainder of this report presents the scope and methodology employed in this supplementary study and our resulting findings, conclusions and recommendations, which are presented in separate reports attached as Exhibits.

#### SCOPE OF SUPPLEMENT TO SPECIAL STUDY

Our special study was performed at the request of BellSouth to provide an external assessment of the proposed WASSP methodology, which has been implemented on a parallel basis in all nine states in the BellSouth geographic region, awaiting regulatory approval. Our procedures are intended to provide ... information to respond to the Federal Communications Commission (FCC) and state regulators, and this report should not be used for any other purpose. This supplement to the special study included three primary activities - Assessing System Functionality, Examining the Internal Control Structure over Financial Reporting, and Assessing the Policies and Procedures Associated with Training of the Technical Analyst.

Deloitte Touche Tohmatsu International

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# Assessing System Functionality

We performed an assessment of the functionality of the WASSP methodology to measure network technicians' regulated and nonregulated work activity in the state of Florida during the three-month period ended June 30; 1993. Our report is included herein as Exhibit A.

This assessment was made by conducting an examination of the system's actual measurement of network technicians' work activities in the state of Florida for the three months ended June 30, 1993 in compliance with BellSouth's policies for time reporting under Part 32 - Uniform System of Accounts. Our examination was made in accordance with standards established by the American Institute of Certified Public Accountants and, accordingly, included such procedures as we considered necessary in the circumstances. As shown in Exhibit A, our opinion pertaining to the examination is unqualified.

The specific procedures we employed generally paralleled the three primary modules utilized in the WASSP process - Sample Selection, Data Collection and Data Analysis. A summary of our primary procedures performed to test each of those modules is included in Exhibit B. Those procedures were performed, together with other procedures, to form our opinion included in Exhibit A.

Examining the Internal Control Structure Over Financial Reporting

The second activity performed was an examination of BellSouth WASSP management's assertion that BellSouth maintained an effective internal control structure over financial reporting for the segment of the internal control structure pertaining to the WASSP process during the three-month period ended June 30, 1993.

Our examination was made in accordance with standards established by the American Institute of Certified Public Accountants and, accordingly, included obtaining an understanding of the applicable segment of the internal control structure; testing, and evaluating the design and operating effectiveness of the internal control structure; and performing such other procedures as we considered necessary in the circumstances as shown in Exhibit C. Our opinion pertaining to the examination is unqualified.

The specific control criteria established by BellSouth WASSP management to maintain an effective internal control structure are included in an appendix to Exhibit C

#### Assessing Policies and Procedures Associated with Training of the Technical Analyst

For the assessment of the policies and procedures associated with the training of the technical analysts, the approach utilized and our summary findings are as follows:

Our approach to assessing the policies and procedures associated with the training of the technical analysts included consideration of several aspects, such as:

- Entry level and continuing education courses,
- Analyst policies and procedures manual,
- Knowledge of FCC time reporting requirements,
- Effectiveness of the interview process, and
- Error resolution.

Our approach consisted of obtaining an understanding of the policies and procedures associated with the above aspects of the technical analyst through:

- Interviewing and observing job performance of the analysts to understand their duties, job functions, background, experience, training, knowledge of FCC time reporting rules and effective interview techniques,
- Interviewing management who have supervisory responsibility over the analysts to assess their perception of the analyst's ability to perform identified job functions.
- Assessing the information available to the analysts to perform identified job duties including the following;
  - Analyst policies and procedures manual
  - BellSouth time reporting manuals, and
  - Access to source data of network technician time reporting.

Based on our assessment, the policies and procedures relating to the training of the technical analysts allow for effective entry level and continuing education of technical analysts based on established criteria for this position. Technical analysts are selected through an interview process from a pool of candidates that possess knowledge of and experience in outside plant architecture, network technician time reporting, including knowledge of FCC time reporting rules and regulations, and exhibit strong interpersonal skills.

Once selected, technical analysts are trained through a combination of the following:

- Reading the Technical Analyst Reference Manual, WASSP Policies and Procedures Manual and the Technical Analyst Handbook,
- Technical analyst staff meetings covering BellSouth time reporting policies and practices regularly conducted by WASSP management,
- Periodic performance appraisals conducted via WASSP management's observation of "live" analyst phone interviews. These appraisals focus on the analyst's interview and error resolution techniques, and
- Continuing education courses that combine both a base time reporting curriculum as well as a curriculum specifically tailored for the needs of the individual technician as periodically reviewed and approved by WASSP management.

Training of the technical analysts is arranged and/or conducted by WASSP management with considerable experience in FCC time reporting requirements. The current centralization of the analyst location further facilitates efficient training.

#### Implementation of Prior Recommendations

In conjunction with the above activities, we assessed management's responses pertaining to the implementation of our procedural recommendations associated with the WASSP process, included in our report dated March 5, 1993. We have also formed additional observations relating to various aspects of

the WASSP process. Our assessment of the status of the implementation of these original observations, as well as our additional recommendations, are included in our Letter of Recommendations at Exhibit D.

Additionally, we were requested to perform certain procedures to test management's analysis of the reporting impacts associated with the proposed implementation of the WASSP process in the BellSouth nine-state geographic region pertaining to the application of Part 32, Part 64, Part 36, and Part 69 of the Rules and Regulations of the FCC. The procedures we performed and our findings are included in a report under separate cover.

\* \* \* \* \*

We would like to acknowledge the excellent cooperation and assistance given our study team during the course of our study. We would be pleased to discuss any aspect of our report with you.

We appreciate this opportunity to be of service.

Very truly yours,

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Suite 1700 100 Peachtree Street Atlanta, Georgia 30303-1943 Telephone: (404) 220-1500 Facsimile: (404) 220-1583

## INDEPENDENT ACCOUNTANTS' ATTESTATION REPORT

BellSouth Corporation Atlanta, Georgia

We have examined the accompanying Statement of Network Technician Labor Distribution Profiles for the state of Florida for the three-month period ended June 30, 1993. Our examination was made in accordance with standards established by the American Institute of Certified Public Accountants and, accordingly, included such procedures as we considered necessary in the circumstances. This Statement is the responsibility of the Company's management. Our responsibility is to express an opinion on the Statement based on our examination.

The Statement of Network Technician Labor Distribution Profiles was derived from BellSouth Telecommunications, Inc.'s Work Activity Statistical Sampling Process (WASSP) on the basis described in the Notes to the Statement of Network Technician Labor Distribution Profiles.

In our opinion, the Statement of Network Technician Labor Distribution Profiles for the state of Florida referred to above presents, in all material respects, the Network Technician Labor Distribution Profiles for the state of Florida for the three-month period ended June 30, 1993 in conformity with the basis described in the Notes.

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July 14, 1993

Deloitte Touche Tohmatsu International

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## STATEMENT OF NETWORK TECHNICIAN LABOR DISTRIBUTION PROFILES FOR THE STATE OF FLORIDA THREE-MONTH PERIOD ENDED JUNE 30, 1993 (Continued)

## WORK GROUP - I&M POTS JOB FUNCTION CODE - 4100

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Field		Labor
Reporting		Distribution
Code	Description	Percentage
22M	AERIAL CBL-METALLIC	. 3.74%
45M	BURIED CBL-METALLIC	16.05%
248C	AERIAL SVC WIRE (DROPS)	1.88%
248M	AERIAL SVC WIRE (DROPS)	7.45%
548C	BURIED SVC-WIRE (DROPS)	2.80%
548M	BURIED SVC-WIRE (DROPS)	8.01%
12M	AERIAL CBL-METALLIC-BLDG ENT	2.18%
52M	INTRABLDG NETWK CBL-METALLIC	0.16%
68E	OTH NON-CPE EQPT EXP-NETWK TERM WIRE INSTL	2.55%
68M	OTH NON-CPE EQPT EXP-NETWK TERM WIRE	3.27%
257M	CIRC EQPT-DIGITAL-SUB PR GN SYS	0.05%
257R	CIRC EQPT-DIGITAL-SUB PR GN SYS	0.28%
377M	DIGITAL ELECTRONIC SWITCH EQPT	0.04%
F257M	CIRCUIT EQPT-SUBSCRIBER PAIR GAIN SYS-FIBER OPTIC	0.10%
	FEEDER	
F257R	CIRCUTT EQPT-SUBSCRIBER PAIR GAIN SYS-FIBER OPTIC	0.24%
	FEEDER	
97BI	INSIDE WIRE-BASIC-INSTL & REARRANGE	4.45%
97BW	INSIDE WIRE-BASIC-WARRANTY	0.84%
97BP	INSIDE WIRE-BASIC-SVC PLAN	10.41%
97BR	INSIDE WIRE-BASIC-MTCE	0.80%
98EI	INSIDE WIRE-NON BASIC INSTL & REARRANGE	0.59%
98EW	INSIDE WIRE-NON BASIC WARRANTY	0.16%
98ER	INSIDE WIRE-NON BASIC TIME & MTL	0.25%
5532	MISC MEETINGS	4.38%
5533	UNION ACTIVITIES (PAID)	0.04%
5534	EXCELLENCE THROUGH QUALITY (QWL)	1.04%
5535	GEN CLASSROOM TRAINING	2.04%
5536	OTH UNCLASSIFIED PROD COSTS (E.G., NO ACCESS)	2.51%
553A	NO TROUBLE FOUND	3.75%
5539	OTH MTCE EXP	0.01%

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## STATEMENT OF NETWORK TECHNICIAN LABOR DISTRIBUTION PROFILES FOR THE STATE OF FLORIDA THREE-MONTH PERIOD ENDED, JUNE 30, 1993 (Continued)

### WORK GROUP - I&M POTS JOB FUNCTION CODE - 4100 (Continued)

Field Reporting Code	Description	Labor Distribution Percentage
		•
510C	STOREROOM	0.66%
F257C	DIGITAL SUBSCRIBER PAIR GAIN-FIBER	0.02%
248X	AERIAL SVC WIRE (DROPS)-ACCUM DEPR	0.01%
548X	BURIED SVC WIRE (DROPS)-ACCUM DEPR	0.01%
257C	CIRCUIT EQPT-DIGITAL-SUB PR GN SYS	0.23%
TRVL	TRAVEL & BREAKS	19.00%
	TOTAL - I&M POTS	<u>100.00%</u>

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## STATEMENT OF NETWORK TECHNICIAN LABOR DISTRIBUTION PROFILES FOR THE STATE OF FLORIDA THREE-MONTH PERIOD ENDED JUNE 30, 1993 (Continued)

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## WORK GROUP - I&M SPECIAL SERVICES (SSI&M) JOB FUNCTION CODE - 4110

Field Reporting		Labor Distribution
Code	Description	Percentage
22M	AERIAL CBL-METALLIC	1.66%
45M	BURIED CBL-METALLIC	11.52%
248C	AERIAL SVC WIRE (DROPS)	0.43%
248M	AERIAL SVC WIRE (DROPS)	0.86%
548C	BURIED SVC WIRE (DROPS)	0.30%
548M	BURIED SVC WIRE (DROPS)	0.81%
12M	AERIAL CBL-METALLIC-BLDG ENT	5.64%
52M	INTRABLDG NETWK CBL-METALLIC	2.09%
68E	OTH NON-CPE EOPT EXP-NETWK TERM WIRE-INSTL	9.64%
68M	OTH NON-CPE EOPT EXP-NETWK TERM WIRE	6.26%
68Y	OTH NON-CPE EQPT EXP-NETWK TERMINATING WIRE-	0.60%
	RMVL	
257M	CIRC EQPT-DIGITAL-SUB PR GN SYS	0.52%
257R	CIRC EQPT-DIGITAL-SUB PR GN SYS	0.59%
377M	DIGITAL ELECTRONIC SWITCH EQPT	0.23%
F257M	CIRCUIT EQPT-SUBSCRIBER PAIR GAIN SYS-FIBER OPTIC	0.67%
	FEEDER	
F257R	CIRCUIT EQPT-SUBSCRIBER PAIR GAIN SYS-FIBER OPTIC	0.50%
	FEEDER	
758M	OTH TERM EQPT-SUB PR GN EQPT	0.32%
378C	OTH TERM EQPT DIGITAL NON-CPE NCTE	2.46%
378M	OTH TERM EQPT DIGITAL NON-CPE NCTE-REG	1.05%
358NM	OTH TERM EQPT DIGITAL NON-CPE NCTE	0.03%
558C	OTH TERM EQPT-ANALOG NCTE	3.68%
558M	OTH TERM EQPT-ANALOG NCTE	4.67%
418M	STA APPARATUS-BOC OWNED-REGULATED	3.03%
97BI	INSIDE WIRE-BASIC-INSTL & REARRANGE	0.20%
97BP	INSIDE WIRE-BASIC-SVC PLAN	0.32%
97BR	INSIDE WIRE-BASIC-MTCE	0.01%

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## STATEMENT OF NETWORK TECHNICIAN LABOR DISTRIBUTION PROFILES FOR THE STATE OF FLORIDA THREE-MONTH PERIOD ENDED JUNE 30, 1993 (Continued)

## WORK GROUP - I&M SPECIAL SERVICES (SSI&M) JOB FUNCTION CODE - 4110

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## (Continued)

Field Reporting		Labor Distribution
Code	Description	Percentage
98 <b>E</b> I	INSIDE WIRE-NON BASIC INSTL & REARRANGE	3.37%
98EW	INSIDE WIRE-NON BASIC WARRANTY	0.38%
98ER	INSIDE WIRE-NON BASIC TIME & MTL	1.52%
728C	COMPANY COMM STAND ALONE	0.05%
658M	COMPANY COMM EQPT	0.08%
628C	COMPANY COMM INTRASYS	0.23%
730C	DATA CONTROLLERS & WORKSTATIONS	0.39%
630M	DATA CONTROLLERS & WORKSTATIONS	0.15%
628X	CO COMM INTRSYSTEM-ACCUM DEPR	0.08%
730X	DATA CONTROLLERS & WORKSTATIONS-ACCUM DEPR	0.03%
5532	MISC MEETINGS	3.70%
5534	EXCELLENCE THROUGH QUALITY (QWL)	0.60%
5535	GEN CLASSROOM TRAINING	2.79%
5536	OTH UNCLASSIFIED PROD COSTS (E.G., NO ACCESS)	1.48%
553A	NO TROUBLE FOUND	2.80%
5539	OTH MTCE EXP	0.07%
510C	STOREROOM	1.75%
F257C	CIRC EQPT-SUB PR GN SYS-FIBER OPTIC FEEDER	0.13%
F758M	OTH TERM EQPT-SUBPR GN EQPT-FIBER OPTIC FEEDER	0.03%
158C	LGE PBX-911 INSTALLATIONS	0.14%
257C	CIRCUIT EQPT-DIGITAL-SUB PR GN SYS	2.14%
558X	OTH TERM EQPT-ANALOG NCTE-ACCUM DEPR	0.54%
758X	OTH TERM EQ-SUB PR GN EQ	0.01%
378X	OTH TERM EQ-DIG NONCPE-ACCUM DEPR	0.13%
· 117M	OPERATOR SYSTEMS	0.02%
TRVL	TRAVEL & BREAKS	<u>19.30</u> %

### TOTAL - I&M SPECIAL SERVICES (SSI&M) <u>100.00%</u>

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## STATEMENT OF NETWORK TECHNICIAN LABOR DISTRIBUTION PROFILES FOR THE STATE OF FLORIDA THREE-MONTH PERIOD ENDED JUNE 30, 1993

## WORK GROUP - I&M CORPORATE COMMUNICATIONS JOB FUNCTION CODE - 4120

1

Field Reporting		Labor Distribution
Code	Description	Percentage
22M	AERIAL CBL-METALLIC	.0.12%
45M	BURIED CBL-METALLIC	0.2 <b>9%</b>
248M	AERIAL SVC WIRE (DROPS)	0.03%
548M	BURIED SVC WIRE (DROPS)	0.74%
12M	AERIAL CBL-METALLIC-BLDG ENT	1.05%
52M	INTRABLDG NETWK CBL-METALLIC	0.89%
. 68E	OTH NON-CPE EQPT EXP-NETWK TERM WIRE-INSTL	0.93%
68M	OTH NON-CPE EQPT EXP-NETWK TERM WIRE	0.53%
68Y	OTH NON-CPE EQPT EXP-NTWK TERMINATING WIRE-RMVL	0.07%
257M	CIRC EQPT-DIGITAL-SUB PR GN SYS	0.01%
257R	CIRC EQPT-DIGITAL-SUB PR GN SYS	0.01%
377M	DIGITAL ELECTRONIC SWITCH EQPT	0.01%
F257R	CIRCUIT EQPT-SUBSCRIBER PAIR GAIN SYS-FIBER OPTIC FEEDER	0.04%
758M	OTH TERM EQPT-SUB PR GN EQPT	0.12%
378C	OTH TERM EQPT DIGITAL NON-CPE NCTE	2.06%
378M	OTH TERM EQPT DIGITAL NON-CPE NCTE-REG	0.35%
558C	OTH TERM EQPT-ANALOG NCTE	0.83%
558M	OTH TERM EQPT-ANALOG NCTE	1.33%
418M	STA APPARATUS-BOC OWNED-REGULATED	0.18%
728C	COMPANY COMM STAND ALONE	1.44%
658M	COMPANY COMM EQPT	11.26%
658C	COMPANY COMM EQPT-PBX INSTALLATIONS	1.38%
628C	COMPANY COMM INTRASYS	8.12%
730C	DATA CONTROLLERS & WORKSTATIONS	17.13%
630M	DATA CONTROLLERS & WORKSTATIONS	29.52%
728X	CO COMM EQ-STA APPARATUS EQ-ACCUM DEPR	0.12%
658X	COMPANY COMM EQUIP-PBX-ACCUM DEPR	0.10%
628X	CO COMM INTRSYSTEM-ACCUM DEPR	0.28%
730X	DATA CONTROLLERS AND WORKSTATIONS-ACCUM DEPR	0.97%
5532	MISC MEETINGS	1.90%
5533	UNION ACTIVITIES (PAID)	0.04%
5535	GEN CLASSROOM TRAINING	1.77%
5536	OTH UNCLASSIFIED PROD COSTS (E.G., NO ACCESS)	0.16%

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## STATEMENT OF NETWORK TECHNICIAN LABOR DISTRIBUTION PROFILES FOR THE STATE OF FLORIDA THREE-MONTH PERIOD ENDED JUNE 30, 1993 (Continued)

## WORK GROUP - I&M CORPORATE COMMUNICATIONS JOB FUNCTION CODE - 4120

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(Continued)

Field Reporting Code	Description	Labor Distribution Percentage
		-
553A	NO, TROUBLE FOUND	0.07%
5539	OTH MTCE EXP	0.71%
510C	STOREROOM	1.20%
558X	OTH TERM EQPT-ANALOG NCTE-ACCUM DEPR	0.11%
TRVL	TRAVEL AND BREAKS	<u>   14.13%</u>
	TOTAL - 1&M CORPORATE COMMUNICATIONS	100.00%

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## STATEMENT OF NETWORK TECHNICIAN LABOR DISTRIBUTION PROFILES FOR THE STATE OF FLORIDA THREE-MONTH PERIOD ENDED JUNE 30, 1993 (Continued)

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## WORK GROUP - 1&M PUBLIC COMMUNICATIONS (COIN) JOB FUNCTION CODE - 4180

Field Reporting Code	Description	Labor Distribution Percentage
221 (		0.790
22M	AERIAL CBL-METALLIC	0.78%
45IM		2.02%
2480	AERIAL SVC WIRE (DROPS)	0.24%
248M	AERIAL SVC WIRE (DROPS)	0.70%
548C	BUKIED SVC WIKE (DROPS)	. 0.31%
548M	BUKIED SAC MIKE (DKOL2)	0.99%
12M	AERIAL CEL-METALLIC-BUDG ENT	0.28%
52M	INTRABLUG NET WE CEL-METALLIC	0.05%
08E	OTH NON-CRE EQPT EXP-NETWY TERM WIRE-INSTE	0.2070
08M	OTH NON-CPE EQPT EXP-NETWK TERM WIRE	0.27%
08 I	OTH NON-CPE EQPT EXP-INT WK TERM WIRE-RWIVE	0.01%
	CIRC EQPT-DIGITAL-SUB PR GN STS	0.10%
257R	CIKU EQPI-DIGITAL-SUB PK UN STS	0.01%
3//M	DIGITAL ELECTRONIC SWITCH EQPT	0.02%
F257M	FEEDER	0.01%
98EI	INSIDE WIRE-NON BASIC INSTL & REARRANGE	0.05%
98EW	INSIDE WIRE-NON BASIC WARRANTY	0.02%
98ER	INSIDE WIRE-NON BASIC TIME & MTL	0.10%
88E	PUB TEL TERM EOPT UNIV-INSTL	0.01%
88M	PUB TEL TERM EOPT UNIV	0.69%
88Y	PUB TEL TERM EOPT UNIV-RMVL	0.23%
188E	PUB TEL TERM EOPT-COIN OP-INSTL	5.95%
- 188M	PUB TEL TERM EOPT-COIN OP	35.88%
188Y	PUB TEL TERM EOPT-COIN OP-RMVL	3.27%
288E	PUB TEL TERM EQPT-COINLESS INSTALLATION	0.32%

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## STATEMENT OF NETWORK TECHNICIAN LABOR DISTRIBUTION PROFILES FOR THE STATE OF FLORIDA THREE-MONTH PERIOD ENDED JUNE 30, 1993 (Continued)

## WORK GROUP - I&M PUBLIC COMMUNICATIONS (COIN) JOB FUNCTION CODE - 4180 (Continued)

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Field Reporting		Labor Distribution
Code	Description	Percentage
288M	PUB TEL TERM EOPT-COINLESS	- 1.90%
288Y	PUB TEL TERM EOPT-COINLESS-RMVL	0.07%
988E	PUB TEL TERM EOPT INSTALLATION	0.08%
988M	PUB TEL TERM EOPT	0.01%
988Y	PUB TEL TERM EOPT-RMVL	0.01%
5532	MISC MEETINGS	4.70%
5533	UNION ACTIVITIES (PAID)	0.01%
5534	EXCELLENCE THROUGH QUALITY (QWL)	1.61%
5535	GEN CLASSROOM TRAINING	0.22%
5536	OTH UNCLASSIFIED PROD COSTS (E.G., NO ACCESS)	1.09%
553A	NO TROUBLE FOUND	3.54%
5539	OTH MTCE EXP	0.02%
510C	STOREROOM	4.70%
TRVL	TRAVEL & BREAKS	28.81%
	TOTAL - I&M PUBLIC COMMUNICATIONS (COIN)	<u>100.00%</u>

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## STATEMENT OF NETWORK TECHNICIAN LABOR DISTRIBUTION PROFILES FOR THE STATE OF FLORIDA THREE-MONTH PERIOD ENDED JUNE 30, 1993 (Continued)

## WORK GROUP - CABLE/FACILITIES MAINTENANCE JOB FUNCTION CODES - 4250/4260

Field		Labor
Reporting		Distribution
Code	Description	Percentage
22M	AERIAL CBL-METALLIC	7.01%
45M	BURIED CBL-METALLIC	33.48%
248C	AERIAL SVC WIRE (DROPS)	0.05%
248M	AERIAL SVC WIRE (DROPS)	0.37%
548C	BURIED SVC WIRE (DROPS)	0.13%
548M	BURIED SVC WIRE (DROPS)	1.34%
12M	AERIAL CBL-METALLIC-BLDG ENT	0.73%
52M	INTRABLDG NETWK CBL-METALLIC	0.86%
68E	OTH NON-CPE EQPT EXP-NETWK TERM WIRE-INSTL	0.56%
68M	OTH NON-CPE EQPT EXP-NETWK TERM WIRE	0.14%
5M	UG CBL-METALLIC	4.78%
68Y	OTH NON-CPE EQPT EXP-NETWK TERMINATING WIRE- RMVL	0.05%
257M	CIRC EOPT-DIGITAL-SUB PR GN SYS	2.69%
257R	CIRC EOPT-DIGITAL-SUB PR GN SYS	4.44%
377M	DIGITAL ELECTRONIC SWITCH EOPT	0.10%
F257M	CIRCUIT EOPT-SUBSCRIBER PAIR GAIN SYS-FIBER OPTIC	5.88%
,	FEEDER	
F257R	CIRCUIT EQPT-SUBSCRIBER PAIR GAIN SYS-FIBER OPTIC	2.74%
758M	OTH TERM EOPT-SUB PR GN EOPT	0.54%
378C	OTH TERM EOPT DIGITAL NON-CPE NCTE	1.89%
378M	OTH TERM EOPT DIGITAL NON-CPE NCTE-REG	3.47%
97BI	INSIDE WIRE-BASIC-INSTL & REARRANGE	0.00%
97BW	INSIDE WIRE-BASIC-WARRANTY	0.02%
97BP	INSIDE WIRE-BASIC-SVC PLAN	0.07%
98EI	INSIDE WIRE-NON BASIC INSTL & REARRANGE	0.14%
630M	DATA CONTROLLERS & WORKSTATIONS	0.06%
5532	MISC MEETINGS	2.22%
5533	UNION ACTIVITIES (PAID)	0.04%
5534	EXCELLENCE THROUGH QUALITY (QWL)	0.65%
5535	GEN CLASSROOM TRAINING	1.18%
5536	OTH UNCLASSIFIED PROD COSTS (E.G., NO ACCESS)	0.58%
553A	NO TROUBLE FOUND	0.18%
5539	OTH MTCE EXP	0.11%

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## STATEMENT OF NETWORK TECHNICIAN LABOR DISTRIBUTION PROFILES FOR THE STATE OF FLORIDA THREE-MONTH PERIOD ENDED JUNE 30, 1993 (Continued)

### WORK GROUP - CABLE/FACILITIES MAINTENANCE JOB FUNCTION CODES - 4250/4260 (Continued)

Field Reporting Code	Description	Labor Distribution Percentage
		· •
510C	STOREROOM	0.18%
F257C	CIRC EQPT-SUB PR GN SYS-FIBER OPTIC FEEDER	2.58%
F758C	OTH TERM EQPT-SUB PR GN EQPT-FIBER OPTIC FEEDER	0.11%
52C	INTRABLDG NETWK CBL-METALLIC	0.05%
257C	CIRCUIT EQPT-DIGITAL-SUB PR GN SYS	6.18%
378X	OTH TERM EQ-DIG NONCPE-ACCUM DEPR	0.01%
TRVL	TRAVEL & BREAKS	<u>14.39%</u>
	TOTAL - CABLE REPAIR	100.00%

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### NOTES TO STATEMENT OF NETWORK TECHNICIAN LABOR DISTRIBUTION PROFILES FOR THE STATE OF FLORIDA FOR THE THREE-MONTH PERIOD ENDED JUNE 30, 1993

#### 1. BASIS OF PRESENTATION

The accompanying Statement of Network Technician Labor Distribution Profiles presents, in summary form, the result of BellSouth Telecommunications, Inc.'s (BellSouth) Work Activity Statistical Sampling Process (WASSP) applied to measure the activities of groups of network technicians in the State of Florida during the three-month period ended June 30, 1993 for reporting in accordance with BellSouth's policies pertaining to the application of Part 32 - Uniform System of Accounts. WASSP was applied to measure the work activities of network technicians operating in four Installation and Maintenance (I&M) work groups and Cable/Facilities Maintenance work group using statistical sampling and evaluation techniques, as follows:

I&M - POTS I&M - Special Services (SSI&M) I&M - Corporate Communications I&M - Public Communications Cable/Facilities Maintenance

For each I&M and Cable/Facilities Maintenance work group, the Statement presents a three-month composite profile of the percentages of work activity summarized by specific work activity descriptions which correspond to defined field reporting codes. Field reporting codes form the basis for reporting of network technician time into BellSouth's financial systems.

### 2. DESCRIPTION OF THE WORK ACTIVITY STATISTICAL SAMPLING PROCESS (WASSP)

WASSP is a statistical methodology designed to gather sample data and statistically estimate the work activity of work reporting groups. WASSP consists of three related process modules for sample selection, data collection, and data analysis. Each of these process modules are described below:

#### The Sample Selection Module

The Sample Selection Module has been designed to select a statistically valid sample of network technicians from the Payroll Master Database (PMDB), a BellSouth database used to maintain employee information. The EXTRACT program of the Sample Selection Module searches the PMDB and stratifies the universe of employees into homogenous categories based upon state boundaries and work groups (by job function code). For each job function code, the SAMPLER program generates a random sample of technicians to participate in the work activity log completion portion of the Data Collection Module. Network technicians selected will participate in the process for one work week. The SAMPLER program of the Sample Selection Module simultaneously generates a random sample of the above sampled technicians to participate in the technical analyst interview portion of the Data Collection Module. Work Activity Logs (Logs) for three days of the selected network technician's work week are randomly selected for technical analyst review procedures described in the Data Collection Module.

Sample size and the structure of the sample has been designed so that a three-month Network Technician Labor Distribution Profile is targeted to achieve a 95% confidence level with a precision of ±3% for each field reporting code profile percentage estimated by WASSP. The precision corresponds to approximately ± fifteen minutes, the lowest increment of time reporting for network technicians under the WASSP time reporting process. Technicians selected are oversampled in the Sample Selection Module to account for days on which the technicians are not present (i.e., vacations, illness, and days off).

#### The Data Collection Module

Prior to the month sampled, a list of the technicians to be sampled, the appropriate Logs, and instructions are forwarded to WASSP field management by the WASSP Center. The field management then disseminates the Logs and instructions to a supervisor for dispersal to the selected technicians. Technicians participating in WASSP report their time by work activity in minimum increments of fifteen minutes. Logs have been developed for each work group listing predominant work activities of each subject work group.

Once completed by the network technician, the Logs are submitted to the supervisor who reviews the, Logs. Arithmetical discrepancies are resolved and the Logs are forwarded to the technical analyst for detailed review. What about the source doc'm?

Telephone interviews of the technician's supervisor are conducted to test a random sample of network technician's Logs. The selection of those to be interviewed is determined through the Sample Selection Module. The interviews are generally conducted within three business days of the Log preparation date and prior to the input of the work activity data into the WASSP database processor. The interviews are conducted by the technical analysts and are accomplished through telephone interviews with the selected technician's supervisor. The interviews consist of the supervisor reviewing the source documentation with the analyst who compares such information to that recorded on the Log. If errors are detected and cannot be resolved, the technical analyst contacts the network technician directly. Once resolved, errors are corrected by the technical analyst on the Log. March it the technic timely have source date? What are the greation the T/A ashs?

The Data Analysis Module

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Work activity data, derived from the Logs, are input into the WASSP database processor. The INPUT program of the WASSP database processor provides for the input of the sampled data and stores the input data in files by work group. Data in the files can be changed, appended, or deleted using the INPUT program.

The IMOUT program of the WASSP database processor develops the time distribution ratios and. other data analysis for each work group for which labor distribution percentages are estimated by WASSP. WASSP distributes the increments of hours reported to each field reporting code and calculates the percentage of time assigned to each field reporting code.

Data generated by WASSP is available to interfacing MTR systems with no changes to formats or requirements. The WASSP allocation profiles are available to be input into the MTR time reporting tables and would be available for MTR off-line processing to create a report detailing the field codes which have been generated and passed to the Company's Financial Processor (FP).

#### EXHIBIT B

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#### **BELLSOUTH CORPORATION**

## SUMMARY OF PRIMARY PROCEDURES PERFORMED

Exhibit A includes an attestation report pertaining to an examination of the Statement of Network Technician Labor Distribution Profiles for the state of Florida for the three-month period ended June 30, 1993. This summary presents the primary procedures we performed as part of our examination. These procedures represent only a partial listing and were conducted to form our opinion included in Appendix A but not to express an opinion on any of the individual WASSP processes.

The procedures we performed were structured to parallel the three modules in the WASSP statistical estimation process as follows:

Test of Sample Selection Module Test of Data Collection Module Test of Data Analysis Module

#### Test of Sample Selection Module

Perform tests to verify the completeness and accuracy of network technician input information from which samples are selected. The primary procedures for this phase include:

- Assess the statistical design and review the program logic of the computer programs which perform the statistical selection process of network technicians for implementation of the statistical design,
- Assess the effect of creating a three month profile on the statistical sampling and evaluation process, and
- Test the completeness of the database which provides network technician information for sampling. Test the accuracy of the employee information (i.e., name, responsibility code, social security number, job function code, etc.) by referencing, via random sample, both to and from independent source documents.

#### Test of Data Collection Module

Obtain an understanding of and test the administration of the collection of network technician data. The primary procedures for this phase include:

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- Document the procedures and related oversight controls associated with the data collection process,
- Test compliance with the stated procedures by selecting field technicians and examining documentary evidence of compliance with data collection procedures, and
- Test the effectiveness of data collection procedures to accurately reflect the field technician description of work activity to the appropriate Field Reporting Code by comparing the reported work activity for a limited number of selected field technicians to independent source documents (i.e., assignment records, trouble tickets, dispatch records, etc.).

### Test of Data Analysis Module

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Test the computer applications utilized to process the data. The procedures for this phase include:

- Assess the statistical evaluation and preparation of profiles of the reported work activities of the selected network technicians,
- Review the program logic of the computer program which processes network technician work activity,
- · Assess the computer program's implementation of the statistical function,
- Test the validity of the computer allocation of work activity by reprocessing the data obtained in the data collection module under audit control,
- Test the validity of input data by agreeing the network technicians' work activity as selected in the data <u>collection module</u> to the related input program source, and
- Test the validity of output data by agreeing the network technicians' work activity, as selected above, to the proper inclusion in the output file.

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### EXHIBIT C

Suite 1700 100 Peachtree Street Atlanta, Georgia 30303-1943

Te:ephone: (404) 220-1500 Facsimile: (404) 220-1583

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#### INDEPENDENT ACCOUNTANTS' REPORT

BellSouth Corporation Atlanta, Georgia

Deloitte &

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We have examined management's assertion, included in its representation letter dated July 14, 1993, that BellSouth Corporation maintained an effective internal control structure over financial reporting for the segment of the internal control structure pertaining to the Work Activity Statistical Sampling Process (WASSP) during the three-month period ended June 30, 1993. Management's description of the WASSP process to which the internal control structure pertains and specific control criteria established by management are included in the Appendix.

Our examination was made in accordance with standards established by the American Institute of Certified Public Accountants and, accordingly, included obtaining an understanding of the internal control structure over financial reporting, testing and evaluating the design and operating effectiveness of the internal control structure, and such other procedures as we considered necessary in the circumstances. We believe that our examination provides a reasonable basis for our opinion.

Because of inherent limitations in any internal control structure, errors or irregularities may occur and not be detected. Also, projections of any evaluation of the internal control structure over financial reporting to future periods are subject to the risk that the internal control structure may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, management's assertion that BellSouth Corporation maintained an effective internal control structure over financial reporting for the segment of the internal control structure pertaining to the WASSP process during the three-month period ended June 30, 1993 is fairly stated in all material respects, based upon the control criteria included in the Appendix.

This report is intended solely for the information and use of BellSouth management and to assist you in responding to inquiries from the Federal Communications Commission and state regulatory authorities, and should not be used for any other purpose.

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July 14, 1993

Deloitte Touche Tohmatsu International

#### APPENDIX

#### BELLSOUTH CORPORATION

### BELLSOUTH MANAGEMENT'S DESCRIPTION OF WORK ACTIVITY STATISTICAL SAMPLING PROCESS TO WHICH THE INTERNAL CONTROL STRUCTURE PERTAINS AND RELATED CONTROL CRITERIA FOR THE THREE MONTHS ENDED JUNE 30, 1993

The Work Activity Statistical Sampling Process (WASSP) is a statistical methodology designed to gather sample data and statistically estimate the work activity of work reporting groups. WASSP consists of three related process modules for sample selection, data collection, and data analysis. Each of these process modules and the related primary control criteria established by management are described below:

#### The Sample Selection Module

The Sample Selection Module has been designed to select a statistically valid sample of network technicians from the Payroll Master Database (PMDB), a BellSouth database used to maintain employee information. The EXTRACT program of the Sample Selection Module searches the PMDB and stratifies the universe of employees into homogenous categories based upon state boundaries and work groups (by job function code). For each job function code, the SAMPLER program generates a random sample of technicians to participate in the work activity log completion portion of the Data Collection Module. Network technicians selected will participate in the process for one work week. The SAMPLER program of the Sample Selection Module simultaneously generates a random sample of the above sampled technicians to participate in the technical analyst interview portion of the Data Collection Module. Work Activity Logs (Logs) for three days of the selected network technician's work week are randomly selected for technical analyst review procedures described in the Data Collection Module.

Sample size and the structure of the sample has been designed so that a three-month Network Technician Labor Distribution Profile is targeted to achieve a 95% confidence level with a precision of  $\pm 3\%$  for each field reporting code profile percentage estimated by WASSP. The precision corresponds to approximately  $\pm$  fifteen minutes, the lowest increment of time reporting for network technicians under the WASSP time reporting process. Technicians selected are oversampled in the Sample Selection Module to account for days on which the technicians are not present (i.e., vacations, illness, and days off).

The primary control criteria include:

- Structural Query Language (SQL) used in the module appropriately specifies the relevant Job Function • Codes to be extracted;
- Personnel files are adequately maintained and contain updated and proper Job Function Codes;
- Appropriate diskette handling procedures are utilized from the point of extraction and sample selection;
- Security administration procedures and program change controls control against unauthorized changes to the Extract Process;
  - Usage of the relevant input files (current period diskettes) is verified by management;

- The program is designed to produce a valid sample;
- Management reviews results of sample selection for appropriate size and reasonableness; and,
- Security administration procedures and program change controls control against unauthorized changes to the sample selection process.

### The Data Collection Module

Prior to the month sampled, a list of the technicians to be sampled, the appropriate Logs, and instructions are forwarded to WASSP field management by the WASSP Center. The field management then disseminates the Logs and instructions to a supervisor for dispersal to the selected technicians. Technicians participating in WASSP report their time by work activity in minimum increments of fifteen minutes. Logs have been developed for each work group listing predominant work activities of each subject work group.

Once completed by the network technician, the Logs are submitted to the supervisor who reviews the Logs<sub>2</sub> Arithmetical discrepancies are resolved and the Logs are forwarded to the technical analyst for detailed review.

Telephone interviews of the technician's supervisor are conducted to test a random sample of network technician's Logs. The selection of those to be interviewed is determined through the Sample Selection Module. The interviews are generally conducted within three business days of the Log preparation date and prior to the input of the work activity data into the WASSP database processor. The interviews are conducted by the technical analysts and are accomplished through telephone interviews with the selected technician's supervisor. The interviews consist of the supervisor reviewing the source documentation with the analyst who compares such information to that recorded on the Log. If errors are detected and cannot be resolved, the technical analyst contacts the network technician directly. Once resolved, errors are corrected by the technical analyst on the Log.

The primary control criteria include:

- Field supervisor receives selection notification via E-Mail and agrees the list to a follow-up list;
- Supervisor controls access to work activity logs;
- Supervisor reviews (signs) the work activity logs after completion;
- Work Activity Logs (WALs) are sorted by State and placed into respective bins for receipt by analyst;
- Analysts agree the WALs to the sample selection list;
- Analysts review WALs for reasonableness; and,
- Analysts perform subsample testing by interviewing employees and comparing data to the source documents.

### The Data Analysis Module

Work activity data, derived from the Logs, are input into the WASSP database processor. The INPUT program of the WASSP database processor provides for the input of the sampled data and stores the input

data in files by work group. Data in the files can be changed, appended, or deleted using the INPUT program.

The IMOUT program of the WASSP database processor develops the time distribution ratios and other data analysis for each work group for which labor distribution percentages are estimated by WASSP. WASSP distributes the increments of hours reported to each field reporting code and calculates the percentage of time assigned to each field reporting code.

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Data generated by WASSP is available to interfacing MTR systems with no changes to formats or requirements. The WASSP allocation profiles are available to be input into the MTR time reporting tables and would be available for MTR off-line processing to create a report detailing the field codes which have been generated and passed to the Company's Financial Processor (FP).

The primary control criteria include:

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- WAL is logged in by input personnel and agreed to the sample list;
- On-line edit checks are performed during data entry;
- Data entry personnel print queries that are agreed to the WALs by independent data entry personnel;
- -> Management performs an on-line query to verify completeness of sample using social security numbers;
  - Security administration procedures and program change controls in the system control against unauthorized access and changes to the input and analysis process;

->. The generation of profiles is performed by management only, monthly and quarterly; and, How murry

Management reviews the Profile Precision report for completeness and reasonableness.

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#### EXHIBIT D



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Suite 1700 100 Peachtree Street Atlanta, Georgia 30303-1943 Telephone: (404) 220-1500 Facsimile: (404) 220-1583

July 14, 1993

BellSouth Corporation 1155 Peachtree Street, N.E. Atlanta, Georgia 30367

Dear Sirs:

This report pertains to our observations and recommendations related to certain matters noted during our special study pertaining to the BellSouth Telecommunications, Inc. Work Activity Statistical Sampling Process (WASSP).

We have previously issued our report, dated March 5, 1993, which included our observations and recommendations resulting from our special study of WASSP conducted during the three-month period ended December 31, 1992.

For this report, we have included all observations and recommendations included in our report dated March 5, 1993, together with BellSouth management's responses concerning the implementation status of these recommendations. Based on our procedures performed for the three-month period ended June 30, 1993, the responses are representative of the status of actions taken by management to implement our recommendations. We have also included additional observations and recommendations that will be useful to you in enhancing the WASSP process.

This report is intended solely for the use of BellSouth management and to assist you in responding to inquiries from the Federal Communications Commission and state regulatory authorities.

Yours truly,

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Deloitte Touche Tohmatsu International

## WORK ACTIVITY STATISTICAL SAMPLING PROCESS

## A. STATUS OF OBSERVATIONS AND RECOMMENDATIONS IN OUR REPORT DATED MARCH 5, 1993

#### I. POLICIES AND PROCEDURES

#### SOURCE DOCUMENTS USED FOR ANALYST INTERVIEWS

#### Observation and Background

The technical analyst is required to perform a detailed review of selected Logs from the total population of Logs returned to the analyst. The detail review consists of a technical analyst's phone interview with the supervisor of the technician whose Log was randomly selected by the WASSP sample selection program. The technical analyst requests the supervisor to describe the activities as reported by the technician on source documentation maintained at the supervisor location. However, the technical analyst does not have access to source documentation created by the technician to evidence his/her activities and used by the supervisor to review completed Logs.

#### Recommendation

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Require source documentation to be forwarded to the technical analyst concurrently with the completed and reviewed Logs. Absent hard copy source documentation, allow analyst on-line access to this information, where applicable.

#### BellSouth Management Response

Effective April 1993, all technical analysts have on-line access to Loop Maintenance Operations Systems (LMOS) which contains the documentation created via craft access (Display Craft Work Summary/Display Job Information (DCWS/DJI) FULL CLOCK NARRATIVE). This will allow the analyst to view source documentation for the majority (approximately 85% of technicians use craft access) of the sample technicians. For those subselected technicians not on craft access, source documentation will be submitted along with the work activity logs. this will provide the analysts with the greatest amount of information available for verification of the work activity logs.

#### POLICIES AND PROCEDURES IN THE EVENT OF A NATURAL DISASTER

#### Observation and Background

Currently there are no formal policies and procedures pertaining to the application of the WASSP methodology in the event of a natural disaster. Consequently, formal guidance is not available as to the effect of a natural disaster on the areas of sample selection, work activities performed by network technicians, reporting procedures, analyst and supervisor review procedures and methodology associated with data analysis. Formal policies and procedures would promote an effective operation of the process in the event of a natural disaster.

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#### Recommendation

Create, document and implement formal policies and procedures pertaining to the application of the WASSP methodology in the event of a natural disaster.

#### BellSouth Management Response

The WASSP Policies and Procedures Manual documents the WASSP disaster recovery policy developed in February 1993. This policy, which was communicated in a February 22. 1993 letter to the BellSouth Telecommunications (BST) MTR Methods and Programming Staffs as well as the BULL Time Share Administration group located at the BIS Data Center, ensures that BST will be able to continue the timely collection and processing of the appropriate work activity information in the event of a disaster.

#### POLICIES, PROCEDURES AND CONTROLS MANUAL

#### Observation and Background

Currently, a policies, procedures and controls manual in relation to the implementation and operation of the WASSP process does not exist. A policies, procedures and controls manual will provide an effective resource in terms of WASSP process consistency and integrity and would reduce disruption in the event of various events such as organizational changes, employee turnover, and natural disasters.

#### **Recommendation**

Create and maintain a policies, procedures and controls manual to incorporate all critical aspects of the WASSP process. Disseminate this manual to those time reporting personnel who will benefit from its use.

#### BellSouth Management Response

BST has established, within the WASSP organization, a manager position with responsibility for all network time reporting policies and procedures. This position will issue/concur in procedures to the field forces related to the WASSP process and be responsible for all other documentation for WASSP.

Concurrent with approval, WASSP will become the <u>"official" time reporting system for outside plant forces</u>. As such, all appropriate documentation (WASSP Policies and Procedures Manual, BellSouth System Practices (BSP) as well as updated MTR documentation) has been distributed to the affected BST personnel 2 light cours driften? PR= prolong for use upon approval.

TECHNICIAN USE OF PERSONAL LOGS

Observation and Background

Network technicians in certain of the states in the BellSouth geographic region are maintaining informal logs of trouble jobs received and work performed in addition to that required by the current Craft Access System. This occurs via the documentation of specific trouble job information on form #6025 or #6571. The maintenance of informal trouble job logs represents an inefficient and unnecessary utilization of BellSouth resources and is currently not required by WASSP management or BellSouth time reporting personnel.
#### Recommendation

Eliminate network technician use of informal logs in areas where the Craft Access System is utilized.

#### BellSouth Management Response

BST agrees that a practice of the kind described here is an inefficient use of company resources and on January 21, 1993 issued instructions to the field forces re-emphasizing to them that such a practice should be stopped.

#### LOG-OFF PROCEDURES FOR THE CRAFT ACCESS SYSTEM

#### Observation and Background

Network technicians at times "log off" of the Craft Access System at a time subsequent to the actual time of completion of the trouble job even though the time shown on the Log is correct. This can occur if the technician logs off on a current trouble job after receipt of and travel to a new trouble job. As technical analysts are placing reliance on the Detail Craft Work Summary (DCWS) generated by the Craft Access System as a source document, differences relating to the above must be investigated.

#### **Recommendation**

Require technicians to "log off" of the Craft Access System immediately upon completion of each trouble job. Consider the feasibility of Craft Access System modification such that a technician may not receive orders for his next job without "logging off" of the current job.

#### BellSouth Management Response

BST has reviewed the recommendation above and is of the opinion that implementation of such a requirement is not cost effective and that it would create operational inefficiencies for the technician iso, since the "log off" procedures for the Craft Access System have no impact on the classification of a technician's time to the appropriate work functions, BST has no plans to pursue this enhancement we se vendors at this time. That a forth, here the bar of the second 
vendors at this time. what about having tick by off whe linish ? RECEIPT AND REVIEW OF WORK ACTIVITY LOGS ST out of work RECEIPT AND REVIEW OF WORK ACTIVITY LOGS

#### Observation and Background

Interviews conducted by technical analysts do not always occur within three working days as prescribed under established WASSP criteria. Delays in analyst interviews occasionally occur due to the remote location of the technician which requires an additional day for the supervisor's review before mailing to the technical analyst. Additionally, Logs forwarded to the technical analyst via fax machine are delayed due to the volume of fax transmissions.

#### Recommendation

Provide one-day mail service from remote locations and obtain additional fax machines to ensure the timely receipt of Logs.

#### BellSouth Management Response

BST installed three additional fax machines during the first week of April 1993 bringing to nine the total number of machines available for receipt of work activity logs. Additionally, BST uses one-day mail service form the major metropolitan locations.

## TIMELY SUPERVISOR REVIEW OF WORK ACTIVITY LOGS

#### Observation and Background

Supervisors are required to review Logs the day after the Logs are completed by the network technicians. We observed instances in which such review was substantially beyond the one day requirement. Additionally, in some of the remote offices the supervisors do not have printers. Consequently, if the supervisors use the DCWS in their review procedures, they must obtain hard copies of DCWS source documents from other offices via mail. These situations cause delays in the supervisor review and forwarding of Logs to the technical analysts. However, in these remote locations, we observed that the supervisor often has on-line access to the DCWS.

#### **Recommendation**

Instruct supervisors to perform Log reviews the day subsequent to completion by the technician. Additionally, advise supervisors who choose to use the DCWS in their review process to perform Log reviews via on-line inquiry of the Craft Access System if hard copy documentation is not readily available.

## BellSouth Management Response

The supervisors have been reinstructed to review and forward the completed logs to the WASSP Center by the next business day. The supervisory review is intended to be a test for reasonableness for items such as work group of the technician, mathematical accuracy, completeness of the log, as well as other unique items particular to a supervisor's group. It is not intended for the supervisor to trace every work function to the source documentation, as the in-depth review is performed by the technical analyst.

The technical analyst conducts the detailed review and tracing of work performed to source documentation using the supervisor and technician as "conduits" for information on an as-needed basis.

Therefore, BST has no plans to pursue any changes in our current practices relative to the review of the work activity logs.

## TRAINING OF TECHNICAL ANALYSTS

## Observation and Background

There is currently no formal training program for the technical analysts involved in the WASSP Process pertaining to work procedures, FCC time reporting rules, effective interview techniques, error resolution and other matters.

## **Recommendation**

Develop, document, and implement a formal training program for the technical analysts. This program should encompass entry level training courses as well as continuing education training courses to inform the analysts of any updates or changes in FCC time reporting requirements, any updates or changes in the WASSP Process and other pertinent subjects. This program would be an essential ingredient in the consistent implementation of the analyst function.

## BellSouth Management Response

The expertise of the technical analysts is critical to the success of the WASSP process. As such, the BST comptrollers organization (owners of the WASSP process) rely on rotational employees from the Network organization to fill the positions of technical analysts. In order to qualify for an analyst position, the candidate must have an in-depth knowledge of, as well as experience in, outside plant architecture and areas of the telecommunications business related to time reporting for outside technicians. This includes a great familiarity with actual work performed by the technicians as well as knowledge of FCC rules and reporting requirements (particularly nonregulated activities).

Given the above requirements for job assignment, initial training consists of obtaining a complete understanding of the process through review of WASSP documentation including the WASSP Policies and Procedures Manual. BST recognizes the need for continuing education as a critical part of the WASSP process. As such, the Technical Analysts have received an overview of the Joint Cost Order and a refresher on <u>BST's Functional Accounting process by the respective subject matter experts</u>. The analysts have also attended a three-day Integrated Internal Controls Training class as well as the Network Manager's Administrative Conference.

As a part of the overall documentation of the process as mentioned earlier, BST has incorporated into that documentation <u>a "Technical Analyst Handbook"</u> which includes the references used by the analysts, as well as a suggested training curriculum designed to ensure the continued high level of knowledge required for this position. This continuing education training curriculum is agreed to by the analysts and their supervisor based on individual need.

ROTATION AND COVERAGE FOR ABSENT TECHNICAL ANALYSTS

## Observation and Background

Technical analysts are assigned to review Logs for one particular state. No plan currently exists for the ration of technical analysts nor does a plan exist to cover for an analyst in the event of illness or vacation.

## Recommendation

Develop, document, and implement a rotation plan whereby the technical analysts are required to periodically rotate their states of responsibility. Additionally, develop, document, and implement a plan in the event of analyst absence due to illness or vacation.

## BellSouth Management Response

Effective April 1993, BST implemented an Analysts Coverage Schedule detailing the analysts' primary and backup state responsibilities through December 1993. These assignments will be rotated every six months beginning January 1994 to ensure that there is adequate coverage for all states in the absence of any of the analysts.

## EXPANSION OF THE CRAFT ACCESS SYSTEM DOCUMENTATION

## Observation and Background

During the review of the Log, the supervisor, at times, determines if the technician's time is charged to the proper work activity by comparing the activities as reported on Logs to source documentation. Currently source documentation includes Detail Craft Work Summaries (DCWS) generated from the computerized Craft Access System and/or existing Mechanized Time Report (MTR) forms prepared by the technician. The current space allowed for description on the Craft Access System DCWS for each distribution number (42 characters) is not always large enough to fully describe the task performed by the technician. This situation can occur if more than one service is performed on the same trouble job. As such, the technician is required to continue the description of the work performed on this trouble job on the manually completed MTR form. This situation does not currently present a problem due to the dual reporting nature of the WASSP and MTR time reporting processes. However, as the MTR form will be eliminated once the WASSP process is fully implemented, the Craft Access System will become the chief source of documentation medium available to the technician and sufficient space should be given to the technician to allow him to perform an efficient reporting of time.

## **Recommendation**

Add additional space in the Craft Access System field for description of each trouble job performed by the technician. This will allow sufficient information to be recorded in the Craft Access System and to promote accurate reporting of technician work activity.

## BellSouth Management Response

Expansion of the Craft Access System to allow additional narrative space is not practical in the near term. <u>BST</u>, as it is not allowed to manufacture software, is not the "owner" of all aspects of craft access. Therefore, it must rely on outside vendors in order to effect expansions and/or changes to craft access and certain operations systems that are involved.

<u>The issue of additional narrative space has been, and will continue to be, investigated along with all other</u> <u>proposed craft access enhancements</u>. However, the costs of such changes and associated impacts on other features within the system do not make this a realistic option for BST. It is important to note that in 95%+ of the occurrences the existing narrative space is adequate for technicians to describe work performed. In those rare instances when craft access narrative space is limited. BST will issue procedures instructing involved technicians to use From 6025-1-SC or Form 6571-C (Work Ticket) to provide supplemental documentation on work performed.

## WORK ACTIVITY LOG SIGN-OFF BY SUPERVISOR AND DATA INPUT PERSONNEL

## Observation and Background

Supervisor and data input personnel signature on the Logs, although required upon completion of these individual's assigned duties, is not consistently obtained. Although it appears that the assigned duties are generally performed by these individuals, consistently requiring a signature will provide a means of documenting accountability.

## **Recommendation**

Require all supervisors to sign and date the Logs after their review. Require all data input personnel to sign and date the Logs upon entering the Log data into the WASSP system.

## BellSouth Management Response

BST's Procedures for Verification of Work Activity Data Input, which were developed and implemented in April 1993, require the input personnel to initial the work activity logs after input and the verifying personnel to initial the system printout after they have compared it to the appropriate work activity log. Also, WASSP Center management personnel periodically review a sample of the logs and associated printouts to monitor the effectiveness of this control.

As a result of this recommendation, the field supervisors have been instructed to sign the completed logs prior to submission to the WASSP Center.

## II: STATISTICAL METHODS

## PROSPECTIVE UNIVERSE TECHNIQUE

## Observation and Background

Currently, all samples of network technicians throughout the three-month profile period are generated from an extract of the PMDB as of the beginning of the <u>three-month profile period</u>. This methodology will not account for changes in technician composition since the initial extraction. Such changes may include network technician employment, transfer, or termination.

#### Recommendation

Develop procedures to account for changes in the composition of network technicians subsequent to the date of the data extract.

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#### BellSouth Management Response

Effective with the July 1993 sample selections processed in June 1993, BST implemented a monthly data extract program to select the universe of technicians to be sampled from the Payroll Masterfile Data Base (PMDB). This revised procedure will ensure that the composition of the network technicians is the most current available. (See Note 1.)

## QUALITY CONTROL SAMPLE SIZE

## Observation and Background

As the WASSP process is implemented in the nine-state BellSouth geographic region, the pool of network technicians for the entire BellSouth region may be viewed as one population for network technician quality control sampling purposes. If this view is acceptable, then a reasonably high level of assurance in regard to error rates can be obtained through the use of Acceptance Sampling techniques. This can be accomplished with much less work than is presently contemplated.

#### **Recommendation**

Consider reducing the number of network technician quality control interviews through the use of one region-wide interview sample versus separate interview samples for each state.

## BellSouth Management Response

Because of state public service commission considerations, the WASSP process will continue to stratify the universe of technicians to be sampled into homogenous categories based upon state boundaries and job functions (work groups) for a while. However, BST will take this recommendation under advisement.

## SELECTING THE NUMBER OF WEEKS IN A MONTH

#### Observation and Background

It is the system user's responsibility, for the SAMPLER application, to input the number of weeks in any particular month. An error in the number of weeks input parameter could result in a reporting week being improperly excluded from the sampling population.

#### Recommendation

Adopt a more simplistic decision rule, as follows:

If a Wednesday at the end of the month falls in the current month, that month has five weeks.

Further, we recommend that a table of months and weeks be input at the beginning of the year and reviewed by <u>supervisory personnel to minimize the necessity for clerical decision and controls throughout the year</u>, similar to the way parameters are codified in the Data Analysis Module of the WASSP process.

#### BellSouth Management Response

In April 1993, the Sample Selection User's Guide was prepared as Section 2 of the WASSP Policies and Procedures Manual. The purpose of this section of the manual is to provide the documentation and instructions necessary to process the Sample Selection Module of WASSP. Exhibit 4 in this user's guide is a table that lists the number and dates for each week in each month for 1993. This will eliminate the need for the sample selection operator having to assume responsibility for determining the number of weeks of each month as well as the date each week begins. This exhibit will be updated in November of each year for use in making the sample selections in the following year.

## TRACKING AND EVALUATION OF WORK ACTIVITY LOG ERRORS

## Observation and Background

A feedback system is not currently used to track and evaluate the number and type of errors being detected by the supervisors during their review of the technician's Logs or by the technical analysts during their review and interview procedures. Any errors noted by supervisors or technical analysts while performing their duties should be evaluated to determine any adverse impact on the sufficiency of the initial statistical sample of network technicians and to confirm that the extent of oversampling is sufficient to maintain targeted levels of statistical assurance.

#### **Recommendation**

Develop, document, and implement a feedback program to accumulate and statistically evaluate the continued validity of the Network Technician Labor Profiles for any errors identified by the supervisors and technical analysts on the Logs during their review procedures. Provide a mechanism within this process to evaluate the effect of any errors on the precision of the profiles and on the number of selections of network technicians required to participate in the WASSP Process.

## BellSouth Management Response

A Summary of Adjustments process has been developed and documented in the Technical Analyst Handook. However, this process has not yet been activated due to the fact that BST has been reviewing 100% of the work activity logs during the development phase of the WASSP project.

## III. COMPUTER PROCESSING APPLICATIONS AND CONTROLS

## EXTRACT FILE CREATION

## Observation and Background

Improper changes to the SQL routines may be made and not be detected. Mistakes could be made in entering the QMF and ISPF/PC commands while creating and down loading files.

#### Recommendation

Create five versions of the SQL routine, one for each sampling population. Add program statements to automatically save the files in the correct format and libraries. Add these programs to the automatic job scheduler.

## BellSouth Management Response

The SQL routine was replaced with a data extract application that no longer requires the operator to input the QMF and ISPF/PC commands. This will eliminate the concern over input errors while creating and downloading the files. Also, a DBASE IV program is now used to automatically format the universe of technicians into the appropriate text records, create a back up of the text files and print an output report listing the input and output files, file names and number of employees on each file. These reformatted records are distributed to 45 text files (one per state, per JFC work group, i.e., C:/WASSP/AL/4100.TXT) for mechanical input into the Sample Selection program. (See Note 1.)

#### Observation and Background

Files with similar names could be interchanged, resulting in improper processing in later stages of the WASSP process.

#### **Recommendation**

Maintain a manual log to detail the times, dates, and sizes of the files created. The log should also indicate the state for each file, the external label of the diskette, and the directory in which the files are stored. Require the operator to initial and date each entry in the log as documentation of procedure performance. Additionally, place external labels on diskettes that clearly indicate the states and time periods of the files contained on the diskettes. Finally, use naming conventions (e.g., "FL0193") when creating DOS directories to separate files and identify them to their time periods and states. Modify the programs described above to print an audit trail report showing the pertinent details of processing: file names, file sizes, file creation dates, any exceptions in processing.

#### **BellSouth Management Response**

Effective with the July 1993 sample selections processed in June, a DBASE IV program was used to reformat the text records containing the universe of technicians. These reformatted records are distributed to 45 text files (one per state, per JFC work group, i.e., C:\WASSP\AL\4100.TXT). These text files are backed up to a diskette labeled C:\CDATA\CPRSI.TXT for X month and year. This DBASE IV program also prints an audit trail report listing the Input Files, Output Files, Date Last Processed and the Number Of Employees on each output file. (See Note N)

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Observation and Background

Improper changes to work sheets and macro routines may be made and not be detected.

#### **Recommendation**

Modify file attributes in DOS to read-only. Modify macros to close the work sheet (without saving) automatically upon completing processing.

#### BellSouth Management Response

Effective with the May 1993 Sample Selections processed in April, the Sample Selection program was modified to incorporate the above recommendations.

#### Observation and Background

The IMPORT.WK3 macro may not execute as intended if the window and other global work sheet settings are not created as expected.

#### **Recommendation**

Modify the logic of the macro to set all window and global work sheet settings at the beginning of processing. Replace the {BIGRIGHT} command with program steps to position the cursor to a specific location prior to importing data into the NET1, NET2, NET3, NET4, and NET5 ranges.

#### BellSouth Management Response

Effective with the May 1993 Sample Selections processed in April, the Sample Selection program was modified to incorporate the above recommendations.

## Observation and Background

The IMPORT.WK3 macro is designed to require the operator to enter the name of the file (including subdirectory) to which the results of processing are to be saved. If the operator chooses a misleading name, errors may result in later processes.

#### **Recommendation**

Require the operator to maintain an audit trail of processing and use appropriate conventions (e.g., "\FL0192\NETWORK1.WK3") for naming files. Also require the operator to document in a log the names and contents of files created and to document any deviations from the expected procedures.

## BellSouth Management Response

The Sample Selection User's Guide documents the standardized sub-directory and file names (state abbreviations, quarter and year) required for the sample selection macro. A run log for documenting the date(s), names and contents of the files created will be added to incorporate these guidelines as soon as possible.

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## Observation and Background

Once the WASSP process is fully operational the operator will be required to execute the LASTSAMP.WK3 program 45 times each processing cycle once for each of the five network technician work groups in each of the nine states in the BellSouth geographic region, which is inefficient.

## Recommendation

Modify the logic of the LASTSAMP.WK3 macro to automatically execute all 45 network technician samples.

#### BellSouth Management Response

The macro was modified in April 1993 to run an entire state at once so that the macro is only executed nine times.

#### Observation and Background

The LASTSAMP.WK3 work sheet is designed to allow the operator to:

- Enter invalid sample choices (i.e., something other than 1, 2, 3, 4, or 5);
- Enter an incorrect file name to be read into the work sheet;
- Enter the sample period without a prompt; and
- Modify the Sample Size and Number of Weeks parameters incorrectly.

## **Recommendation**

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Modify the logic of the LASTSAMP.WK3 macro to perform additional edit checks and only allow valid responses.

## BellSouth Management Response

The macro was revised in April 1993 to accept only firmly established naming conventions for input files, to prompt the operator for the appropriate sample period and to only allow sample size within a range from an established minimum up to the universe size.

## FORTRAN APPLICATIONS

#### Observation and Background

Improper changes may be made to the FORTRAN programs and not be documented.

## Recommendation

Place the source code versions of the FORTRAN programs into a "test" environment to which the operator does not have access. Restrict the operator's access to FORTRAN source code and means for compiling programs into the production environment.

#### BellSouth Management Response

Beginning in April 1993, a specific User ID has been reserved for use by the Statistician. Permission for all programs accessed by WASSP Center Personnel has been changed to Execute only.

#### Observation and Background

File naming conventions do not identify the year of the period to be processed.

#### **Recommendation**

Modify the FORTRAN programs to use a file naming convention that includes the year of the period to be processed.

#### BellSouth Management Response

Since file storage limitations do not allow more than three months of data to be stored on-line at any one time, there can be only one JAN4150, for example, stored at any given time. Thus, BST does not consider the modification recommended to be necessary.

## Observation and Background

Errors can be made when maintaining the CODES and COUNT files.

#### **Recommendation**

Add programs for maintaining the CODES and COUNT files. These programs should contain edit routines to ensure that the records in the CODES and COUNT files are all in the proper format, and it should maintain a log of maintenance activity. Use password protection techniques to control maintenance using edit utilities or means other than the maintenance programs.

#### BellSouth Management Response

The CODES and COUNT files were password protected in April 1993 with the password coded into the appropriate FORTRAN programs. Since these programs have Execute only permission the user is not able to retrieve the password.

## Note 1 to BellSouth Management Response

Certain recommendations in Part II and Part III, as noted, were implemented subsequent to Deloitte & Touche's test period. However, it should be noted that BST has and will continue to have compensating controls in place and operating that mitigate the concerns raised by Deloitte & Touche. Thus, BST demonstrated that there were no impacts on the classification of the technician's time to the appropriate work function.

## WORK ACTIVITY STATISTICAL SAMPLING PROCESS

## B. ADDITIONAL OBSERVATIONS AND RECOMMENDATIONS RESULTING FROM PROCEDURES PERFORMED FOR THE THREE-MONTH PERIOD ENDED JUNE 30, 1993

## **REVIEW OF WORK ACTIVITY LOGS**

## Observation and Background

Interviews conducted by technical analysts do not always occur within the time requirement as prescribed under established WASSP criteria. Delays in analyst interviews occur primarily due to delays in the forwarding of Logs to the analyst as prescribed under established WASSP criteria.

#### Recommendation

Reinforce WASSP policies with supervisors to forward the completed and reviewed Logs to the analyst within the time requirements as prescribed under the established WASSP criteria.

#### WORK ACTIVITY LOG SIGN-OFF BY SUPERVISOR

#### Observation and Background

Analyst, supervisor, and data input personnel signatures on the Logs, although required upon completion of these individual's assigned duties, are not consistently obtained. Although it appears that the assigned duties are performed by these individuals, consistently requiring a signature will provide a means of documenting accountability.

#### **Recommendation**

Reinforce WASSP policies which require all analysts and supervisors to sign and date the Logs after their review. Reinforce similar WASSP policies with data input personnel.

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Special Study of the Work Activity Statistical Sampling Process

March 1993

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## SPECIAL STUDY OF THE WORK ACTIVITY STATISTICAL SAMPLING PROCESS MARCH 1993

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March 5, 1993

BellSouth Corporation 1155 Peachtree Street, N.E. Atlanta, Georgia 30367 Dear Sirs:

We are pleased to present the results of our special study to assess certain aspects of BellSouth Telecommunications, Inc.'s Work Activity Statistical Sampling Process (WASSP).

The WASSP methodology is a statistically-based time reporting methodology proposed to replace existing time reporting methods utilized by certain groups of network technicians. WASSP is intended to enhance the measurement of work activities which form the basis for the separation of costs of network technicians' regulated telecommunications work activities from the costs of nonregulated work activities.

The remainder of this report presents the scope and methodology employed in the study and our findings, conclusions and recommendations resulting from the study, which are presented in separate reports attached as Exhibits.

## SCOPE OF STUDY

Our study was performed at the request of BellSouth Corporation to provide an external assessment of the proposed WASSP methodology, which is in effect as a test system, not yet in production and awaiting regulatory approval. Our external assessment is intended to provide information to respond to the Federal Communications Commission (FCC) and state regulators, and this report should not be used for any other purpose.

Our study was performed pursuant to our proposal, dated December 1, 1992, and included two primary forms of assessment activity - Assessing System Functionality and Assessing Other Qualitative Factors.

#### Assessing System Functionality

The first form of assessment activity we performed was intended to assess the functionality of the WASSP methodology which was being applied as a test system to measure network technicians' regulated and nonregulated work activity in the state of Alabama during the three-month period ended December 31, 1992. Our report is included herein as Exhibit A.

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This assessment was made by conducting an examination of the system's actual measurement of network technicians' work activities for the three months ended December 31, 1992 in compliance with BellSouth's policies for time reporting under Part 32 - Uniform System of Accounts. Our examination was made in accordance with standards established by the American Institute of Certified Public Accountants and, accordingly, included such procedures as we considered necessary in the circumstances. As shown in Exhibit A, our opinion pertaining to the examination is unqualified. During the course of our work, we also formed observations relating to internal accounting controls and have included recommendations pertaining thereto in our Letter of Recommendations at Exhibit C.

The specific procedures we employed generally paralleled the three primary modules utilized in the WASSP process - Sample Selection, Data Collection and Data Analysis. A summary of our primary procedures performed to test each of those modules is included in Exhibit B. Those procedures were performed, together with other procedures, to form our opinion included in Exhibit A.

## Assessing Qualitative Issues

In addition to performing the examination to test the functionality of the WASSP process applied on a test basis, we also performed a series of procedures to assess certain aspects of WASSP which would not be comprehended by the aforementioned test of system functionality. Our procedures in these areas were conducted to assess specific aspects of the WASSP process, evaluate and conclude on our findings and suggest recommendations for improvement or modifications to existing or proposed practices. The qualitative issues comprehended by these procedures included:

- Estimated annual net cost savings associated with the implementation of the WASSP process in the ninestate BellSouth geographic region,
- Analysis of the reporting impacts associated with the proposed implementation of the WASSP process in the state of Alabama and an estimate of impacts for the BellSouth nine-state geographic region, based on the Alabama data, pertaining to the application of Part 32, Part 64, Part 36, and Part 69 of the Rules and Regulations of the FCC,
- Assessment of the suitability of the WASSP methodology for time reporting by network technicians in all nine states in the BellSouth geographic region,
- Assessment of policies and procedures associated with the technical analyst,
- Assessment of controls associated with the WASSP process, and
- Assessment of the relevance and suitability of WASSP reporting procedures in the event of possible natural disasters, including disaster recovery procedures pertaining to the WASSP computer-based systems.

For two of the issues listed above, the estimated annual net cost savings associated with the implementation of the WASSP process and the analysis of the reporting impacts pertaining to the application of Part 32, Part 64, Part 36 and Part 69 of the Rules and Regulations of the FCC, the procedures we performed and our findings are included in separate reports presented in Exhibits D and E, respectively.

For each of the remaining qualitative issues described above, the approach utilized in our procedures and our summary findings and recommendations are as follows:

I. Suitability of The WASSP Methodology for Time Reporting by Network Technicians in all Nine States in the BellSouth Geographic Region

Our approach to assessing the suitability of the WASSP methodology for time reporting by network technicians in all nine states in the BellSouth geographic region included the following:

- Obtained an understanding of the critical attributes of the WASSP time reporting process (i.e., input information, forms, organizational infrastructure, sampling methodology, review procedures and data analysis) and the transferability of the existing attributes between states. This included:
  - Reading applicable WASSP literature,
  - Interviewing management, technical analysts, supervisors, BellSouth's staff statistician, and network technicians to obtain an understanding of their job duties and to solicit their views of differences in job functions across the nine states,
  - Examining forms and reports used in the WASSP process (i.e., instructions, Work Activity Logs ("Logs") and IMOUT allocation reports).
- Assessed the consistency of applicable policies and procedures of network technicians pertaining to time reporting between states in which the WASSP methodology is being trialed. This included:
  - Accompanying network technicians in the states of Alabama, Tennessee, and Kentucky on actual trouble jobs to assess the similarities in job duties and time reporting procedures,
  - Interviewing network technicians supervisors and technical analysts to assess the similarities in job duties,
  - Observing technical analysts in the performance of the job duties to assess the similarities in review procedures,
  - Examining applicable WASSP time reporting forms to assess the consistency of network technician work groups and field reporting codes between states.
- Interviewed time reporting management in each of the nine states in the BellSouth geographic region to assess the consistency of time reporting practices and state demographic differences under existing MTR and proposed WASSP methodologies.

Based on our assessment, the WASSP process appears to be a suitable methodology in all nine states in the BellSouth geographic region. The critical attributes of the WASSP process (i.e., input information, forms, organizational infrastructure, sampling methodology, review procedures, and data analysis) appear to be substantially identical in the states currently utilizing the WASSP process on a trial basis. Further, our assessment did not disclose the absence of any critical attributes that would

- 3 -

be required for the implementation of WASSP in the remaining states in which trials have not been performed.

Based upon our assessment, we have recommended that BellSouth:

- Create and maintain a policies and procedures manual to incorporate all aspects of the WASSP process and disseminate this manual to those time reporting personnel who will benefit from its use.
- Eliminate network technician use of informal logs in areas where the Craft Access System is utilized.
- Consider reducing the number of analyst interviews through the use of one region-wide interview sample versus separate interview samples for each state.

The detailed recommendations pertaining to these items are included in our Letter of Recommendations at Exhibit C.

II. Policies and Procedures Associated with the Technical Analyst

Our approach to assessing the policies and procedures associated with the technical analyst included consideration of several aspects, such as:

- Supervision,
- Knowledge of FCC time reporting requirements,
- Ability to question supervisor or technician or challenge the time reported by the technician,
- Effectiveness of the interview process,
- Rotation,
- Absences due to sickness or vacation, and
- Training.

Our approach consisted of obtaining an understanding of the policies and procedures associated with the above aspects of the technical analyst through:

- Interviewing and observing job performance of the technical analysts to understand their duties, job functions, background, experience, training, knowledge of FCC time reporting rules and effective interview techniques,
- Interviewing supervisors and technicians to assess their perceptions of the effectiveness of the analyst interview process, and
- Interviewing management who have supervisory responsibility over the analysts to assess their perception of the analyst's ability to perform identified job functions.

- Assessed the information available to the analysts to perform identified job duties including the following;
  - BellSouth time reporting manuals, and
  - Access to source data of network technician time reporting.

Based on our assessment, the policies and procedures relating to the technical analysts appear to allow for effective administration of the WASSP process based on established criteria for this position. Supervision of the technical analysts is conducted by WASSP management with considerable experience in FCC time reporting requirements. The current centralization of the analyst location further facilitates efficient supervision. Technical analysts appear to have sufficient knowledge of FCC time reporting requirements through practical work experience and a working knowledge of BellSouth time reporting policies.

The format of the technical analyst interview process is structured to permit technical analyst phone interviews with supervisors of randomly selected network technicians who have submitted Logs. The interview requires the supervisor to describe the network technician's work activities based on source documentation maintained at the supervisors location.

This process appears reasonably effective; however, the effectiveness of the function could be enhanced in several respects and, based upon our assessment, we recommend that:

- Source documentation of network technicians work activities be forwarded to the technical analyst concurrently with the completed Logs,
- Develop, document, and implement a formal training program for technical analysts, and
- Develop, document, and implement a plan for rotation and coverage during absence or illness of the technical analysts.

The detailed recommendations pertaining to these items are included in our Letter of Recommendations at Exhibit C.

III. Controls Associated with the WASSP Process

We assessed the controls associated with the WASSP process to include general computer controls and application system controls in the following areas:

## **General Computer Controls**

- Security
- Program Changes
- Computer Operations

- **Application System Controls**
- Sample Selection Module
- Data Collection Module
- Data Analysis Module

Our approach to assessing general computer controls included the following:

- Assessed mechanized and manual measures for securing the WASSP systems,
- Assessed program testing and quality control procedures, and
- Assessed the schedule for processing of WASSP programs and related procedures.

Our approach to assessing applications system controls included the following:

- Assessed the procedures for creating data extract files, transferring of such files to diskettes, and maintenance of such diskettes after transfer,
- Analyzed each field in the data extract to determine how the field is used to satisfy the sampling plan,
- Analyzed the contents of Lotus 1-2-3 files after extract import to identify the state and time period being processed,
- Assessed the mechanized and manual measures that all data is accurately and completely obtained and processed,
- · Analyzed data entry procedures and edits, and
- Analyzed input edits, program logic, and statistical methodology associated with the EXTRACT, SAMPLER, and IMOUT computer applications.

Based upon our assessment, recommendations have been made in the following general areas:

- "Extract" file creation and maintenance
- Lotus 1-2-3 file creation and maintenance
- Fortran programming controls.

The detailed recommendations pertaining to these items and detailed recommendation on controls resulting from the attestation engagement are included in our Letter of Recommendations at Exhibit C.

IV. Relevance and Suitability of WASSP Reporting Procedures in the Event of Natural Disasters

To assess the relevance and suitability of WASSP reporting procedures in the event of natural disasters, including disaster recovery procedures pertaining to WASSP computer-based systems, our approach consisted of first obtaining an understanding of BellSouth's policies and procedures. We conducted interviews of management, technical analysts, supervisors, and network technicians to solicit their views on the effect of a natural disaster on the following:

- Sample selection,
- Work activities performed by network technicians,
- Reporting procedures,

- Analyst and Supervisor review procedures, and
- Allocation of work activities between regulated and nonregulated services.

We also conducted interviews and reviewed written backup and recovery procedures pertaining to disaster recovery procedures for WASSP computer-based systems.

Backup policies and procedures have been prepared for cases where the WASSP process is not available to be utilized due to a disaster affecting the WASSP system. Disaster recovery plans included offsite storage, maintenance of manual records of network technician work activities, backup of WASSP programs and data, and the use of the most recent WASSP-generated network technician labor profiles until the system is restored.

Management believes that the WASSP system would continue to be functional in the event of a natural disaster and proposes to instruct users of the methodology to continue to use the system, as permitted by the circumstances. Based upon our assessment, we have recommended that BellSouth develop written policies in relation to the effect of a natural disaster on the various aspects of WASSP process to include:

- Sample selection,
- Performance of work activities,
- Reporting procedures,
- Supervisor and analyst review procedures,
- Analysis of work activity data, etc.

The detailed recommendation pertaining to this item is included in our Letter of Recommendations in Exhibit C.

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We would like to acknowledge the excellent cooperation and assistance given our study team during the course of our study. We would be pleased to discuss any aspect of our report with you.

We appreciate this opportunity to be of service.

Very truly yours,

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## INDEPENDENT ACCOUNTANTS' ATTESTATION REPORT

BellSouth Corporation Atlanta, Georgia

We have examined the accompanying Statement of Network Technician Labor Distribution Profiles for the state of Alabama for the three-month period ended December 31, 1992. Our examination was made in accordance with standards established by the American Institute of Certified Public Accountants and, accordingly, included such procedures as we considered necessary in the circumstances. This Statement is the responsibility of the Company's management. Our responsibility is to express an opinion on the Statement based on our examination.

The Statement of Network Technician Labor Distribution Profiles was derived from BellSouth Telecommunications, Inc.'s Work Activity Statistical Sampling Process (WASSP) on the basis described in the Notes to the Statement of Network Technician Labor Distribution Profiles.

In our opinion, the Statement of Network Technician Labor Distribution Profiles for the state of Alabama referred to above presents, in all material respects, the Network Technician Labor Distribution Profiles for the state of Alabama for the three-month period ended December 31, 1992 in conformity with the basis described in the Notes.

Atlanta, Georgia March 5, 1993

## STATEMENT OF NETWORK TECHNICIAN LABOR DISTRIBUTION PROFILES FOR THE STATE OF ALABAMA THREE-MONTH PERIOD ENDED DECEMBER 31, 1992

## WORK GROUP - I&M CORPORATE COMMUNICATIONS JOB FUNCTION CODE - 4130

Labor Field Distribution Reporting Description Percentage Code .13% 22R **AERIAL CBL-METALLIC** .60% **BURIED CBL-METALLIC** 45M .18% **BURIED CBL-METALLIC** 45R .02% **BURIED SVC WIRE (DROPS)** 548M .10% INTRABLDG NETWK CBL-METALLIC 52M .24% INTRABLDG NETWK CBL-METALLIC 52R OTH NON-CPE EQPT EXP-NETWK TERM WIRE-INSTI .37% 68E OTH NON-CPE EQPT EXP-NETWK TERM WIRE .02% 68M .04% OTH NON-CPE EQPT EXP-NETWK TERM WIRE 68R .02% CIRC EOPT-DIGITAL-SUB PR GN SYS 257R .05% OTH TERM EQPT-SUB PR GN EQPT 758M OTH TERM EQPT DIGITAL NON-CPE NCTE .11% 378C OTH TERM EQPT DIGITAL NON-CPE NCTE-REG .05% 378M .25% **OTH TERM EQPT-ANALOG NCTE** 558C .18% **OTH TERM EOPT-ANALOG NCTE** 558M COMPANY COMM STAND ALONE 7.03% 728C 23.41% COMPANY COMM EQPT 658M .75% COMPANY COMM EQPT-PBX INSTALLATIONS 658C 3.21% COMPANY COMM INTRASYS 628C DATA CONTROLLERS & WORKSTATIONS 21.98% 730C DATA CONTROLLERS & WORKSTATIONS 23.21% 630M .61% MISC MEETINGS 5532 EXCELLENCE THROUGH QUALITY (QWL) .38% 5534 .61% GEN CLASSROOM TRAINING 5535 .05% OTH UNCLASSIFIED PROD COSTS (E.G., NO ACCESS) 5536 .63% NO TROUBLE FOUND 553A 12.01% **TRAVEL & BREAKS** TRVL **OTH NON-CPE EOPT EXP-NTWK TERMINATING** 68Y .05% WIRE-RMVL CO COMM INTRSYSTEM - ACCUM DEPR .17% 628X CO COMM EQ-STA APPARATUS EQ-ACCUM DEPR 1.41% 728X DATA CONTROLLERS & WORKSTATIONS-OTH COSTS-730X 1.98% ACCUM DEPR .02% 510C STOREROOM .04% **REMOVAL OF CORPORATE EQUIPMENT - ACCUM DEPR** 658X **BURIED CABLE - FIBER** ź .09% 845M

## TOTAL - I&M CORPORATE COMMUNICATIONS <u>100.00%</u>

PRELIMINARY DRAFT - FOR DISCUSSION PURPOSES ONLY. TO BE RETURNED TO DELOTTE A TOUCHE, AND NOT TO BE REPRODUCED IN ANY FORM WITHOUT THEIR PENMISSION.

## STATEMENT OF NETWORK TECHNICIAN LABOR DISTRIBUTION PROFILES FOR THE STATE OF ALABAMA THREE-MONTH PERIOD ENDED DECEMBER 31, 1992 (Continued)

## WORK GROUP - I&M POTS JOB FUNCTION CODE - 4150

Field Reporting Code	Description	Labor Distribution Percentage
0000		
22M	AERIAL CBL-METALLIC	2.72%
22R	AERIAL CBL-METALLIC	4.89%
45M	BURIED CBL-METALLIC	5.24%
45R	BURIED CBL-METALLIC	7.46%
248C	AERIAL SVC WIRE (DROPS)	5.23%
248M	AERIAL SVC WIRE (DROPS)	6.95%
248R	AERIAL SVC WIRE (DROPS)	4.01%
548C	BURIED SVC-WIRE	2.92%
548M	BURIED SVC-WIRE	2.02%
548R	BURIED SVC-WIRE	2.86%
52M	INTRABLDG NETWK CBL-METALLIC	.03%
52R	INTRABLDG NETWK CBL-METALLIC	.01%
68E	OTH NON-CPE EQPT EXP-NETWK TERM WIRE INSTL	.94%
68M	OTH NON-CPE EOPT EXP-NETWK TERM WIRE	.44%
68R	OTH NON-CPE EOPT EXP-NETWK TERM WIRE	.54%
257M	CIRC EOPT-DIGITAL-SUB PR GN SYS	.05%
257R	CIRC EOPT-DIGITAL-SUB PR GN SYS	.53%
377M	DIGITAL ELECTRONIC SWITCH EOPT	.22%
377R	DIGITAL ELECTRONIC SWITCH EOPT	.02%
378C	OTH TERM EOPT DIGITAL NON-CPE NCTE	.01%
97BI	INSIDE WIRE-BASIC-INSTL & REARRANGE	3.28%
97BW	INSIDE WIRE-BASIC-WARRANTY	.24%
97BP	INSIDE WIRE-BASIC-SVC PLAN	7.39%
97BR	INSIDE WIRE-BASIC-MTCE	.64%
98EI	INSIDE WIRE-NON BASIC INSTL & REARRANG	.72%
98EW	INSIDE WIRE-NON BASIC WARRANTY	.01%
98ER	INSIDE WIRE-NON BASIC TIME & MTL	.12%
5532	MISC MEETINGS	1.82%
5533	UNION ACTIVITIES (PAID)	.18%
5534	EXCELLENCE THROUGH QUALITY (QWL)	.80%
5535	GEN CLASSROOM TRAINING	.29%
5536	OTH UNCLASSIFIED PROD COSTS (E.G., NO ACCESS)	1.08%
553A	NO TROUBLE FOUND	2.77%
TRVL	TRAVEL & BREAKS	33.17%

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## STATEMENT OF NETWORK TECHNICIAN LABOR DISTRIBUTION PROFILES FOR THE STATE OF ALABAMA THREE-MONTH PERIOD ENDED DECEMBER 31, 1992 (Continued)

## WORK GROUP - I&M POTS JOB FUNCTION CODE - 4150 (Continued)

Field Reporting		Labor Distribution
Code	Description	Percentage
3C	AERIAL WIRE	.23%
3M	AERIAL WIRE	.02%
3R	AERIAL WIRE	.12%
248X	AERIAL SVC WIRE (DROPS)-ACCUM DEPR	.02%
68Y	OTH NON-CPE EQPT EXP-NTWK TERMINATING	
	WIRE-RMVL	.01%
	TOTAL - I&M POTS	100 00%

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## STATEMENT OF NETWORK TECHNICIAN LABOR DISTRIBUTION PROFILES FOR THE STATE OF ALABAMA THREE-MONTH PERIOD ENDED DECEMBER 31, 1992 (Continued)

## WORK GROUP - I&M PUBLIC COMMUNICATIONS (COIN) JOB FUNCTION CODE - 4180

Field Reporting Code	Description	Labor Distribution Percentage
22M	AERIAL CBL-METALLIC	.15%
22R	AERIAL CBL-METALLIC	.87%
45M	BURIED CBL-METALLIC	1.24%
45R	BURIED CBL-METALLIC	1.02%
248C	AERIAL SVC WIRE (DROPS)	1.05%
248M	AERIAL SVC WIRE (DROPS)	.64%
248R	AERIAL SVC WIRE (DROPS)	1.03%
548C	BURIED SVC WIRE (DROPS)	.88%
548M	BURIED SVC WIRE (DROPS)	.07%
548R	BURIED SVC WIRE (DROPS)	.43%
68E	WIRE-INSTI	.58%
68R	OTH NON-CPE EQPT EXP-NETWK TERM WIRE	.07%
257R	CIRC EQPT-DIGITAL-SUB PR GN SYS	.03 %
98EW	INSIDE WIRE-NON BASIC WARRANTY	.02%
98ER	INSIDE WIRE-NON BASIC TIME & MTL	.10%
88M	PUB TEL TERM EQPT UNIV	.37%
88Y	PUB TEL TERM EQPT UNIV RMVL	.08%
188E	PUB TEL TERM EQPT-COIN OP-INSTL	5.45%
188M	PUB TEL TERM EQPT-COIN OP	39.16%
188Y	PUB TEL TERM EQPT-COIN OP RMVL	3.05%
288E	PUB TEL TERM EQPT-COINLESS INSTALLATION	.06%
288M	PUB TEL TERM EQPT-COINLESS	1.44%
288Y	PUB TEL TERM EQPT-COINLESS-EXP-RMVL	.39%
78E	PUB TEL TERM EQPT PUB-CPE-INSTL	.13%
78Y	PUB TEL TERM EQPT PB-CPE RMVL	.02%
988E	PUB TEL TERM EQPT-INSTALLATION	.21%
988M	PUB TEL TERM EQPT	.76%
988Y	PUB TEL TERM EQPT-RMVL	.19%
5532	MISC MEETINGS	3.97%
5533	UNION ACTIVITIES (PAID)	.15%
5535	GEN CLASSROOM TRAINING	.32%
5536	'OTH UNCLASSIFIED PROD COSTS (E.G., NO ACCESS)	.47%
553A	NO TROUBLE FOUND	1.22%

## STATEMENT OF NETWORK TECHNICIAN LABOR DISTRIBUTION PROFILES FOR THE STATE OF ALABAMA THREE-MONTH PERIOD ENDED DECEMBER 31, 1992 (Continued)

## WORK GROUP - I&M PUBLIC COMMUNICATIONS (COIN) JOB FUNCTION CODE - 4180 (Continued)

Field Reporting Code	Description	Labor Distribution Percentage
TRVL	TRAVEL & BREAKS	33.29%
248X	AERIAL SVC WIRE (DROPS)-ACCUM DEPR	.06%
68Y	OTH NON-CPE EQPT EXP-NTWK TERMINATING	
	WIRE-RMVL	.05%
510C	STOREROOM	<u>98%</u>
	TOTAL - I&M PUBLIC COMMUNICATIONS (COIN)	<u>100.00%</u>

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## STATEMENT OF NETWORK TECHNICIAN LABOR DISTRIBUTION PROFILES FOR THE STATE OF ALABAMA THREE-MONTH PERIOD ENDED DECEMBER 31, 1992 (Continued)

## WORK GROUP - I&M SPECIAL SERVICES (SSI&M) JOB FUNCTION CODE - 4190

Field Reporting		Labor Distribution
Code	Description	Percentage
22M	AERIAL CBL-METALLIC	2.54%
22R	AERIAL CBL-METALLIC	1.58%
45M	BURIED CBL-METALLIC	10.45%
45R	BURIED CBL-METALLIC	3.10%
248C	AERIAL SVC WIRE (DROPS)	1.42%
248M	AERIAL SVC WIRE (DROPS)	.67%
248R	AERIAL SVC WIRE (DROPS)	.82%
548C	BURIED SVC WIRE (DROPS)	.26%
548M	BURIED SVC WIRE (DROPS)	.09 %
548R	BURIED SVC WIRE (DROPS)	.17%
12M	AERIAL CBL-METALLIC-BLDG ENT	1.49%
12 <b>R</b>	AERIAL CBL-METALLIC-BLDG ENT	.41%
52M	INTRABLDG NETWK CBL-METALLIC	.63%
52R	INTRABLDG NETWK CBL-METALLIC	.35%
68E	OTH NON-CPE EQPT EXP-NETWK TERM WIRE-INSTL	16.22%
68M	OTH NON-CPE EOPT EXP-NETWK TERM WIRE	2.42%
68R	OTH NON-CPE EOPT EXP-NETWK TERM WIRE	1.70%
257M	CIRC EOPT-DIGITAL-SUB PR GN SYS	.91%
257R	CIRC EOPT-DIGITAL-SUB PR GN SYS	.23%
F257R	OPTIC FEEDER	.16%
758M	OTH TERM EOPT-SUB PR GN EOPT	.04%
378C	OTH TERM EOPT DIGITAL NON-CPE NCTE	1.07%
378M	OTH TERM EOPT DIGITAL NON-CPE NCTE-REG	.63%
358NM	OTH TERM EOPT DIGITAL CPE NCTE	.01%
558C	OTH TERM EOPT-ANALOG NCTE	2.86%
558M	OTH TERM EOPT-ANALOG NCTE	2.22%
418M	STA APPARATUS-BOC OWNED-REGULATED	2.65%
97BI	INSIDE WIRE-BASIC-INSTL & REARRANGE	.06%
97BW	INSIDE WIRE-BASIC-WARRANTY	.04%
97BP	INSIDE WIRE-BASIC-SVC PLAN	.34%
97BR	INSIDE WIRE-BASIC-MTCE	7.37%
98EW	INSIDE WIRE-NON BASIC WARRANTY	.12%
98ER	INSIDE WIRE-NON BASIC TIME & MTL	.43%

PRELIMINARY DRAFT - FOR DISCUSSION PURPOSES ONLY. TO BE RETURNED TO DELOTTE & TOUCHE, AND NOT TO BE REPRODUCED IN ANY FORM WITHOUT THEIR PERMISSION.

## STATEMENT OF NETWORK TECHNICIAN LABOR DISTRIBUTION PROFILES FOR THE STATE OF ALABAMA THREE-MONTH PERIOD ENDED DECEMBER 31, 1992 (Continued)

## WORK GROUP - I&M SPECIAL SERVICES (SSI&M) JOB FUNCTION CODE - 4190 (Continued)

Field Reporting		Labor Distribution
Code	Description	Percentage
730C	DATA CONTROLLERS & WORKSTATIONS	12%
5532	MISC MEETINGS	2.31%
5533	UNION ACTIVITIES (PAID)	.06%
5534	EXCELLENCE THROUGH QUALITY (OWL)	2.33%
5535	GEN CLASSROOM TRAINING	.50%
5536	OTH UNCLASSIFIED PROD COSTS (E.G., NO ACCESS)	.31%
553A	NO TROUBLE FOUND	2.29%
TRVL	TRAVEL & BREAKS	26.94%
248X	AERIAL SVC WIRE (DROPS)-ACCUM DEPR	.01%
68Y	OTH NON-CPE EOPT EXP-NTWK TERMINATING	
	WIRE-RMVL	1.33%
1 <b>58M</b>	LGE PBX BOC OWNED-911 INSTALLATIONS	.09%
540M	OTH WORK EOPT PLANT CHARGES	.11%
558X	OTH TERM EQPT-ANALOG NCTE-ACCUM DEPR	.14%
	TOTAL - I&M SPECIAL SERVICES (SSI&M)	100.00%

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## STATEMENT OF NETWORK TECHNICIAN LABOR DISTRIBUTION PROFILES FOR THE STATE OF ALABAMA THREE-MONTH PERIOD ENDED DECEMBER 31, 1992 (Continued)

## WORK GROUP - CABLE REPAIR JOB FUNCTION CODES - 4230, 4240

Field		Labor
Reporting		Distribution
Code	Description	Percentage
22M	AERIAL CBL-METALLIC	1.15%
22R	AERIAL CBL-METALLIC	17.44%
45M	BURIED CBL-METALLIC	1.59%
45R	BURIED CBL-METALLIC	13.06%
248C	AERIAL SVC WIRE (DROPS)	.25%
248M	AERIAL SVC WIRE (DROPS)	1.01%
248R	AERIAL SVC WIRE (DROPS)	3.70%
548C	BURIED SVC WIRE (DROPS)	.17%
548M	BURIED SVC WIRE (DROPS)	.57%
548R	BURIED SVC WIRE (DROPS)	2.39%
68E	OTH NON-CPE EQPT EXP-NETWK TERM WIRE-INSTI	.03%
68M	OTH NON-CPE EQPT EXP-NETWK TERM WIRE	.02%
68R	OTH NON-CPE EQPT EXP-NETWK TERM WIRE	.25%
5M	UG CBL-METALLIC	1.82%
5R	UG CBL-METALLIC	2.21%
257M	CIRC EQPT-DIGITAL-SUB PR GN SYS	8.18%
257R	CIRC EQPT-DIGITAL-SUB PR GN SYS	3.39%
377M	DIGITAL ELECTRONIC SWITCH EQPT	.01%
377R	DIGITAL ELECTRONIC SWITCH EQPT	.03%
F257M	OPTIC FEEDER	.29%
758M	OTH TERM EQPT-SUB PR GN EQPT	.09%
97BI	INSIDE WIRE-BASIC-INSTL & REARRANGE	.08%
97BW	INSIDE WIRE-BASIC-WARRANTY	.01%
97BP	INSIDE WIRE-BASIC-SVC PLAN	3.80%
97BR	INSIDE WIRE-BASIC-MTCE	.70%
98EI	INSIDE WIRE-NON BASIC INSTL & REARRANG	.03%
98EW	INSIDE WIRE-NON BASIC WARRANTY	.01%
98ER	INSIDE WIRE-NON BASIC TIME & MTL	.21%
728C	COMPANY COMM STAND ALONE	.05%
658M	COMPANY COMM EQPT	.30%
730C	DATA CONTROLLERS & WORKSTATIONS	.15%
630M	DATA CONTROLLERS & WORKSTATIONS	.05%
5532	MISC MEETINGS	1.48%
5534	EXCELLENCE THROUGH QUALITY (QWL)	.79%
5535	GEN CLASSROOM TRAINING	1.25%
5536	OTH UNCLASSIFIED PROD COSTS (E.G., NO ACCESS)	.82%
553A	NO TROUBLE FOUND	2.28%
5539	OTH MTCE EXP	.13%

## STATEMENT OF NETWORK TECHNICIAN LABOR DISTRIBUTION PROFILES FOR THE STATE OF ALABAMA THREE-MONTH PERIOD ENDED DECEMBER 31, 1992 (Continued)

## WORK GROUP - CABLE REPAIR JOB FUNCTION CODES - 4230, 4240 (Continued)

Field Reporting		Labor Distribution
Code	Description	Percentage
TRVL	TRAVEL & BREAKS	29.71%
3C	AERIAL WIRE	.18%
3M	AERIAL WIRE	.01%
3R	AERIAL WIRE	.17%
248X	AERIAL SVC WIRE (DROPS)-ACCUM DEPR	.01%
510C	STOREROOM	.01%
845M	BURIED CABLE - FIBER	.12%
	TOTAL - CABLE REPAIR	<u>100.00%</u>

## NOTES TO STATEMENT OF NETWORK TECHNICIAN LABOR DISTRIBUTION PROFILES FOR THE STATE OF ALABAMA FOR THE THREE-MONTH PERIOD ENDED DECEMBER 31, 1992

#### 1. BASIS OF PRESENTATION

The accompanying Statement of Network Technician Labor Distribution Profiles presents, in summary form, the result of BellSouth Telecommunications, Inc.'s (BellSouth) Work Activity Statistical Sampling Process (WASSP) applied to measure the activities of groups of network technicians in the State of Alabama during the three-month period ended December 31, 1992 for reporting in accordance with BellSouth's policies pertaining to the application of Part 32 - Uniform System of Accounts. WASSP was applied to measure the work activities of network technicians operating in five Installation and Maintenance (I&M) work groups using statistical sampling and evaluation techniques, as follows:

I&M - Corporate Communications I&M - POTS I&M - Public Communications I&M - Special Services (SSI&M) Cable Repair

For each I&M and Cable Repair work group, the Statement presents a three-month composite profile of the percentages of work activity summarized by specific work activity descriptions which correspond to defined field reporting codes. Field reporting codes form the basis for reporting of network technician time into BellSouth's financial systems.

# 2. DESCRIPTION OF THE WORK ACTIVITY STATISTICAL SAMPLING PROCESS (WASSP)

WASSP is a statistical methodology designed to gather sample data and statistically estimate the work activity of work reporting groups. WASSP consists of three related process modules for sample selection, data collection, and data analysis. Each of these process modules are described below:

#### The Sample Selection Module

The Sample Selection Module has been designed to select a statistically valid sample of network technicians from the Payroll Master Database (PMDB), a BellSouth database used to maintain employee information. The EXTRACT program of the Sample Selection Module searches the PMDB and stratifies the universe of employees into homogenous categories based upon state boundaries and work groups (by job function code). For each job function code, the SAMPLER program generates a random sample of technicians to participate in the work activity log completion portion of the Data Collection Module. Network technicians selected will participate in the process for one work week. The SAMPLER program of the Sample Selection Module simultaneously generates a random sample of technicians to participate in the technical analyst interview portion of the Data Collection Module. Logs (Logs) for three days of the selected network technician's work week are randomly selected for technical analyst teview procedures described in the Data Collection Module.

Sample size and the structure of the sample has been designed so that a three-month Network Technician Labor Distribution Profile is targeted to achieve a 95% confidence level with a precision of  $\pm 3\%$  for each field reporting code profile percentage estimated by WASSP. The precision corresponds to approximately  $\pm$  fifteen minutes, the lowest increment of time reporting for network technicians under the WASSP time reporting process. Technicians selected are oversampled in the Sample Selection Module to account for days on which the technicians are not present (i.e., vacations, illness, and weekend/weekday shifts).

## The Data Collection Module

Prior to the week sampled, a list of the technicians to be sampled, the appropriate Logs, and instructions are forwarded to each sampled technician's manager by the technical analyst. The manager then disseminates the Logs and instructions to a supervisor for dispersal to the selected technicians. Technicians participating in WASSP report their time by work activity in minimum increments of fifteen minutes. Logs have been developed for each work group listing predominant work activities of each subject work group.

Once completed by the network technician, the Logs are submitted to the supervisor who reviews the Logs. Discrepancies are resolved and the Logs reviewed by the supervisor are forwarded to the <u>technical analyst</u> for additional review.

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Telephone interviews of the technician's supervisor are conducted to test a random sample of network technician's Logs. The selection of those to be interviewed is determined through the Sample Selection Module. The interviews are generally conducted within three business days of the Log preparation date and prior to the input of the work activity data into the WASSP database processor. The interviews are conducted by the technical analysts and are accomplished through telephone interviews with the selected technician's supervisor. The interviews consist of the supervisor reviewing the source documentation with the analyst who compares such information to that recorded on the Log. If errors are detected and cannot be resolved, the technical analyst contacts the network technican directly. Once resolved, errors are corrected by the technical analyst on the Log.

#### The Data Analysis Module

Work activity data, derived from the Logs, are input into the WASSP database processor. The INPUT program of the WASSP database processor provides for the input of the sampled data and stores the input data in files by work group. Data in the files can be changed, appended, or deleted using the INPUT program.

The IMOUT program of the WASSP database processor develops the time distribution ratios and other data analysis for each work group for which labor distribution percentages are estimated by WASSP. WASSP distributes the increments of hours reported to each field reporting code and calculates the percentage of time assigned to each field reporting code.

Data generated by WASSP is available to interfacing MTR systems with no changes to formats or requirements. The WASSP allocation profiles are available to be input into the MTR time reporting tables and would be available for MTR off-line processing to create a report detailing the field codes which have been generated and passed to the Company's Financial Processor (FP).

PRELIMINARY DRAFT - FOR DISCUSSION PURPOSES ONLY. TO BE RETURNED TO DELOTTE & TOUCHE, AND NOT TO BE REPRODUCED IN ANY FORM WITHOUT THEIR PERMISSION.

## EXHIBIT B

## **BELLSOUTH CORPORATION**

## SUMMARY OF PRIMARY PROCEDURES PERFORMED

Exhibit A includes an attestation report pertaining to an examination of the Statement of Network Technician Labor Distribution Profiles for the state of Alabama for the three-month period ended December 31, 1992. This summary presents the primary procedures we performed as part of our examination. These procedures represent only a partial listing and were conducted to form our opinion included in Appendix A but not to express an opinion on any of the individual WASSP processes.

The procedures we performed were structured to parallel the three modules in the WASSP statistical estimation process as follows:

Test of Sample Selection Module Test of Data Collection Module Test of Data Analysis Module

## **Tests of Sample Selection Module**

Perform tests to verify the completeness and accuracy of network technician input information from which samples are selected and to validate the computer applications utilized to process such information. The primary procedures for this phase include:

• Test the completeness of the database which provides network technician information for sampling. Test the accuracy of the employee information (i.e., name, responsibility code, social security number, job function code, etc.) by referencing, via random sample, both to and from independent source documents.

• Review and test the methodology and the program logic of the computer applications in the sample selection module as to the applications' statistical selection process.

#### **Test of Data Collection Module**

Obtain an understanding of and test the administration of the collection of network technician data. The primary procedures for this phase include:

- Document the procedures and related oversight controls associated with the data collection process,
- Test compliance with the stated procedures by selecting field technicians and examining documentary evidence of compliance with data collection procedures, and
- Test the effectiveness of data collection procedures to accurately reflect the field technician assignment of work activity to the appropriate Field Reporting Code by comparing the reported work activity for a limited number of selected field technicians to independent source documents (i.e., assignment records, trouble tickets, dispatch records, etc.).
# **Test of Data Analysis Module**

Review the data analysis methodology and test the computer applications utilized to process the data. The procedures for this phase include:

- Review the statistical methodology associated with the analysis of information obtained from the Data Collection Module,
- Obtain an understanding of design and coding of the data analysis specifications to process the network technician work activity,
- Test the validity of the computer allocation of work activity by reprocessing the data obtained in the data collection module under audit control,
- Test the validity of input data by agreeing the network technicians' work activity as selected in the data collection module to the related input program source, and
- Test the validity of output data by agreeing the network technicians' work activity, as selected above, to the proper inclusion in the output file.

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EXHIBIT C

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March 5, 1993

BellSouth Corporation 1155 Peachtree Street, N.E. Atlanta, Georgia 30367

Dear Sirs:

This report contains observations and recommendations related to certain matters noted during our special study pertaining to the BellSouth Telecommunications, Inc. Work Activity Statistical Sampling Process (WASSP). We believe the observations and recommendations will be useful to you in improving the WASSP process.

This report is intended solely for the use of BellSouth management and to assist you in responding to inquiries from the Federal Communications Commission or state regulatory authorities. We would be please to discuss these comments with you and, if desired, to assist you in implementing any of them.

Yours truly,

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## BELLSOUTH CORPORATION

# WORK ACTIVITY STATISTICAL SAMPLING PROCESS

## **OBSERVATIONS AND RECOMMENDATIONS**

### I. POLICIES AND PROCEDURES

### SOURCE DOCUMENTS USED FOR ANALYST INTERVIEWS

#### Observation and Background

The technical analyst is required to perform a detailed review of selected Logs from the total population of Logs returned to the analyst. The detail review consists of a technical analyst's phone interview with the supervisor of the technician whose Log was randomly selected by the WASSP sample selection program. The technical analyst requests the supervisor to describe the activities as reported by the technician on source documentation maintained at the supervisor location. However, the technical analyst does not have access to source documentation created by the technician to evidence his/her activities and used by the supervisor to review completed logs.

# Recommendation

Require source documentation to be forwarded to the technical analyst concurrently with the completed and reviewed Logs. Absent hard copy source documentation, allow analyst on-line access to this information, where applicable.

#### POLICIES AND PROCEDURES IN THE EVENT OF A NATURAL DISASTER

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#### **Observation and Background**

Currently there are no formal policies and procedures pertaining to the application of the WASSP methodology in the event of a natural disaster. Consequently, formal guidance is not available as to the effect of a natural disaster on the areas of sample selection, work activities performed by network technicians, reporting procedures, analyst and supervisor review procedures and methodology associated with data analysis. Formal policies and procedures would promote an effective operation of the process in the event of a natural disaster.

#### **Recommendation**

Create, document and implement formal policies and procedures pertaining to the application of the WASSP methodology in the event of a natural disaster.

# POLICIES, PROCEDURES AND CONTROLS MANUAL

#### **Observation and Background**

Currently, a policies, procedures and controls manual in relation to the implementation and operation of the WASSP process does not exist. A policies, procedures and controls manual will provide an effective resource in terms of WASSP process consistency and integrity and would reduce disruption in the event of various events such as organizational changes, employee turnover, and natural disasters.

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#### Recommendation

Create and maintain a policies, procedures and controls manual to incorporate all critical aspects of the WASSP process. Disseminate this manual to those time reporting personnel who will benefit from its use.

# **TECHNICIAN USE OF PERSONAL LOGS**

#### Observation and Background

Network technicians in certain of the states in the BellSouth geographic region are maintaining informal logs of trouble jobs received and work performed in addition to that required by the current Craft Access System. This occurs via the documentation of specific trouble job information on form #6025 or #6571. The maintenance of informal trouble job logs represents an inefficient and unnecessary utilization of BellSouth resources and is currently not required by WASSP management or BellSouth time reporting personnel.

#### Recommendation

Eliminate network technician use of informal logs in areas where the Craft Access System is utilized.

# TRACKING AND EVALUATION OF WORK ACTIVITY LOG ERRORS

#### **Observation and Background**

A feedback system is not currently used to track and evaluate the number and type of errors being detected by the supervisors during their review of the technician's Logs or by the technical analysts during their review and interview procedures. Any errors noted by supervisors or technical analysts while performing their duties should be evaluated to determine any adverse impact on the sufficiency of the initial statistical sample of network technicians and to confirm that the extent of oversampling is sufficient to maintain targeted levels of statistical assurance.

#### **Recommendation**

Develop, document, and implement a feedback program to accumulate and statistically evaluate the continued validity of the Network Technician Labor Profiles for any errors identified by the supervisors and technical analysts on the Logs during their review procedures. Provide a mechanism within this process to evaluate the effect of any errors on the precision of the profiles and the number of selections of network technicians required to participate in the WASSP process.

# LOG-OFF PROCEDURES FOR THE CRAFT ACCESS SYSTEM

#### **Observation and Background**

Network technicians at times "log off" of the Craft Access System at a time subsequent to the actual time of completion of the trouble job even though the time shown on the Log is correct. This can occur if the technician logs off on a current trouble job after receipt of and travel to a new trouble job. As technical analysts are placing reliance on the Detail Craft Work Summary ("DCWS") generated by the Craft Access System as a source document, differences relating to the above must be investigated.

#### Recommendation

Require technicians to "log off" of the Craft Access System immediately upon completion of each trouble job. Consider the feasibility of Craft Access System modification such that a technician may not receive orders for his next job without "logging off" of the current job.

# **RECEIPT AND REVIEW OF WORK ACTIVITY LOGS**

### **Observation and Background**

Interviews conducted by technical analysts do not always occur within three working days as prescribed under established WASSP criteria. Delays in analyst interviews occasionally occur due to the remote location of the technician which requires an additional day for the supervisor's review before mailing to the technical analyst. Additionally, Logs forwarded to the technical analyst via fax machine are delayed due to the volume of fax transmissions.

#### Recommendation

Provide one-day mail service from remote locations and obtain additional fax machines to ensure the timely receipt of Logs.

# TIMELY SUPERVISOR REVIEW OF WORK ACTIVITY LOGS

#### **Observation and Background**

Supervisors are required to review Logs the day after the Logs are completed by the network technicians. We observed instances in which such review was substantially beyond the one day requirement. Additionally, in some of the remote offices the supervisors do not have printers. Consequently, if the supervisors use the DCWS in their review procedures, they must obtain hard copies of DCWS source documents from other offices via mail. These situations cause delays in the supervisor review and forwarding of Logs to the technical analysts. However, in these remote locations, we observed that the supervisor often has on-line access to the DCWS.

#### Recommendation

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Instruct supervisors to perform Log reviews the day subsequent to completion by the technician. Additionally, advise supervisors who choose to use the DCWS in their review process to perform Log reviews via on-line inquiry of the Craft Access System if hard copy documentation is not readily available.

#### TRAINING OF TECHNICAL ANALYSTS

#### **Observation and Background**

There is currently no formal training program for the technical analysts involved in the WASSP process pertaining to work procedures, FCC time reporting rules, effective interview techniques, error resolution and other matters.

#### Recommendation

Develop, document, and implement a formal training program for the technical analysts. This program should encompass entry level training courses as well as continuing education training courses to inform the analysts of any updates or changes in FCC time reporting requirements, any updates or changes in the WASSP process and other pertinent subjects. This program would be an essential ingredient in the consistent implementation of the analyst function.

## ROTATION AND COVERAGE FOR ABSENT TECHNICAL ANALYSTS

#### **Observation and Background**

Technical analysts are assigned to review logs for one particular state. No plan currently exists for the rotation of technical analysts nor does a plan exist to cover for an analyst in the event of illness or vacation.

#### Recommendation

Develop, document, and implement a rotation plan whereby the technical analysts are required to periodically rotate their states of responsibility. Additionally, develop, document, and implement a plan in the event of analyst absence due to illness or vacation.

#### EXPANSION OF THE CRAFT ACCESS SYSTEM DOCUMENTATION

#### Observation and Background

During the review of the Log, the supervisor determines if the technician's time is charged to the proper work activity by comparing the activities as reported on Logs to source documentation. Currently source documentation includes Detail Craft Work Summaries (DCWS) generated from the computerized Craft Access System and/or existing Mechanized Time Report (MTR) forms prepared by the technician. The current space allowed for description on the Craft Access System DCWS for each distribution number (42 characters) is not always large enough to fully describe the task performed by the technician. This situation can occur if more than one service is performed on the same trouble job. As such, the technician is required to continue the description of the work performed on this trouble job on the manually completed MTR form. This situation does not currently present a problem due to the dual reporting nature of the WASSP and MTR time reporting processes. However, as the MTR form will be eliminated once the WASSP process is fully implemented, the Craft Access System will become the chief source of documentation medium available to the technician and sufficient space should be given to the technician to allow him to perform an efficient reporting of time.

Add additional space in the Craft Access System field for description of each trouble job performed by the technician. This will allow sufficient information to be recorded in the Craft Access System and to promote accurate reporting of technician work activity.

# WORK ACTIVITY LOG SIGN-OFF BY SUPERVISOR AND DATA INPUT PERSONNEL

## **Observation and Background**

Supervisor and data input personnel signature on the Logs, although required upon completion of these individual's assigned duties, is not consistently obtained. Although it appears that the assigned duties are generally performed by these individuals, consistently requiring a signature will provide a means of documenting accountability.

## Recommendation

Require all supervisors to sign and date the Logs after their review. Require all data input personnel to sign and date the Logs upon entering the Log data into the WASSP system.

# **II. STATISTICAL METHODS**

# PROSPECTIVE UNIVERSE TECHNIQUE

# **Observation and Background**

Currently, all samples of network technicians throughout the three-month profile period are generated from an extract of the PMDB as of the beginning of the three-month profile period. This methodology will not account for changes in technician composition since the initial extraction. Such changes may include network technician employment, transfer, or termination.

#### Recommendation

Develop procedures to account for changes in the composition of network technicians subsequent to the date of the data extract.

# QUALITY CONTROL SAMPLE SIZE

#### Observation and Background

As the WASSP process is implemented in the nine-state BellSouth region, the pool of network technicians for the entire BellSouth region may be viewed as one population for network technician quality control sampling purposes. If this view is acceptable, then a reasonably high level of assurance in regard to error rates can be obtained through the use of Acceptance Sampling techniques. This can be accomplished with much less work than is presently contemplated.

Consider reducing the number of network technician quality control interviews through the use of one regionwide interview sample versus separate interview samples for each state.

#### SELECTING THE NUMBER OF WEEKS IN A MONTH

#### **Observation and Background**

It is the system user's responsibility, for the SAMPLER application, to input the number of weeks in any particular month. An error in the number of weeks input parameter could result in a reporting week being improperly excluded from the sampling population.

#### Recommendation

Adopt a more simplistic decision rule, as follows:

If a Wednesday at the end of the month falls in the current month, that month has five weeks.

Further, we recommend that a table of months and weeks be input at the beginning of the year and reviewed by supervisory personnel to minimize the necessity for clerical decision and controls throughout the year, similar to the way parameters are codified in the Data Analysis Module of the WASSP process.

#### **III. COMPUTER PROCESSING APPLICATIONS AND CONTROLS**

#### **EXTRACT FILE CREATION**

#### **Observation and Background**

Improper changes to the SQL routines may be made and not be detected. Mistakes could be made in entering the QMF and ISPF/PC commands while creating and down loading files.

#### Recommendation

Create five versions of the SQL routine, one for each sampling population. Add program statements to automatically save the files in the correct format and libraries. Add these programs to the automatic job scheduler.

#### **Observation and Background**

Files with similar names could be interchanged, resulting in improper processing in later stages of the WASSP process.

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Maintain a manual log to detail the times, dates, and sizes of the files created. The log should also indicate the state for each file, the external label of the diskette, and the directory in which the files are stored. Require the operator to initial and date each entry in the log as documentation of procedure performance. Additionally, place external labels on diskettes that clearly indicate the states and time periods of the files contained on the diskettes. Finally, use naming conventions (e.g., "FL0193") when creating DOS directories to separate files and identify them to their time periods and states. Modify the programs described above to print an audit trail report showing the pertinent details of processing: file names, file sizes, file creation dates, any exceptions in processing.

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# **Observation and Background**

Improper changes to work sheets and macro routines may be made and not be detected.

## Recommendation

Modify file attributes in DOS to read-only. Modify macros to close the work sheet (without saving) automatically upon completing processing.

# **Observation and Background**

The IMPORT.WK3 macro may not execute as intended if the window and other global work sheet settings are not created as expected.

#### **Recommendation**

Modify the logic of the macro to set all window and global work sheet settings at the beginning of processing. Replace the {BIGRIGHT} command with program steps to position the cursor to a specific location prior to importing data into the NET1, NET2, NET3, NET4, and NET5 ranges.

#### **Observation and Background**

The IMPORT.WK3 macro is designed to require the operator to enter the name of the file (including subdirectory) to which the results of processing are to be saved. If the operator chooses a misleading name, errors may result in later processes.

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Require the operator to maintain an audit trail of processing and use appropriate conventions (e.g., "\FL0192\NETWORK1.WK3") for naming files. Also require the operator to document in a log the names and contents of files created and to document any deviations from the expected procedures. *Observation and Background* 

Once the WASSP process is fully operational the operator will be required to execute the LASTSAMP.WK3 program 45 times each processing cycle once for each of the five network technician work groups in each of the nine states in the BellSouth geographic region, which is inefficient.

# **Recommendation**

Modify the logic of the LASTSAMP.WK3 macro to automatically execute all 45 network technician samples.

# Observation and Background

The LASTSAMP.WK3 work sheet is designed to allow the operator to:

- Enter invalid sample choices (i.e., something other than 1, 2, 3, 4, or 5)
- Enter an incorrect file name to be read into the work sheet
- Enter the sample period without a prompt
- Modify the Sample Size and Number of Weeks parameters incorrectly.

# Recommendation

Modify the logic of the LASTSAMP.WK3 macro to perform additional edit checks and only allow valid responses.

# FORTRAN APPLICATIONS

# Observation and Background

Improper changes may be made to the FORTRAN programs and not be documented.

# Recommendation

Place the source code versions of the FORTRAN programs into a "test" environment to which the operator does not have access. Restrict the operator's access to FORTRAN source code and means for compiling programs into the production environment.

#### **Observation and Background**

File naming conventions do not identify the year of the period to be processed.

## **Recommendation**

Modify the FORTRAN programs to use a file naming convention that includes the year of the period to be processed.

## **Observation and Background**

Errors can be made when maintaining the CODES and COUNT files.

#### Recommendation

Add programs for maintaining the CODES and COUNT files. These programs should contain edit routines to ensure that the records in the CODES and COUNT files are all in the proper format, and it should maintain a log of maintenance activity. Use password protection techniques to control maintenance using edit utilities or means other than the maintenance programs.

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# EXHIBIT D

March 5, 1993

BellSouth Corporation 1155 Peachtree Street, N.E. Atlanta, Georgia 30367

Dear Sirs:

We have performed the procedures requested by you, as described below, to the accompanying Schedule of Estimated Annual Net Cost Savings and associated supporting schedules of Estimated Annual Gross Cost Savings and Estimated Annual Cost of Implementation of the BellSouth Telecommunications, Inc. Work Activity Statistical Sampling Process. This report is solely for your information and is not to be referred to or distributed to anyone who is not a member of BellSouth management or the Federal Communications Commission for any purpose. Our procedures performed and our findings are as follows.

- A. Schedule A Schedule of Estimated Annual Net Cost Savings
  - 1. We compared the "Estimated Annual Gross Cost Savings" amount to Schedule B and found them to be in agreement.
  - 2. We compared the "Estimated Annual Cost of Implementation" amount to Schedule C and found them to be in agreement.
  - 3. We determined that Schedule A was mathematically accurate.
- B. Schedule B Schedule of Estimated Annual Gross Cost Savings
  - 1. We compared the "Number of Technicians" to the BSCMS report "BellSouth Region Forces as of March 1, 1993" and found them to be in agreement.
  - 2. We compared the "Estimated Hours Saved Per Day" to a BellSouth prepared analysis and found them to be in agreement. BellSouth management assumes that technicians will save fifteen minutes daily completing Logs compared to the existing Mechanized Time Reporting ("MTR") form.

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3. We compared the "Estimated % of Employees Not Reporting Under WASSP" to a BellSouth prepared analysis and found them to be in agreement.

- 4. We recalculated the "Estimated Hours Saved Per Year" by multiplying the "Number of Technicians" by the "Estimated Hours Saved Per Day" by the "Estimated % of Employees Not Reporting Under WASSP" by 20 workdays per month by 12 months per year and found the amounts to be in agreement. Management has made the assumption that technicians will work an average of 20 workdays per month during the year.
- 5. We compared the "Average Technician Hourly Cost" to the management report named "Analysis of Direct Labor and Related Costs-Craft Forces" for the period ending December 1992 and found such amounts to be in agreement. The Average Technician Pay Rate includes benefits.
- 6. We recalculated the "Estimated Annual Gross Cost Savings" by multiplying the "Estimated Hours Saved Per Year" by the "Average Technician Hourly Cost" and found such amounts to be in agreement.
- 7. We compared the "Total Estimated Annual Gross Cost Savings" to the sum the estimated annual gross cost savings for each job function code and found them to be in agreement.
- C. Schedule C Schedule of Estimated Annual Cost of Implementation
  - 1. We recalculated the "Estimated Cost of Payroll at Full Implementation" by multiplying the number of employees which WASSP management has represented it is approved to hire by an estimated average salary per employee provided to us by BellSouth and found the amounts to be in agreement.
  - 2. We agreed the "Estimated Data Processing Cost," "Estimated Equipment Cost," and "Estimated Telecommunications Cost" to BellSouth prepared analyses and found them to be in agreement.
  - 3. We recalculated the "Annual Depreciation of Equipment" assuming a 5-year life and straight-line depreciation.
  - 4. We recalculated the "Estimated Travel and Training Cost" by multiplying BellSouth estimates of ten training personnel by \$2,000 in cost per week by 25 weeks per year.
  - 5. We determined that Schedule C was mathematically accurate.

Because the procedures we performed were not sufficient to constitute an audit in accordance with generally accepted auditing standards, we do not express an opinion on the accompanying Schedules referred to above. In performing these procedures, however, no matters came to our attention that caused us to believe that such schedules should be adjusted. Had we performed additional procedures, matters might have come to our attention that would have been reported to you. This report relates only to the items specified above, and does not extend to BellSouth Corporation's financial statements taken as a whole for any date or period.

Yours truly,

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# SCHEDULE A

# BELLSOUTH TELECOMMUNICATIONS, INC.

WORK ACTIVITY STATISTICAL SAMPLING PROCESS SCHEDULE OF ESTIMATED ANNUAL NET COST SAVINGS								
	(000's)							
ESTIMATED ANNUAL GROSS COST SAVINGS (Schedule B)	\$24,618							
ESTIMATED ANNUAL COST OF IMPLEMENTATION (Schedule C)	(1,782)							
ESTIMATED ANNUAL NET COST SAVINGS	\$22,836							

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# SCHEDULE B

# **BELLSOUTH TELECOMMUNICATIONS, INC.**

# WORK ACTIVITY STATISTICAL SAMPLING PROCESS SCHEDULE OF ESTIMATED ANNUAL GROSS COST SAVINGS

Job Function Code	Number of Technicians	Estimated Hours Saved Per Day	Estimated % of Employees Not Reporting Under WASSP	Estimated Hours Saved Per Year	Average Technician Hourly Cost	(\$000) Estimated Annual Gross Cost Savings
4150 I&M POTS	7,422	0.25	90%	400,788	\$39.59	\$15,867
4130 I&M Corporate	292	0.25	75%	13,140	39.59	520
4180 I&M Public	440	0.25	75%	19,800	39.59	784
4190 I&M Special Services	1,144	0.25	85%	58,344	39.59	2,310
42XX I&M Cable Repair	2,584	0.25	80%	124,032	41.42	5,137

Total Estimated Annual Gross Cost Savings

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\$24,618

# SCHEDULE C

# BELLSOUTH TELECOMMUNICATIONS, INC.

# WORK ACTIVITY STATISTICAL SAMPLING PROCESS SCHEDULE OF ESTIMATED ANNUAL COST OF IMPLEMENTATION

	(000's)
Estimated Cost of Payroll at Full Implementation	\$1,133
Estimated Data Processing Cost	100
Equipment Cost: PCs Fax Machines	100 20
Total Estimated Equipment Cost	120
Estimated Annual Depreciation of Equipment	24
Estimated Telecommunications Cost	25
Estimated Travel and Training Cost	500
Total Estimated Annual Cost of Implementation	<u>\$1,782</u>

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# EXHIBIT E

PRELIMINARY DRAFT - FOR DISCUSSION PURPOSES ONLY. TO BE RETURNED TO DELIDITE & TOUCHE, AND NOT TO BE REPRODUCED IN ANY FORM WITHOUT THEIR PERMISSION. March 5, 1993

BellSouth Corporation 1155 Peachtree Street, N.E. Atlanta, Georgia 30367

Dear Sirs:

We have performed the procedures requested by you, as described below, to the accompanying schedules pertaining to the implementation of the Work Activity Statistical Sampling Process in the state of Alabama for the month of January 1993 for BellSouth Telecommunications, Inc. as follows:

- Schedule of the Part 32 reporting impacts
- Schedule of the Part 64 reporting impacts on account 6362
- Schedule of the Part 36 interstate reporting impacts and the Part 69 application to access elements

This report is solely for your information and is not to be referred to or distributed to anyone who is not a member of BellSouth management or the Federal Communications Commission for any purpose. Our procedures performed and our findings are as follows.

- A. Schedule A Schedule of Part 32 Reporting Impacts
  - 1. We compared the amounts of "Reported Dollars" to a management report that applies labor and benefit rates to the hours reported by the network technicians under the Mechanized Time Reporting (MTR) system and found them to be in agreement.
  - 2. We compared the amounts of "Profiled Dollars" to a management report that applies labor and benefit rates to the network technician hours as distributed in the WASSP process and found them to be in agreement.
  - 3. We determined that Schedule A was mathematically accurate.

- B. Schedule B Schedule of Part 64 Reporting Impacts
  - 1. We compared the amount of "Reported Dollars" and "Profiled Dollars" to a management report that summarizes all account 6362 field reporting codes and found them to be in agreement.
  - 2. We compared the amounts of the "Total Account 6362" for "Reported Dollars" and "Profiled Dollars" to amounts presented in Schedule A and found them to be in agreement.
  - 3. We determined that Schedule B was mathematically accurate.
- C. Schedule C Schedule of Part 36 Interstate Reporting Impacts and the Part 69 Application to Access Elements
  - 1. We compared the amounts of "Difference Actual Versus Profile" to amounts presented in Schedule A and found them to be in agreement.
  - 2. We compared the amounts of "Part 36 Interstate Separations" to a management report that separates the "Difference Actual Versus Profile" amounts between the interstate and intrastate components and found them to be in agreement.
  - 3. We compared the "Part 69 Application to Access Elements" to a management report that allocates the "Part 36 Interstate Separations" between the "Common Line," "Traffic Sensitive," "Special Access," and "Inter-Exchange" components and found them to be in agreement.
  - 4. We compared the amounts of "Total Balance Sheet" and "Total Income Statement" for the "Difference Actual Versus Profile" to amounts presented in Schedule A and found them to be in agreement.
  - 5. We determined that Schedule C was mathematically accurate.

Because the procedures we performed were not sufficient to constitute an audit in accordance with generally accepted auditing standards, we do not express an opinion on the accompanying Schedules referred to above. In performing these procedures, however, no matters came to our attention that caused us to believe that such schedules should be adjusted. Had we performed additional procedures, matters might have come to our attention that would have been reported to you. This report relates only to the items specified above, and does not extend to BellSouth Corporation's financial statements taken as a whole for any date or period.

Yours truly,

# BELLSOUTH TELECOMMUNICATIONS, INC.

SCHEDULE OF THE PART 32 REPORTING IMPACTS RESULTING FROM THE IMPLEMENTATION OF THE WORK ACTIVITY STATISTICAL SAMPLING PROCESS IN THE STATE OF ALABAMA FOR THE MONTH OF JANUARY 1993

Part 32 Account	Reported Dollars	Profiled Dollars	Difference
Balance Sheet			
2123 2124 2220 2232 2341 2362 2411 2421 2422 2423 2426 2431 3100	\$ 73,228 118,053 395 49,079 5,343 37,215 117 272,482 6,606 147,564 303 11,783 22,574	\$ 44,658 92,730 40,140 312,308 171,249 19,635 17,006	\$ (28,570) (25,323) (395) (49,079) (5,343) 2,925 (117) 39,826 (6,606) 23,685 (303) 7,852 (5,568)
Total	<u>\$ 744,742</u>	<u>\$ 697,726</u>	<u>\$ (47,016)</u>
6116 6123 6124 6211 6212 6231 6232 6311 6341 6351 6362 6411 6421 6422 6423 6424 6426 6431 6441 6512 6533 6534 6728	$ \begin{array}{c} & 751 \\ 57,210 \\ 118,061 \\ 1,199 \\ 14,620 \\ 5,086 \\ 294,236 \\ 7,681 \\ 6,486 \\ 161,078 \\ 1,337,298 \\ 541 \\ 2,123,816 \\ 164,625 \\ 1,845,905 \\ 849 \\ 12,080 \\ 21,638 \\ 73 \\ 863 \\ 906 \\ 761,002 \\ 59 \\ \end{array} $	\$ 1,060 103,218 92,511 14,544 513,264 25,553 824 156,985 1,312,138 2,016,495 159,100 1.806,205 13,182 14,907 3,616 749,477	$\begin{array}{c} 309\\ 46,008\\ (25,550)\\ (1,199)\\ (76)\\ (5,086)\\ 219,028\\ 17,872\\ (5,662)\\ (4,093)\\ (25,160)\\ (541)\\ (107,321)\\ (5,525)\\ (39,700)\\ (849)\\ 1,102\\ (6,731)\\ (73)\\ 2,753\\ (906)\\ (11,525)\\ (59) \end{array}$
Total	\$6,936,063	\$6,983,079	<u>\$ 47.016</u>

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# SCHEDULE B

# BELLSOUTH TELECOMMUNICATIONS, INC.

SCHEDULE OF THE PART 64 REPORTING IMPACTS RESULTING FROM THE IMPLEMENTATION OF THE WORK ACTIVITY STATISTICAL SAMPLING PROCESS IN THE STATE OF ALABAMA FOR THE MONTH OF JANUARY 1993

	Part 32 Ac		
Description	Reported Dollars	Profiled Dollars	Difference
Nonregulated	\$ 969,117	\$ 950,001	\$ (19,116)
Regulated	368,181	362,137	(6,044)
Total Account 6362	<u>\$1,337,298</u>	<u>\$1,312,138</u>	<u>\$ (25,160</u> )

# SCHEDULE C

# **BELLSOUTH TELECOMMUNICATIONS, INC.**

# SCHEDULE OF THE PART 36 INTERSTATE REPORTING IMPACTS AND THE PART 69 APPLICATION TO ACCESS ELEMENTS RESULTING FROM THE IMPLEMENTATION OF THE WORK ACTIVITY STATISTICAL SAMPLING PROCESS IN THE STATE OF ALABAMA FOR THE MONTH OF JANUARY 1993

	Difference	Part 36	Part 69 Application To Access Elements										
Part	Actual Versus	Interstate	Common	Traffic	Special	Inter-							
32 Account	Profile	Separations	Line	Sensitive	Access	Exchange							
Balance Sheet													
2123	\$ (28,570)	\$ (5,763)	\$ (1,597)	\$ (3,067)	\$ (1,095)	\$ (4)							
2124	(25,323)	(5,108)	(1,415)	(2,719)	(970)	(4)							
2220	(395)												
2232	(49,079)	(16,883)	(5,522)	(7,431)	(3,927)	(3)							
2341	(5,343)	(1,299)	(1,298)		(1)								
2362	2,925	, 711	711										
2411	(117)	(29)	(26)	(1)	(2)								
2421	39,826	9,785	8,691	433	661								
2422	(6,606)	(1,623)	(1,441)	(72)	(110)								
2423	23,685	5,819	5,168	258	393								
2426	(303)	(74)	(66)	(3)	(5)								
2431	7,852	1,929	1,714	85	130								
3100	(5,568)												
Total Balance	<u> </u>			<u>_</u>									
Sheet	(47,016)	(12,535)	4,919	(12,517)	(4,926)	(11)							

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# SCHEDULE C (Continued)

# **BELLSOUTH TELECOMMUNICATIONS, INC.**

# SCHEDULE OF THE PART 36 INTERSTATE REPORTING IMPACTS AND THE PART 69 APPLICATION ACCESS FLEMENTS RESULTING FROM THE IMPLEMENTATION OF THE WORK ACTIVITY STATISTICAL SAMPLING PROCESS IN THE STATE OF ALABAMA FOR THE MONTH OF JANUARY 1993

	Difference	Part 36	Part	69 Applicatio	on Access E	lements
Part	Actual Versus	Interstate	Common	Traffic	Special	Inter-
32 Account	Profile	Separations	Line	Sensitive	Access	Exchange
Income						
Statement						
6116	\$ 309	<b>\$</b> 63	\$ 35	<b>\$</b> 21	<b>\$</b> 7	
6123	46,008	9,514	2,640	5,056	1.811	\$7
6124	(25,550)	(5,284)	(1,466)	(2,809)	(1,005)	(4)
6211	(1,199)	(285)	(64)	(176)	(45)	
6212	(76)	(18)	(4)	ìш	ີເສັ	
6231	(5,086)	(1,216)	(270)	(752)	(193)	(1)
6232	219,028	52,348	11,658	32,356	8,292	42
6311	17,872	1,968	1,966	•	2	
6341	(5,662)	(623)	(623)			
6351	(4,093)	(451)	(451)			
6362	(25,160)	(2,770)	(2,768)		(2)	
5411	(541)	(133).	(118)	(6)	(9)	
5421	(107,321)	(26,369)	(23,424)	(1,165)	(1,780)	
5422	(5,525)	(1,357)	(1,205)	(60)	(92)	
5423	(39,700)	(9,755)	(8,666)	(431)	(658)	
5424	(849)	(208)	(185)	(9)	(14)	
6426	1,102	271	241	12	18	
6431	(6,731)	(1,654)	(1,469)	(73)	(112)	
5441	(73)	(18)	(16)	(1)	(1)	
5512	2,753	631	397	169	65	
5533	(906)	(202)	(123)	(58)	(21)	
5534	(11,525)	(2,570)	(1,571)	(735)	(263)	(1)
5728	(59)	(13)	(7)	(5)	<u>(1)</u>	
Total Income						
Statement	47,016	11,869	(25,493)	31.323	5,996	43
Total Accounts	<u>\$</u>	<u>\$ (666)</u>	\$(20,574)	\$18,806	<u>\$ 1,070</u>	\$32



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COMPANY:BSTTITLE:DISPATCH PROCESSPERIOD:TYE 12/31/93DATE:DEC 9, 1993AUDITOR:RKY

WP NO.

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1. DISPATCH

PSC staff was provided with the practice for "Adjusting Dispatch Weights using ADW and DPVAL. This on on wp NO. -45-6.

From out observation and review, Staff determined that controls were needed in the Mapper, and for the person who changes the weights in the Mapper system.

Mapper:

Per answer to Req 9, Attchment 4, the company states that Mapper has no knowledge of who the sampled technicians are. 45.5 This needs 2 be afound in a could program it and. Also, troubles cannot be predetermined as regulated or nonregulated when going

Also, troubles cannot be predetermined as regulated or nonregulated when going into Mapper. Although, there is a description, the public is not always knowledgeable as to what is regulated and deregulated. Also, there may be a problems that looks regulated, but turns out to be deregulated or vise versa. 43-5

Person who changes the weights: (Control Dispatcher)

In an interview with Roberto Suarez, Manger, Network Support, Steve Shaw, Staff, Manager, Network Support and Earl Mergelberg, Staff Manager, Network Support, the following was determined:

I asked hypothetically if aservice tech and a control dispatcher could get together and somehow have the dispatcher only give him reg jobs of if the dispatcher knew he was in the sample and weight all the reg jobs heavily so that he could have a better change of getting a reg job.

45-4 The Company answered as follows: The Control Dispatcher is not in the flow of the system of the service tech, they do not know who is sampled. There is no mechanical separation for a quick see of reg and dereg in the system. The control dispatcher would have to look at each one separately and when he has 500 to 600 in the system, it is not possible

to start selecting certain jobs and weighting them differently.

The Dispatcher sets commitments and is responsible to meet these commitments. If the weights are changed, he might not meet commitments.

If commitments are not met, there are huge fines by the PSC.

In answer to PSC Request No. 3, the company stated that there was no recommended weighting policy, each IMC determines their own based on the needs of that center. 45-3 p 2

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COMPANY: BST DISPATCH PROCESS TITLE: TYE 12/31/93 PERIOD: DEC 9, 1993 DATE: RKY AUDITOR: WP NO.

1. DISPATCH

GENERAL OVERVIEW

In order for the service technicians to get their work, the following process occurs:

Requests for telephone service (service orders) go through a system called SOCS and requests for maintenance go through a systems called LMOS. (Service Order Communications System -- Loop Maintenance Operations Systems)

The input into SOCS and LMOS go into Mapper and are dispatched to the technician from Mapper via the technicains's Computer Access Terminal (CAT), which they carry around with them. Work completed dispatched through Mapper are documented on the Display Craft Work Summary (DCWS)

Requests for Designed Circuits go through SOCS and requests for maintenance of designed troubles go through Work Force Administration Control (WFA-C).

The input here for service orders of Designed ciruciuts and maintenance of these are dispatched through a system called RADS -6 (Route and Dispatch System and the technician receives via the CAT.

PSC staff visited the customer service office and observed how orders are taken and put into SOCS. Staff visited the Customer Rapair Service Analysis Bureau where trouble are taken and input into LMOS. Then staff visited an Installation and Maintenance Center (IMC) where service orders and troubles are dispatched from. Staff did not visit the office where the RADs dispatch system is.

FACTS:

A detailed descirption of the visits is on wp No. 45-2. The following questions and answers regarding controls resulted from these visits and observations.

The service orders and troubles are dispatched out of Mapper. According to Answer to Req 9, atttachment 4, Mapper is a system developed and maintained by ATT.  $45 \cdot 5$ 

In our interview with John Long we were told that the troubles and service orders are weighted in the computer system and this determines how they are dispatched out. When a service tech dials in from his terminal he gets the next weighted job based on certain criteria. Criteria are on WP no. 45-2,  $\beta$ ?

Cont

45-1

COMPANY:	BST
TITLE:	DISPATCH PROCESS
PERIOD:	TYE 12/31/93
DATE:	DEC 9, 1993
AUDITOR:	RKY

WP NO.

#### 1. DISPATCH

All management personnel within the IMC have the ability to adjust weights if necessary.

Also, IMC is not concerned with which techs are in the sample basis, jobs are not categorized in the Mapper as reg or dereg; therefore changing weight factors cannot bias the sample.

In answer to Req. 9,Attachment 4, the company stated: "The company must have the ability, for operational efficiency reasons, to assign work to particular tech or groups..." Also "the company must have the necessary flexibility in order to meet the needs of the business." Examples and scenarios of why are provided by the company and are on wp no. 45-5.

Another control is "... a Supervisor of the technical analysts as well as a Management Control Position ... Jeview the profiles as developed by the WASSP process for reasonableness and investigate and resolve any anomalies." 45-5

#### CONCLUSION:

Based on my observations of the system and being in the field, it appears that there is reasonable assurance that the dispatch system cannot bias the sample. (the system does not know which service techs are being sampled and the system according to the company does not have the capability to separate reg and dereg work). It also appears that even though the weights can be changed without any approval, it is necessary to do this for flexibility in the field to serve the customer. Results of the profiles of the sample could display any unusual circumstances that need to be checked.

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6/30/93-PSC BST Reply

Items 4 & 5



Requests for provisioning on Plain Old Telephone Services (POTS), Non Designed Special Services and Public Communications (Coin) are input into SOCS which is the Service Order Communications System. Requests for maintenance on these same services are input into LMOS which is the Loop Maintenance Operations System.



The Service Order requests (provisioning) and trouble reports (maintenance) for those services input into SOCS and LMOS are dispatched out of MAPPER and received by the technician via their Computer Access Terminal (CAT).

Work Completed for those services dispatched through MAPPER are documented on the Display Craft Work Summary (DCWS).

Request for provisioning of Designed Circuits are input into the Service Order Communications System (SOCS). Requests for maintenance on Designed Troubles are received through the Work Force Administration Control (WFA-C). These services are dispatched through the Route and Dispatch System - 6 (RADS-6), and received by the technician via their Craft Access Terminal (CAT).

Work completed for those services dispatched through RADS are documented on Field Work Tickets 6571.

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COMPANY:BSTTITLE:OBSERVATIONS OF WORK AT DIFFERENT OFFICES<br/>AND OBSERVATIONS OF SERVICE TECH WORKPERIOD:TYE 12/31/93<br/>DATE:<br/>AUDITOR:NOVEMBER 29, 1993<br/>RKYWith HA

45-2 WP NO.

MONDAY, NOV. 22

1. Visited customer service office where orders are taken. Sat with service rep and listened in on how they take a service order or any other request that they get.

All the information for new service orders or new feature orders is put into computer (SOCS) and sent to where the information is used to put the services in order.

Their input goes to the Installation and Maintenance Center (IMC) where it is then dispatched out of Mapper. See below.

2. Visited Customer Repair Service Analysis Bureau (CRSAB). Sat with customer repair rep and listened in on how she handled repair calls and enters into system.

Each trouble goes through an automatic MLT test which does 42 tests on the line. Company personnel said that about 50% of the troubles do not go to dispatch and are fixed in the Central Office.

Those troubles that need human touch go to the IMC into the LMOS system where it is then dispatched out of Mapper. See below.

The CRSAB is open 24 hours.

3. Visited an IMC where the troubles are dispatched from.

Before describing how the trouble are dispatched, explain how the Service Techs get the troubgus.

Each service tech has a hand held computer access terminal on his person. He dials into the terminal and a repair job automatically comes up on the terminal giving him information on where and sometimes what the problem is. Most service techs go directly from their home and some go to the Maintenance Center before going in the filed.

How are the troubles dispatched? SOCS and LMOS input -- Dispatched out of Mapper.

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Interview with John Long, System Administrator at the IMC. Steve Shaw, Staff Manager, Miami Rick King, Manager, Comptrollers, Birmingham Steve Venderberg, Manager, Comptrollers, Brimingham

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 COMPANY:
 BST

 TITLE:
 OBSERVATIONS OF WORK AT DIFFERENT OFFICES

 AND OBSERVATIONS OF SERVICE TECH WORK

 PERIOD:
 TYE 12/31/93

 DATE:
 NOVEMBER 29, 1993

 AUDITOR:
 RKY

WP NO.

• 1 M

There are six categories of dispatch in the maintenance office.

- 1. General Residence TRoubles
- 2. General Business TRoubles
- 3. gentreral residence service order
- 4. general business service order.
- 5. special circuits (network tech)
- 6. cable dispatch.

The troubles and servicile orders are weighted in the computer system and this determines how they are dispatched out. When a service tech dials in from his terminal he gets the next weighted job.

There are 5 categories of service techs. Three categories dispatched from LMOS (POTS 1,2,3,4 above), Cable (6 above) and Coin (not listed above). There are 2 categories dispatched from RADS. Special Circuits (network tech) and System Technicians (these people work on BST only). PSC staff did not look at RADS dispatch system. How are the troubles and service orders weighted? Weighted to provide the best possible serivce. Each district weights differently.

How many district offices are there in Florida? name them. Provide general weighting for the district office we observed. Provide general weight for all offices in Florida. Explain how the general weighting is determined Explain how the general weighting can be changed. What procedures in each office. Explain how the weighting can be changed manufually how in each office. Who has accesss to the system in each office to change weights. What controls are in place so that no one person can change weighting. Do they get reports of which have been changed and follow up if reasonable. Provide reports. If not, recommend follow up.

As explained takes a big deal to change the general weighting The Control supervisor has to talk to the Manager, and Staff manager before makes a change in weights. The Control supevisor, Assistant Manager and Manger has access to the system.

It was also explained to us that in this office, one person Rocky put on weights on the hottest items. The small stuff he does alone.

Can change weight on the RTE Mask on the bottom.

COMPANY:BSTTITLE:OBSERVATIONS OF WORK AT DIFFERENT OFFICES<br/>AND OBSERVATIONS OF SERVICE TECH WORKPERIOD:TYE 12/31/93DATE:NOVEMBER 29, 1993AUDITOR:RKY

WP NO.

The two sections are as follows as far as disptach and weighting. For the service tech: 1. What you do by title?

2. Where you are? area.

For the types of troubles and Service Orders.

1. What work need to get done.

a. títle

b. priortiy within a geographic area

- 1. irate customer
- 2. type of customer -- illness
- 3. poles down or wire tap
- 4. time to commitment
- 5. distance to home
- 6. subsequent reports, calls twice on same trouble.

weights build all by themselves.

The logistics of how the computer works? ATT computer programs in three large volumes --week long course.

How can this be maneuvered so that it can bias a sample? Example, if the control supervisor knew a service tech was in the sample and that service tech was in a certain area, he would weight all the regulated jobs higher than the nonregualted jobs in the area for that week, giving the service tech a better chance of pulling up a regulated job on his computer access terminal. Can this happen? What controls are in place so this doesn't happen? Service Orders area of concern. Maybe make recommendation, need more

controls. - See answer 45-4

TUESDAY, NOV 23

Went to Maintenance Center to meet service technician to ride with him. Daniel Martin.

he accessed his first job through the Computer Access Terminal (CAT). Itwas a service order and had to go to the cross box in the street, then to the meter room in the nursing home where the service order was requested. Went to the room of the person involved. Went back to cross box and back to meter room. Service installed. Used CAT to test that service was OK.

Charged all time to cable time 45M and charged it to meter room 68B on his time sheet.

Then he filled out the sample form on which he checked off what he did.



WASSP REQUEST 3

11/30/93

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PROVIDE BY 12/3/93

Re: Weighting of Dispatch items.

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A. Please list the IMC offices in the state of Florida.

b. Provide general weighting for each IMC office

C. Explain how general weighting is determined for each office.

D. Explain how general weighting can be changed using the computer generated system. What procedures in each office. Document if available.

5. Explain how the weighting can be changed manually in each office. What procedures in each office. Document if available.

F. Who has access to the system in each office to change weights: Who changes and who approves. Names and positions.

- 1. general wighting through the computer
- 2. manaual changes.

G. What controls are in place so that no one person can change weighting? Document if available.

H. Are there reports of changes in weighting, either manual or computer. Is If so provide for the IMC office I visited for the month of October. If there are reports, is there a follow up review to determine if the change in weighting is reasonable?

If there are no reports for changes in weighting, is there any type of follow up for the changes that take place to determine if they are reasonable?

I. In our visit to the IMC center in Miami, we were told that it takes a big deal to change the general weighting. The control Supervisor has to talk to the Manager and Staff Manager before makes a change in weights. We were also told that in that office one person put on the weights, that is the control supervisor. He also can change certain "hot" items himself without approval. Please explain what "hot" items means.

J. Referring to I above, please answer the following hypothetical question:

If the Control supervisor knew a service tech was in the sample and that service tech was in a certain area, he could weight all the regulated jobs higher than the nonregulated jobs in the area for that week, giving the service tech a better chance of pullng up a regulated job on his compter access terminal. Can this happen? What controls are in place so this doesn't happen?

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FPSC request3

RE: Weighting of dispatch items

a.	North Dade	West Palm Beach
	South Dade	Indian River
	Central Dade	Gainseville
	South Broward	Jacksonville
	North Broward	Orlando
	Coastal	W <b>est</b> Florida

b. There is no Company recommended weighting policy.

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- c. Each IMC determines its' own weighting based on the needs of the business.
- d. There is no programmable computer generated methods to adjust weights.
- e. Weighting can be changed manually in each office via the ADW or RTE/ITE transaction. Each office has local procedures regarding weight adjustment. There is no Company recommended weighting policy.
- f. All management personnel within the IMC have access to change weights. Weight changes are generally performed by the control supervisor. No approvals are necessary, changes are made by management personnel.

 As stated in d. above there is no computerized method to adjust weights.
 Manual changes are generally performed by the control supervisor position.

- g. All management personnel within the IMC have the ability to adjust weights if necessary based on the needs of the business.
- h. There are no reports generated or maintained on weight changes.
- i. Hot items are those reports that generally require an immediate dispatch due to circumstances surrounding the report, ie; medical emergency, line in road, etc.
- j. IMC is not concerned with which technicians are in the sample base. In addition, jobs are not categorized as regulated or deregulated in Mapper. Therefore weight factors cannot be used to determine regulated or deregulated work items.



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#### INTERVIEW WITH

ROBERTO SUAREX, MANBAGER, NETWORK SUPPORT STEVE SHAW, STAFF MANAGER, NETWORK SUPPORT EARL MERGELBERG, STAFF MANAGER, NETWORK SUPPORT.

THESE THREE PEOPLE ARE THE IMPLEMENTATION STAFF FOR WASSP FOR 3 GEOGRAPHIC AREAS.

Rick King and Steve Venderberg are the core staff for Brimingham.

Wassp not controlled by network. Controlled by comptrollers, and implemented by network.

Earl supports the dispatch function.

The Supervisor said that JohnLong who we had our interview with at the IMC was not the supervisor of the office and he might have led us astray in some of his answers and he wanted to clear that up.

When the Service Orders and trouble come int MAPPER they are notweighted yet. Mapper will plot mechanically for georgraphic location then then go through the algorythms in the system based on the ADW (weighting) criteria.

The algorythms stay the same, but the factors are changed. The person who changes the factors is the Dispatch Control Supervisor. I asked how he knows what to put in the system. Based on trial and error in experience in the MAP. Most changes are geographic locations. Controls for changes in weighting. There are no standards -- no reports. Depends on dispatch area, different points for different areas.

For example, will weight residence heavily starting at 8 in the morning because business is not open yet. Then at 9 or 10 will change the weight to businesses because they are open.

The weights. Controls how far somebody will drive. Weekends are different. The Dispatch Control Supervisor, sets up each AM or the night before. The dipatch is from 7 to 7. The priority is to make all commitments set.

John Long said that when any change in weighting need manager and asistant manager (not right. found out (utr)

The Dispatch Controls Supervior's job is to clean up the MAP, do today's work today. The does not need manager or assistant manager to change weights. Have to change weights according to what is happening in the field.

I asked about checks and balances -- missed appointments. They have to meet the Commission rule on commitments. And have to report all missed appointments. Report goes to Tallahassee.

# INTERVIEW WITH

ROBERTO SUAREX MANBAGER, NETWORK SUPPORT STEVE SHAW, STAFF MANAGER, NETWORK SUPPORT EARL MERGELBERG, STAFF MANAGER, NETWORK SUFFORT.

THESE THREE PEOPLE ARE THE IMPLEMENTATION STAFF FOR WASSP FOR 3 GEOGRAPHIC AREAS.

Rick King and Steve Venderberg are the core staff for Brimingham.

Nature of Repairs: Company says people who call in really don't know the nature of repairs. Sometimes they say it is inside and it is really outside and vice versa.

If the Company really knew what the exact problems were, then they could have separate groups for reg and nonreg work.

Explanation of DAA and AA.

DAA are Dispatch Administrative Areas. Each supervisor is assigned a "home DAA". A supervisor could have more than one DAA. It is a geographical area broken into DAA.

Each DAA is broken doesn into AA. Allocation Areas are a cross box area. There may be two cross boxes in an AA. They could be 1 to 25 AA's in a DAA. The DAA and AA's are assigned based on trouble history. The area are change and numbers are changed depending on where the trouble are. Needs a daily look on factors in society. Cannot be aset guidline because it changes every day.

The Mapper systems is used nationally -- since 1978 here in Florida.

I asked if a service tech and a control dispatcher could get together and somehow have the dispatcher only give him reg jobs or if the dispatcher knew he was in the sample weight all the reg jobs heavily so that he could have a better chance of getting a reg job.

Company said that if a servie tech were to do only reg work, it would set the system awry. There are 500-600 jobs pending a day, not really possible to look at picture of each trouble or service order to reset weight. The dispatcher is responsible to make his commitments.

The control dispatcher is not in the flow of the system of the service tech, they do not know who is sampled.

Also, there is no mechanical separation for quick see of reg and dereg. Also the information in the system could indicate it is a reg job and when the service tech gets out there it is a dereg job. The public does not know all the time what is reg and dereg. the data put in the system is not absolute.

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#### INTERVIEW WITH

S. C.

ROBERTO SUAREX, MANBAGER, NETWORK SUPPORT STEVE SHAW, STAFF MANAGER, NETWORK SUPPORT EARL MERGELBERG, STAFF MANAGER, NETWORK SUPPORT.

THESE THREE PEOPLE ARE THE IMPLEMENTATION STAFF FOR WASSP FOR 3 GEOGRAPHIC AREAS.

Rick King and Steve Venderberg are the core staff for Brimingham.

The Dispatcher is also responsible for setting the commitment.

The Company says there are huge fines for not making commitments. The dispatcher is highly concerned with comitments.

Per Company

If the Factors are changed via the ADW, that is if adjust one fact in AdW, all the jobs in the Maintenance Center will change, all jobs will change because of this factor.

If the factor is changed in a mask via RTE/ITE -- the only factor that can be changed for one job is the Priority. Can access a job and change the priority factor. This will not change any other job in the center.

When asked again if the dispatcher could talk to a ST and set the reg jobs at higher priority, company said would have to know the phone number anmd pull up the job and then change priority. There are 500-600 jobs scheduled in a day, would take a lot of time to look up each job individually and change the priority.

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FW 413 12/3



 $\frac{P_{e_1}}{\text{Attachment 4}}$ Page 1 of 3

#### BELLSOUTH TELECOMMUNICATIONS

#### Controls To Prevent "Pre-Determination" of Work Performed by Outside Technicians

Most troubles are dispatched mechanically via Mechanized Mapper Assignment (MMA), a system developed and maintained by AT&T. The MMA system uses the following criterion for assigning technicians to troubles: 1) Time to commitment 2) Distance to Job 3) Distance to Home 4) Out of Service 5) Subsequent Jobs 6) Priority. The System maintains all appropriate information relating to technicians based on Assignment Areas (AAs), in order to maximize assignment efficiences.

When the technician "logs in" for an assignment, MMA selects the most desirable job available based on all the criterion described above.

RESIDENT CONTROL: MMA has no knowledge of who "sampled" technicians are. This need to be Confermed on on card & MAPIEK itself.

With the exception of certain nonregulated troubles reported (such as "jack out of wall"), customer troubles cannot be identified as regulated or nonregulated at the time of dispatch. Generally, the type work needed to be performed to clear the trouble will not be known until the technician begins the job assignment. All instances of reported trouble are screened to the greatest extent 'possible, and the company dispatches a technician only when other efforts to clear the condition are not successful. Therefore, as stated above, trouble conditions are usually unknown at the time of dispatch.

RESIDENT CONTROL: Troubles cannot be predetermined as regulated or nonregulated.

The Company must have the ability, for operational efficiency reasons, to assign work to particular technician(s) or technician group(s). Some examples of why and when the company uses this assignment method are as follows:

Not all technicians are as qualified to do all

Attachment 4 Page 2 of 3

types of work as others. A Services Technician should not be dispatched to repair a cable cut on a 200 pair cable. It is much more efficient for a Cable Repair Technician to do this work.

There are instances where work on a particular job is incomplete at the end of a work day. In many of these instances, it only makes good business sense to have the same technician complete this work because of knowledge of the existing job. So, the company must be able to pre-assign this task.

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Certain technicians have expertise on certain types of facilities as well as for certain customers. As an example, a technician might be assigned to do all work for a large airport due to the unique knowledge required. The company must have the ability to assign this technicians work uniquely.

In the event of disasters such as hurricanes or floods, the company must be able to assign work in "bulk" in order to restore service as quickly as possible.

The technician must have the ability to remove a job if circumstances dictate. For example, if a technician receives a trouble at 8:00 and in the remarks section the order says "access after 1:00", the technician would call the Maintenance Center to have this job reassigned for efficiencies sake. However, in these instances, the source documentation received by the technicians' supervisor as well as the technical analysts in the WASSP center would indicate each job that has been removed. These removed jobs are subject to review by the analysts as well as supervisors.

As displayed above, the company must have this necessary flexibility in order to meet the needs of the business.

RESIDENT CONTROL: None of the involved systems or individuals have knowledge of which technicians are selected for the sample.

:

#### Attachment 4 Page 3 of 3

a., 5. . . .

As an additional control, the company has in place a Supervisor of the technical analysts as well as a Management Control Position, who each review the profiles as developed by the Work Activity Statistical Sampling Process for reasonableness and would investigate and resolve any anomalies.

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Wassp Request 6

11/30/93

PROVIDE BY 12/3/93

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Re: Bulk Dispatch

Please explain "bulk" Jobs. Explain and give examples on how this does ot distort the sample. Are bulk jobs dispatched through the CAT? If so, how? If not, how dispatched.

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NC

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#### FPSC Request 6

#### BULK JOBS

"Bulking" of jobs is a method of efficiently dispatching technicians on more than one job at a time in order to reduce unnecessary travel between jobs by mechanically selecting jobs in close proximity to one another. The bulking of technicians is mechanized. Jobs that are bulked to technicians are dispatched through the CAT terminal.

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Bulking cannot distort the WASSP sample. There is no category of regulated or deregulated work items. The Bulk program determines which jobs to assign technicians based on (1) which DAA has the most work, (2) which AA has the most work, and (3) common FZ (final distribution facility). The local IMC can also add a additional sort item for service orders based on customer request of morning or afternoon appointments.

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ADJUSTING DISPATCH WEIGHTS USING ADW AND DPVAL

<u>INTRODUCTION</u> With LMOS 11/70 Generic 3, the Mechanized Mapper/Assigner (MMA) features were introduced, which enabled LMOS to automatically determine and dispatch the best job for a craft. In addition, it also provided report capabilities to monitor the dispatch process, and several transactions allowing the area control supervisor to control the job selection process.

The MMA dispatch job selection formula is controlled by each dispatch Management Center (MC), or Super dispatch MC for their own craft force by means of the ADW - Assign Dispatch Weights transaction, as described in the section entitled "The ADW Transaction - Assign Dispatch Weights" (nfe mmagen.adw). This transaction lets you assign parameters, and set flags which determine how jobs are assigned to your craftpersons.

The DPVAL report allows the user to see the numerical results of applying the job selection formula to a set of work items and the results of changing them. It is described in the section entitled "DPVAL Report - Display Dispatch Values" (nfe\_rcmd.dpval). The "TOTAL" column on the report provides the values that result from running the dispatch algorithm on each work item. The job that has the largest value in this column is the job that would be dispatched to a craft now if she/he were dispatched from the location specified on the report.

Changes in the controlling parameters can be implemented at any time, and become effective immediately. The settings of these parameters will affect the efficiency of your MC. Therefore, it is important that the effects of changing the parameters are well understood by the MC management.

This guide provides an overview of the effect of changes to the ADW parameters, and explains how changing any parameter affects the operations of the entire center. Several basic examples are given to demonstrate the results of changing them on the operation of the system. This document concludes with a brief section explaining one way that group turfs can be used to increase dispatch efficiency.

JOB SELECTION PARAMETERS There are two kinds of entries on the ADW mask. The first tells the system which jobs to consider for dispatch and whether to test the line of the job that is dispatched, while the second defines the weights for the algorithm that determines which one of these jobs is actually dispatched. Figure 1 shows a typical ADW mask, as it would look on your screen. The options that control which jobs will be considered and the testing options are:

- TEST ON DISPATCH?
- TEST ON RETURN?
- TIME DELTA?

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ADW	MC 170	EC 170	01-08-87 1059A
015	SPATCH PARAMET ESTIMATED CC ACCESS WINDO DISPATCH PAR TIME TO CC DISTANCE T DISTANCE T OUT-OF-SER SUBSEQUENT PRIORITY JOB TYPES: PDO 0 P PDB 6 P	ERS MPLETION TIME W INCREMENT AMETER WEIGHTS MMITMENT O JOB O HOME VICE S DF 4 POM PDG 0 PD D2 0 PD3 0 PD4 0 PD	EXIST. WGT NEH WGT 150 0 100 36 7 80 40 40 40 40 0 PDC 0 0 PWS * PWE *
DIS	PATCH SELECTI TURF DISPATCH CONSIDER FUTU TEST ON DISPA IE DELTA O	ON AND TEST OPTIONS N RE COMMITMENTS Y TCH? N	WITH I OPTION? N WITH APPOINTMENTS? N MIFI? N TEST ON RETURN? N
		Figure 1. A t	pical ADW mask
٠	TURF DISPATO	H? (New in G2)	
٠	WITH I OPTIC	N? (New in G2)	
•	CONSIDER FUT	URE COMMITMENTS? (	ew in G2)
•	WITH APPOINT	MENTS? (New in G2)	
•	MIFI? (New	in G2)	
ese Imeric nagen.	entries will ally affect adw, however.	NOT be discussed the dispatch for The other entrie	in this document, since they do no mula. They are discussed in nfe on the mask are parameters that ar

### ADJUSTING DISPATCH WEIGHTS USING ADW AND DPVAL

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1. ESTIMATED COMPLETION TIME - The estimated completion time parameter is used to determine when an extra 200 points are added to the TOTAL column by the dispatch formula for those jobs just about to miss their commitment. This parameter specifies the amount of time remaining to

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considered. These parameters are:

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#### ADJUSTING DISPATCH WEIGHTS USING ADW AND DPVAL

commitment, at which time the extra 200 points are to be added. The estimated completion time parameter is specified in minutes to the nearest half hour. For example, if the parameter is set to 240 minutes, the 200 extra points is added to all jobs with commitments that are missed, or due within four hours. The estimated completion time parameter can have a maximum value of 900.

- 2. ACCESS WINDOW INCREMENT (New with Generic 2) The access window increment parameter determines how many extra points are added to the TOTAL column by the dispatch formula for those jobs that are currently in, or one half hour before their access window. That is, if there is an access requirement of after 10:00 AM and before 5:00 PM for a job, the job will have these points added from 9:30 AM until 5:00 PM. The extra half hour at the beginning of the window represents the time for the craft to travel to the next job, and assumes that the craft will not arrive at the job site too long before the access window begins. The access window increment parameter can have a maximum value of 200.
- 3. DISPATCH PARAMETER WEIGHTS The MMA job selection formula evaluates six characteristics of each job before adding them to the total. You get the weights for each of these on the ADW mask, and then MMA multiplies them by the actual values of the characteristics of the job, rather than an on/off basis like the Estimated Completion Time and the Access Window Increment. By getting the weight to be used on each of these characteristics, you can control the relative importance the formula gives to each one. The maximum weight value that can be set is 200, and the minimum value is zero. Each of these parameter weights has its own column on the DPVAL report, so you can see how they interact with each other.

These characteristics are:

- A. TIME TO COMMITMENT How much time is left between the time when the dispatch formula is looking for a new job for assignment, and the commitment time associated with the job. The derivation of the actual numerical value for this characteristic may be found in the "nfe\_rcmd.dpval" document. For our purposes, it is sufficient to know that the final value associated with the Time to Commitment parameter increases by the value of the weight for every half hour before the commitment. For example, if the "Time to Commitment" weight is set to 100, and a certain job is due at 5:00 PM today, the Time to Commitment value for this job, as shown on the DPVAL report, will be 100 points higher at 2:30 PM than it was at 2:00 PM.
- 8. DISTANCE TO JOB: The travel time between the craftperson's current location, and the location associated with the job.

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#### ADJUSTING DISPATCH WEIGHTS USING ADW AND DPVAL

The weight you entered on the ADW mask is multiplied by the travel time to the job. Since you want to select jobs that are closer to the craft, this parameter is actually subtracted from the TOTAL value, so it is preceded by a minus sign when displayed in its own column. The travel times are determined by the MMA geography tables for your MC, and represent an estimate of the average amount of time between a location in one area and a location in another area. The numbers in the geography tables usually represent minutes, but they may represent another unit of time in some areas. If you have any questions about the units of travel time used in your geography tables, check with your staff organization that sats up and maintains them. For the purposes of this document, the use of minutes is assumed.

- C. DISTANCE TO HOME The travel time between the craftperson's home location, and the location associated with the job. This parameter is handled just like the Distance to Job parameter when the dispatch value is computed.
- D. OUT-OF-SERVICE If the job is associated with an out-of-service condition, points are added to the TOTAL value equal to 10 times the weight entered on the ADW mask.
- E. SUBSEQUENTS The number of subsequent reports associated with the job is multiplied by 10, and then by this weight. These are then added to the TOTAL.
- F. PRIORITY The priority value associated with the job. This is determined by multiplying the number of priority flags by 0, and adding the priority ranking factor for the line record associated with the job. (This number is limited to 255.) This priority value is then multiplied by the weight shown on the ADW mask. The priority flags are set by customer line record information (the priority line flag, PRI), and by information entered when the work item is created (the customer irate, CIR, and customer comment, CC, flags).
- 4. JOB TYPES The job type parameters reflect the weights of different job types in the job selection formula. For each job type, except programmable work, you can enter a parameter value from 0 to 9. The parameter value that represents the job type of the work item is multiplied by 100 and added to the TOTAL value.

SUGGESTIONS FOR ADJUSTING THE DISPATCH WEIGHTS From our experience, any "reasonable" set of weights will provide good results. However, you can get better results by reviewing and adjusting the values several times a day to

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#### ADJUSTING DISPATCH WEIGHTS USING ADW AND DPVAL

reflect the changing conditions in the area served by your Management Center (MC). The following guidelines should be combined with experience from your local center to achieve the best results. In this section, we describe a step-by-step form to help you, and then present a set of suggestions for adjusting these settings to fit certain circumstances in the center. The suggestions do not attempt to cover all conditions that may occur, but instead are a set of examples for you to use as a guide.

As we describe the method, pieces of the form will be included with the text to demonstrate how the calculations might be performed.

• ESTIMATED CLEARING TIME (ECT) and TIME TO COMMITMENT (TTC) - The estimate of length of time to clear a job should be the first ADW parameter set. This determines when a "bonus" of 200 points is added to the TOTAL, because the job is approaching its commitment, and if it isn't dispatched soon, the commitment will be missed. The parameter value itself should be based on the actual average clearing time for your center. Round this value UP to the next half hour. This insures that the "bonus" is put into effect soon enough. If the clearing times for your center vary greatly from one craftperson to another, you may want to increase this value by an additional half-hour or two. This helps insure that the job will be completed even if a slower craft gets it.

Once the Estimated Clearing Time (ECT) has been set, the Time to Commitment (TTC) weight should be set. This will form the base on which the settings of most of the rest of the parameters and weights will be made. The value of the TTC parameter also determines how much the ECT "bonus" affects the TOTAL, so it is best to check back to see if the ECT "bonus" is what you want it to be, compared to the TTC parameter. If not, adjust the TTC parameter to get the right value. A simple calculation can tell you how much sooner a job will be dispatched if it is "about to miss" its commitment: If you divide 100 by the TTC, the answer is the average number of hours earlier that a job with the ECT "bonus" would be dispatched than the same job without the bonus. A suggested starting value for the TTC weight is 100, which would dispatch these potential missed commitments one hour sooner. If a larger ECT "bonus" is desired, decrease the TTC weight.

If you would rather not give a bonus for "about to miss commitment" jobs, you have two alternatives" First, if the ECT parameter is set to zero, this means the bonus is only given to those jobs that have already missed their commitment. With this alternative, the same procedure for setting the TTC should be followed. The second alternative is to effectively negate the bonus entirely. This is done by getting the ECT to its maximum value, 900, and will serve to add the bonus to ALL jobs due today (assuming that your workday is less

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#### ADJUSTING DISPATCH WEIGHTS USING ADW AND DPVAL

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than 15 hours long). If this alternative is chosen, the selection of the TTC weight is not critical at this stage, and should be set to 100.

1	Do you want to give a bonus to jobs that are		XXXXXXXXX
	about to miss their commitment?		XXXXXXXXX
2	If line 1 is YES, skip to line 6. Otherwise, do		XXXXXXXXX
	you want to give a bonus to jobs that have missed		XXXXXXXXX
	their commitment?		XXXXXXXXX
3	If line 2 is NO, enter 900 here and on line 11.		XXXXXXXXXX
4	If line 2 is NO, enter 100 here and on line 12.		XXXXXXXXX
	Skip to line 13.		XXXXXXXXX
5	Enter 0 here and on line 11.		XXXXXXXXX
6	Enter 100 here.	100_	XXXXXXXXX
	How much of a bonus do you want to give? (hours)		XXXXXXXXX
	Divide line 6 by line 7. Enter the result here		XXXXXXXXX
•	and on line 12.		XXXXXXXXX
9	If line 1 is NO. skip to line 13. Otherwise.		XXXXXXXXX
-	enter the average clearing time for your center.		XXXXXXXXXX
10	Round line 9 up to the next number divisible by		XXXXXXXXX
. •	30. Enter it here and on line 11.		XXXXXXXXX
11	This is the ECT parameter.	XXXXXXXXX	
	This is the TTC weight.	XXXXXXXXX	

Figure 2. ADW Weight Calculation Table--Part 1

 DISTANCE TO JOB - The Distance to Job (DTJ) weight and the TTC weight work together to determine the relative merit of traveling a little farther to take a job that might be due earlier. There are several ways one may look at this relationship between the DTJ and the TTC, two of which are discussed next.

The obvious relationship between the DTJ and the TTC is, "How much more do I want to travel to take a job that is due one hour sconer?" Usually this value will be not more than a few minutes. From this relationship, the simplest way to calculate the DTJ weight is the following:

13	Multiply line 12 by 2.	XXXXXXXXXX
14	How many minutes farther do you want a craft to travel to take a job that is due an hour earlier?	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
15	Divide line 13 by line 14. This is the DTJ weight.	XXXXXXXXX
16	If you want to check to see whether all your jobs can be handled, continue. Otherwise, skip to line 25.	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

Figure 3. ADW Weight Calculation Table--Part 2

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#### ADJUSTING DISPATCH WEIGHTS USING ADW AND DPVAL

Another way to look at the DTJ and TTC relationship, and thereby set the DTJ weight is to ask, "Can I take this nearby job without missing other jobs with earlier commitments in a given area, assuming the ECT is an accurate estimate of the time I need to do each job?" The answer is yes, unless it is physically impossible to do all the work before the commitment times. To insure this result, first describe the area you wish to cover. This will usually be a DAA or supervisor turf. Determine the greatest distance that a craft would travel in this area from the geography tables. Also, determine the current number of jobs and craft in the area. Now the following steps can be used to calculate the maximum value of the DTJ weight that will not cause any unnecessary missed commitments.

17	Multiply line 11 by line 12.		XXXXXXXXXX
18	Enter the number of craft in the area of interest		XXXXXXXXX
19	Multiply line 17 by line 18.		XXXXXXXXX
20	Enter the number of jobs in the area of interest.		XXXXXXXXX
21	Divide line 19 by line 20.		XXXXXXXXX
22	Enter the largest distance in the area of		XXXXXXXXX
	interest.		
23	Divide line 18 by the greatest distance.		XXXXXXXXX
24	Divide line 19 by 30. This is the largest value		XXXXXXXXX
	of the DTJ parameter that will not cause any		XXXXXXXXX
	unnecessary missed commitments.		XXXXXXXXX
25	Enter the number from either line 15 or 24,	XXXXXXXXX	
-	based on your own judgement. This is the DTJ		
	weight.		

Figure 4. ADW Weight Calculation Table-Part 3

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#### ADJUSTING DISPATCH WEIGHTS USING ADW AND DPVAL

The basic philosophy behind this approach is that, assuming no more work comes in, and all jobs are handled as planned, the same craft can take the job that is due first after he/she finishes another job and still have time to complete it before the commitment expires. It is important to note that this is the greatest value of DTJ that insures no UNNECESSARY missed commitments. Often, however, it is advantageous to use a higher value: If the load is very heavy, and you must miss commitments anyway, you might as well miss ones that are far away, rather than waste craft time driving.

Again, we remind you that these are only guidelines. If the experience in your own center suggests otherwise, do not hesitate to use your own judgement.

The remaining weights can all be set in two different ways: they can be compared with the TTC weight (How much sooner do I want to dispatch this job?), or with the DTJ weight (How much farther would I travel to take this job?). Either way yields an equivalent result. The next few parts of the form will have two sections. The first, or 'A' section of the form (Figures 5 and 7) should be filled out if you want to compare them with the TTC weight, and the second, or 'B' section of the form (Figures 6 and 8) if you want to compare them with the DTJ weight.

• JOB TYPE PRIORITIES - The Job Type Priority weights should be set next. These determine which types of jobs you want to be dispatched first, if all other factors are equal. When you select either the number of hours earlier or minutes farther the craft will travel to take the higher priority job, remember to include additional time if the type of job usually takes longer to fix, as well as the emphasis you want to place on it.

Two sample pieces of the form are displayed below. In these samples, we use the PDF and PDO job types. The same process should be repeated for all your job types, comparing each (in the example, PDF) against the job type with the lowest priority (in the example, PDO).

A 26	Divide line 12 by 50, keeping 2 decimal places. Enter the result here.	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
A 27	How many hours earlier do you want to dispatch a PDB job than a PDO job?	
A 28	Multiply line 26 by line 27. This is the difference between the weight of a PDB job and a PDO job.	XXXXXXXXXX XXXXXXXXXX

The same procedure continues for each job type (lines A29 through A42) of the form.

Figure 5. ADW Weight Calculation Table--Part 4A (partial)

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#### ADJUSTING DISPATCH WEIGHTS USING ADW AND DPVAL

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XXXXXXXXX How many hours earlier do you want to dispatch a 8 26 PDF job than a PDO job? XXXXXXXXXX 8 Multiply line 21 by line 12. XXXXXXXXXX 27 XXXXXXXXXX Divide line 22 by 50. This is the difference B XXXXXXXXX between the weight of a PDF job and a PDO job. 28 XXXXXXXXX

The same procedure continues for each job type (lines B29 through B42) of the form.

Figure 6. ADW Weight Calculation Table--Part 48 (partial)

• OUT-OF SERVICE (OOS), SUBSEQUENTS (SUB), AND PRIORITY FLAGS (PRI) -These three parameters all function in the same manner, and will be discussed together. Their interactions are like those of the job type priorities above, and the only changes are the constants in the calculation. The same two methods (TTC and DPJ) also apply to these calculations, for example:

	How many hours earlier do you want to dispatch a		XXXXXXXX
43	job that is Out of Service?		XXXXXXXXX
A	Multiply line 43 by line 12.		XXXXXXXXX
44	· · · · · · · · · · · · · · · · · · ·		XXXXXXXXX
A 45	Divide line 44 by 5. This is the OOS weight.	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	
A	How many hours earlier do you want to dispatch a		XXXXXXXXX
46	job for each Subsequent Report?		XXXXXXXXX
A	Multiply line 46 by line 12.		XXXXXXXXX
47	العه الانفيس والوالي من المعتب الوالي		XXXXXXXXX
A 48	Divide line 47 by 5. This is the SUB weight.	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	
A	How many hours earlier do you want to dispatch a		XXXXXXXXX
49	job for each Priority Factor?		XXXXXXXXX
A	Multiply line 49 by line 12.		XXXXXXXXX
50		l	XXXXXXXXX
A 51	Divide line 50 by 5. This is the PRI weight.	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	

Figure 7. ADW Weight Calculation Table--Part 5A

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- <u> </u>	How much farther would you send a craft to take	1	XXXXXXXX
43	a job that is Out of Service?		XXXXXXXXX
8	Multiply line 43 by line 25.		XXXXXXXXX
44			XXXXXXXXX
B 45	Divide line 44 by 10. This is the OOS weight.	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	
B	How much farther would you send a craft to take		XXXXXXXXX
46	a job for each Subsequent Report?		XXXXXXXXX
B	Multiply line 46 by line 25.		XXXXXXXXX
47			XXXXXXXXX
B 48	Divide line 47 by 10. This is the SUB weight.	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	
B	How much farther would you sent a craft to take		XXXXXXXXX
49	a job for each Priority Factor?		XXXXXXXXXX
8	Multiply line 49 by line 25.		XXXXXXXXX
50			XXXXXXXXX
B	Divide line 50 by 10. This is the PRI weight.	XXXXXXXXXX	
51		XXXXXXXXXX	l

#### ADJUSTING DISPATCH WEIGHTS USING ADW AND DPVAL

Figure 8. ADW Weight Calculation Table--Part 5B

It is important to note that the number of subsequents and priority flags can be substantially greater than one for a job. This means that these factors, if weighted heavily, could easily override everything else in an extreme case. For example, if a customer has called in five subsequent reports, the value added to the formula will be five times that of a job with a single subsequent report. Caution is advised against getting these weights too high.

 DISTANCE TO HOME (DTH) - This last parameter reflects how strongly you desire the craft force to be forced toward their home location. One common strategy of dispatching craft is to assign a first morning job for the craft near the edge of their turf, and then work the craft back to the home location during the day. Increasing the value of this parameter increases the strength of the pull. In theory, this causes the craft to be dispatched to jobs that are p percent of the way from their current location to their home location, on the average, where -

 $p = \frac{100 \text{ (DTH)}}{\text{DTJ} + \text{DTH}}$ 

#### ADJUSTING DISPATCH WEIGHTS USING ADW AND DPVAL

This parameter actually works on a two-level basis. If the craftperson is in the same DAA as the home location, the craft would tend to move toward AAs closer to the home location. However, if the craftperson is in an outlying DAA, the parameter only affects movement across DAA boundaries-- it has no effect within the outlying DAA, because every job in that DAA is assumed to be the same distance to the home location.

No guidelines or formula have been devised to determine the best value for this parameter, but a rule of thumb based on experience in several companies is that a good value for the DTH weight is about 15% - 25% of the DTJ weight, which generates a value of p which is also around 20\%. The DTH value should be modified by your own experience, of course.

• ACCESS WINDOW INCREMENT (AWI) [New with Generic 2] - The Access Window Increment parameter creates a bonus to get jobs dispatched within their access windows. This parameter is not meant to be a major contributor to the TOTAL value, but rather to make the difference between jobs when all other factors are equal. If you don't want a bonus for jobs in the access window, just set the parameter to zero. Otherwise, getting the AWI weigth to twice the TTC weight will provide a one hour bonus to jobs in their access window.

This parameter is an all-or-nothing value. Jobs with an access window will either have this parameter set, or will not be considered for dispatch. Jobs without an access window can be worked anytime, and are never given these points.

<u>CHANGING THE DISPATCH WEIGHTS TO REFLECT CHANGING MC CONDITIONS</u> Different conditions in the MC require different settings from the base weights described above. The following situations are just a few of those that you will experience in your MC. Good adjustment of the parameters will keep the MC running smoother.

- MORNING APPOINTMENTS In the morning, many MCs emphasize getting all of their appointments out of the way. If there is a heavier than usual load of morning work, raising the time to commitment weight will increase the probability of dispatching a morning job, and therefore will handle the heavy load of morning work. This makes the morning jobs more important, and helps insure that they are dispatched soon enough. If you have a Generic 2 system, increasing the Access Window Increment to its maximum value of 200 will also help solve this problem.
- END OF THE DAY Near the end of the day, you may have finished the work committed for today. When the craft request another job at this

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#### ADJUSTING DISPATCH WEIGHTS USING ADW AND DPVAL

time, a job is dispatched that is due tomorrow. (This option can be turned off on G2 systems, if you want.) Since you have extra time and flexibility in dispatching, many MCs choose to work on the jobs that will most negatively affect their service results first. Therefore, increase the out-of-service, subsequent, and priority flag weights. Also, you may not want any unnecessary travel, so a slight increase in the distance to home weight might also be beneficial.

• HEAVY OVERLOAD - Occasionally during severe weather, your MC may be totally swamped with work. In this case, it is important to dispatch the most urgent jobs first. However, since many of the jobs that a craft will complete will have already missed their commitments anyway, it is a good idea not to waste craft time traveling. Boosting the out-of-service and distance to job weight, and possibly also decreasing the time to commitment weight, is advised in this situation.

<u>A SIMPLE EXAMPLE OF THE EFFECTS OF CHANGING DISPATCH WEIGHTS</u> The following simple example will demonstrate the effects of changing the dispatch weights. First, we will describe the area we are dealing with in the example, and then we will demonstrate getting the base dispatch weights. This will allow us to show some of the effects of changing them.

<u>GEOGRAPHY FOR OUR EXAMPLE</u> In our example, we are going to use a simplified MC which has only four DAAs, and AAs within each DAA as follows:

DAA Geography:



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# ADJUSTING DISPATCH WEIGHTS USING ADW AND DPVAL

AA Geographies: DAA 849:

 AA
 <--10</th>
 min-->
 AA

 1199
 2299

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(1 minute within each AA.)

DAA 922:

(1 minute with each AA.)

DAA 923:

(1 minute within each AA.)

DAA 850:



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#### ADJUSTING DISPATCH WEIGHTS USING ADW AND DPVAL

(1 minute within AAs 3322 and 4431, 3 minutes within AAs 3399 and 4499.)

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This MC is covered by two supervisor groups, 'A' and 'C', each having 8 craft working for them. Normally, supervisor A is responsible for jobs in DAAs 849 and 850, and supervisor C is responsible for DAAs 922 and 923. However, craft from each group are allowed to take jobs from one of the DAAs in the other turf, to help each other out when necessary. For this reason the two turfs overlap: the turf for group A also includes DAA 922, and the turf for group C also includes DAA 850. This is shown by the following two DTD reports:

MCMD DTD PAGE AR	MC 170 DAA	SUPV	GRP A	EMP CODE	PRTR	REQ BY
ESPOSITO,R	GROUP: A	HOME DAA	849			
	849	•	850 *			
	922	•		923		
PAGE 1 - END	)	•	•			
MCMD DTD PAGE A	MC 170 DAA	SUPV	GRP C	EMP CODE	PRTR	REQ BY
MCMD DTD PAGE A KIRBY,J.L.	MC 170 DAA RG GROUP: C	SUPV	GRP C 923	EMP CODE	PRTR	REQ BY
MCMD DTD PAGE A KIRBY,J.L.	MC 170 DAA RG GROUP: C 849	SUPV HOME DAA	GRP C 923 850 *	EMP CODE	PRTR	REQ BY
MCMD DTD PAGE A KIRBY,J.L.	MC 170 DAA RG GROUP: C 849 922	SUPV HOME DAA	GRP C 923 850 *	EMP CODE	PRTR	REQ BY

PAGE 1 - END

Figure 9, DTD Masks for the MC in the example.

Today we have a moderate load in our sample MC, overall. However, a very local thunderstorm passed through last night, causing a large number of reports in DAA 850. The following jobs are pending dispatch right now:

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#### ADJUSTING DISPATCH WEIGHTS USING ADW AND DPVAL

MCMD DPJ SUPV GRP EMP CODE PRTR MC 170 DAA REO BY PAGE ARG JOBS PENDING DISPATCH FOR MC: 170 01-08-87 0901A DAA IST RTE TTN TN LOCATION COMMIT TIME MCM OOS SUBS L 849 PDO 400 0312768 815-6262015 01-08-87 0600P 815254-1199 A 8 PDO 400 0312799 815-6262018 01-08-87 0600P 815254-2299 A B PDO 400 0312830 815-6262028 01-08-87 0600P 815254-2299 A В 850 PDO 101 0312489 815-6262003 01-08-87 0100P 815254-3399 A В 01-08-87 0300P PDO 102 0312551 815-6262005 815254-4431 A B PDO 102 0312582 815-6262007 01-08-87 0600P 815254-4431 A B PDF 400 0312613 815-6262011-01-08-87 0600P 815254-3322 A 8 PDO 400 0312644 815-6262085 01-08-87 0600P PAGE 1 - MORE MCMD DPJ MC 170 DAA SUPV GRP EMP CODE PRTR REQ BY PAGE 2 ARG 815254-3322 A 8 PDO 400 0312675 815-6262086 01-08-87 0600P 815254-3322 A 8 01-08-87 0600P PDB 400 0312706 815-6262031 815254-3399 A B 01-08-87 0600P · PDO 400 0312737 815-6262035 815254-3399 A 01-08-87 0600P 922 PDO 102 0407567 217-5462001 217315-2299 A В 01-08-87 0600P PDO 102 0407598 217-5462002 217315-2224 A 8 01-08-87 0600P PDO 102 0407629 217-5462005 923 217315-2606 A B

PAGE 2 - END

Figure 10. DPJ Report for the MC in the Example

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### ADJUSTING DISPATCH WEIGHTS USING ADW AND DPVAL

<u>AN INITIAL SETTING OF THE DISPATCH WEIGHTS</u> The first step in setting the dispatch weights is to gather the information and make the decisions that form the basis of calculation of the weights. For this example we have decided:

- Based on TREAT reports, we know that our average clearing time for a simple (PDO) job is about 138 minutes.
- To set our Distance To Job (DTJ) weight, we decided that we would want craft to drive about five minutes farther to take a job due 10 minutes sooner. As an additional check we want to be absolutely sure to close all the storm-related troubles today, if we can. The area that we will consider is our "problem" area (SUPV group A, who has 11 jobs in DAAs 849 and 850). Remember that although DAA 922 is in SUPV A's turf, it is not his main responsibility. We also make the additional assumptions that we have 8 craft to cover the area, and that our longest distance to travel is 10 minutes (from the geography).
- Next, we will set the weights for the specific job types. We know that a PDF job takes almost two hours longer than a PDO job.
- Troubles on business circuits average about one hour longer than residence, but our district manager insists that we provide our best service to them. To handle this, we add an additional two hours on top of the one hour to insure that there is no risk of missing these commitments.
- For our other weights, we want to give a 4 hour "bonus" if the trouble is Out Of Service (OOS), and 2 hours for each Priority Flag (PRI) or Subsequent Report (SUB).
- Once we have this information, we can enter it in the ADW Weight Calculation Table and compute our weights:

<u> </u>	Do you want to give a bonus to jobs that are	YES	XXXXXXXXX
•	about to miss their commitment?		XXXXXXXXX
2	If line i is YES, skip to line 6. Otherwise, do		XXXXXXXXXX
•	you want to give a bonus to jobs that have missed		XXXXXXXXXX
	their commitment?		XXXXXXXXX
3	If line 2 is NO. enter 900 here and on line 11.		XXXXXXXXX
4	If line 2 is NO, enter 100 here and on line 12.		XXXXXXXXXX
-	Skin to line 13.		XXXXXXXXX
5	Enter O here and on line 11.		XXXXXXXXX
	Enter 100 here	100	XXXXXXXXX
	How much of a bonus do you want to give? (hours)	1	XXXXXXXXX
	Divide line 5 by line 7. Enter the result here	100	XXXXXXXXXX
0	and on line 12.		XXXXXXXXX

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	ADJUSTING	DISPATCH	WEIGHTS	USING	ADH	AND	DPVAL
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9	If line 1 is NO, skip to line 13. Otherwise,	138	XXXXXXXXX
	enter the average clearing time for your center.		XXXXXXXXX
10	Round line 9 up to the next number divisible by	150	XXXXXXXXX
	30. Enter it here and on line 11.		XXXXXXXXX
11	This is the ECT parameter.	XXXXXXXXX	150
12	This is the TTC weight.	XXXXXXXXX	100
13	Multiply the TTC parameter by 2.	200	XXXXXXXXX
14	How many minutes farther do you want a craft to	5	XXXXXXXXX
	travel to take a job that is due an hour earlier?	:	XXXXXXXXXX
15	Divide line 13 by line 14. This is the DTJ .		XXXXXXXXX
	weight.	40	
16	If you want to check to see whether all your jobs	XXXXXXXXX	XXXXXXXXX
	can be handled, continue. Otherwise, skip to	XXXXXXXXX	XXXXXXXXXX
	line 25.	XXXXXXXXX	XXXXXXXXX
17	Multiply line 11 by line 12.	15000	XXXXXXXXX
18	Enter the number of craft in the area of interest	8	XXXXXXXXXX
19	Multiply line 17 by line 18.	12000	XXXXXXXXX
20	Enter the number of jobs in the area of interest.	11	XXXXXXXXX
21	Divide line 19 by line 20.	10909	XXXXXXXXX
22	Enter the largest distance in the area of		XXXXXXXXX
	interest.	10	
23	Divide line 18 by the greatest distance.	1091	XXXXXXXXX
24	Divide line 19 by 30. This is the largest value	36	XXXXXXXXX
	of the DTJ parameter that will not cause any		XXXXXXXXXX
	unnecessary missed commitments.		XXXXXXXXXXX
25	Enter the number from either line 15 or 24,	XXXXXXXXX	36
	based on your own judgement. This is the DTJ	XXXXXXXXX	•
	weight.		
	Section A		
	To be used if you want to calculate your other	parameter	5
	relative to the TTC parameter.		
	• · · · · · · · · · · · · · · · · · · ·	•	
A	Divide line 12 by 50, keeping 2 decimal places.	2	XXXXXXXXX
26	Enter the result here.		XXXXXXXXX
A	How many hours earlier do you want to dispatch a	1+2 = 3	XXXXXXXXXX
27	PDB job than a PDO job?		XXXXXXXXX
A	Multiply line 26 by line 27. This is the	XXXXXXXXX	6
28	difference between the weight of a PDB job and a		
	PDO job.		
A	How many hours earlier do you want to dispatch a	2	XXXXXXXXX
29	PDF job than a PDO job?		XXXXXXXXX
A	Multiply line 26 by line 29. This is the differ-	XXXXXXXXXX	4
30	ence between the weight of a PDF job and PDO job.		
	Continue for the remaining 6 job types		

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A	How many hours earlier do you want to dispatch a	4	XXXXXXXXX
43	job that is out of Service:		*****
A 44	Multiply line 43 by line 12.	400	XXXXXXXXXX
A 45	Divide line 44 by 5. This is the OOS weight.	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	08
A	How many hours earlier do you want to dispatch a	2	XXXXXXXXX
_ 46	job for each Subsequent Report?		XXXXXXXXX
A	Multiply line 46 by line 12.	200	XXXXXXXXX
_ 47 _			XXXXXXXXX
A 48	Divide line 47 by 5. This is the SUB weight.	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	40
A	How many hours earlier do you want to dispatch	2	XXXXXXXXX
49	a job for each Priority Factor?		XXXXXXXXX
A	Multiply line 49 by line 12.	200	XXXXXXXXX
50			XXXXXXXXX
A 51	Divide line 50 by 5. This is the PRI weight.	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	40
	Section B		
	To be used if you want to calculate your other relative to the DTJ parameter.	parameters	5
8	Divide line 25 by 100, keeping 2 decimal places.		XXXXXXXXXX
26	Enter the result here.		XXXXXXXXXX
B	How much farther would you send a craft to take		XXXXXXXXXX
27	a PDB job than a PDO job?		XXXXXXXXXX
В	Multiply line 26 by line 27. This is the differ-	XXXXXXXXX	
28	ence between the weight of a PDB job and a PDO	XXXXXXXXXX	
		<u> </u>	~~~~~~~~~~
8	HOW MUCH TARTHER WOULD YOU SEND A CRAft to take		
- 29	a PUF JOD THAN & PUU JOD!	100000000	<u>  ^^^^^^^^^</u>
_B	Multiply line 20 by line 29. Ints is the		
30	difference between the weight of a PUP job and	^^^^	
		<u> </u>	<u>!</u>
	Continue for the remaining 6 job types .	••	
8	How much farther would you send a craft to take	1	XXXXXXXXX
43	a job that is Out of Service?	1	XXXXXXXXX
8	Multiply line 43 by line 25.		XXXXXXXXX
44			
B 45	Divide line 44 by 10. This is the OOS weight.	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	
	How much farther would you send a craft to take		XXXXXXXXX
46	a lob for each Subsequent Report?		XXXXXXXXX
B	Multiply line 46 by line 25.		XXXXXXXXX
47			XXXXXXXXX
8	Divide line 47 by 10. This is the SUB weight.	XXXXXXXXX	1
48		XXXXXXXXXX	

# ADJUSTING DISPATCH WEIGHTS USING ADW AND DPVAL

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## ADJUSTING DISPATCH WEIGHTS USING ADW AND DPVAL

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B 49	How much farther would you send a craft to take a job for each Priority Factor?	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
B 50	Multiply line 49 by line 25.	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
8 51	Divide line 50 by 10. This is the PRI weight.	XXXXXXXXXXX

Figure 11. ADW Weight Calculation Table-Example

Finally for our Distance To Home (DTH) weight, we choose 20% of the DTJ value (line 25 of the form), or 7. These weights, as entered, are shown on the following ADW mask:

ADW MC 170 EC 170	01-08-87 1059A
DISPATCH PARAMETERS	EXIST WGT NEW WGT
ESTIMATED COMPL TIME	150
ACCESS WINDOW INCREMENT	0
DISPATCH PARAMETER WEIGHTS	
TIME TO COMMITMENT	100
DISTANCE TO JOB	36
DISTANCE TO HOME	7
OUT-OF-SERVICE	80
SUBSEQUENTS	40
PRIORITY	40
JOB TYPES:	
PDO 0 PDF 4 PDM PDG 0 PDS	O PDC O
PDB 6 PD2 0 PD3 0 PD4 0 PD5	O PWS * PWF *
DISPATCH SELECTION AND TEST OPTIONS	
THRE DISPATCH N	WITH I OPTION? N
CONSTRER FUTURE COMMITMENTS Y	WITH APPOINTMENTS? N MIFI? N
TEST ON DISPATCH? N	TEST ON RETURN? N
TIME DELTA O	

Figure 12. ADW Mask for the MC in the Example

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#### ADJUSTING DISPATCH WEIGHTS USING ADW AND DPVAL

<u>CASE 1:</u> Now that we know what is happening in our area, let's take a look at the DPVAL reports for it. First, we'll look at the jobs in C's turf, from a craft located in the same AA (DAA 923, AA 2699) as the home location for the supervisor:

MCMD DPVAL PAGE	MC 170 DAA ARG	SUPV GRP C EMP CODE	PRTR REQ BY
	DISPATCH EVALUATION	IS FOR MC: 170 01-08-8	7 1101A .
DAA AA	ISTRTE TTN EST AWI 150 000	SA SUBS COMM PRI 0080 0040 0100 0040	DIS HOME TOT 0036 0007
	· .	PDO         PDG         PDF         PDC           0000         0000         0004         0000           PD8         PD2         PD3         PD4           0006         0000         0000         0000	PDM PDS 0000 PD5 0000
850 3399 PD 4431 PO 4431 PO 3322 PD 3322 PO 3322 PD 3322 PD	00101 0312489 00102 0312551 00102 0312582 0F400 0312613 00400 0312644 00400 0312675	0800 0000 12100 0000 0800 0000 11700 0000 0800 0000 11100 0000 0800 0000 11100 0000 0800 0000 11100 0000 0800 0000 11100 0000	-01080 -00210 011810 -01080 -00210 011210 -01080 -00210 010610 -01080 -00210 011010 -01080 -00210 009810 -01080 -00210 010610

PAGE 1 - MORE

MCMD PAGE	DPVAL 2	ARG	MC	170	DAA		SUPV	GRP	C	ÉMP	CODE	PRTR	REQ BY
922 923	3399 3399 2299 2224 2606	PDB400 PDO400 PDO102 PDO102 PDO102	03	31270 31273 40756 40759 40762	6 7 7 8 9	0800 0800 0800 0800 0800 0800	0000 0000 0000 0000	) 11 ) 11 ) 13 ) 13 ) 11	100 100 100 100	0000 0000 0000 0000	-01080 -01080 -00540 -00540 -00540	-00210 -00210 -00105 -00105 -00007	011210 010610 011255 011255 011857

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Figure 13. Example DPVAL Report #1

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#### ADJUSTING DISPATCH WEIGHTS USING ADW AND DPVAL

In this case, the craft will be dispatched to the job with the highest index next (TTN 0407629), unless another craft has already been dispatched on it. Notice that the craft will tend to stay near his home location. This is true even when there is heavy load in the system. This craft may end up helping out in DAA 850 later in the day, but not until all the work in DAAs 922 and 923 is dispatched, according to the above report.

<u>CASE 2:</u> Our next report shows a similar situation for a craft in group 'A' that is also currently working in the same AA as his home location (DAA 849, AA 1199):

MC 170 DAA SUPV GRP A EMP CODE MCMD DPVAL PRTR REQ BY ARG PAGE DISPATCH EVALUATIONS FOR MC: 170 01-08-87 1101A DAA AA ISTRTE TTN EST AWI SA SUBS COMM TOT PRI DIS HOME 150 000 0080 0040 0100 0040 0036 0007 PDG PDF PDC PDM PDS PDO 0000 0000 0004 0000 0000 PDB PD2 PD3 PD4 PD5 0006 0000 0000 0000 0000 849 1199 PDO400 0312768 0800 0000 11100 0000 -00036 -00007 011857 0000 0000 11100 0000 -00180 -00035 010885 2299 PDO400 0312799 2299 PDO400 0312830 0800 0000 11100 0000 -00180 -00035 011685 850 3399 PD0101 0312485 0800 0000 12100 0000 -00540 -00105 012455 4431 PD0102 0312551 0800 0000 11700 0000 -00540 -00105 011855 PD0102 0312582 0800 0000 11100 0000 -00540 -00105 011255 4431 PAGE 1 - MORE

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	ADJUSTING	DISPATCH	WEIGHTS	USING	ADM	AND	DPVAL
--	-----------	----------	---------	-------	-----	-----	-------

MCMD	DPVAL	MC	170 DAA	SUPV (	RP A EMP C	ODE	PRTR	REQ BY
PAGE	2	ARG	· ·					
			•					
	3322	PDF400	0312613	0800 0000	11100 0000	-00540 -	00105 01	1655
	3322	PD0400	0312644	0000 0000	11100 0000	-00540 -	00105 01	0455
	3322	PD0400	0312675	0800 0000	11100 0000	-00540 -	00105 01	1255
	3399	PD8400	0312706	0800 0000	> 11100 0000	-00540 -	00105 01	1855
	3399	PD0400	0312737	0800 0000	) 11100 0000	-00540 -	00105 01	1255
922	2299	PD0102	0407567	0800 0000	) 11100 0000	-01080 -	00210 01	0610
	2224	PD0102	0407598	0800 0000	11100 0000	-01080 -	00210 01	0610

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#### Figure 14. Example DPVAL Report #2

In this case, the commitment time becomes the overriding factor. The best job for the craft is TTN 0312489, even though it requires traveling to another DAA to get it. Note that this job is less than two hours from its commitment and will probably be missed, but barely. Even so, the system makes an effort to dispatch it.

<u>CASE 3:</u> Assume that this craft does call in, and is dispatched on TTN 0312489. What if the next craft calls in from group A, and he is also in AA 1199? The jobs that are available for him are the same ones as before, so we can use the same DPVAL report, just ignoring the job that was already dispatched. Notice the three jobs with the highest values that are still on the list, namely TTNs 0312768, 0312551, and 0312706. These are extremely close in value. This implies that the order they are dispatched depends a lot on the weights. One job is close to the craft's current location, another is a PDB job, and the third is due at 3:00, rather than 6:00. The balance is very fine, and very small changes in the parameters would determine which of the jobs to dispatch.

<u>CASE 4:</u> However, the next craft that calls is in DAA 850 and AA 3322. The DPVAL report changes significantly, since the craft is in a different location:

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#### ADJUSTING DISPATCH WEIGHTS USING ADW AND DPVAL

				********
MCMD DPVAL PAGE	MG 170 DAA ARG D850 A3322	SUPV GRP	A EMP CODE	PRTR REQ BY
	DISPATCH EVALUATION	IS FOR MC:	170 01-08-87 110	88A
DAA	ISTRTE TTN EST AWI 150 000	SA SUBS 0080 0040	COMM PRI DIS 0100 0040 0036	HOME TOT 0007
		PDO         PDG           0000         0000           PDB         PD2           0006         0000	PDF         PDC         PDM           0004         0000         0000           PD3         PD4         PD5           0000         0000         0000	PDS 0000
849 1199 P 2299 P 2299 P	DO400 0312768 DO400 0312799 . DO400 0312830	0800 0000 0000 0000 0800 0000	11100 0000 -0054 11100 0000 -0054 11100 0000 -0054	10 -00007 011353 10 -00035 010525 10 -00035 011325
850 4431 P 4431 P 3322 P	DO102 0312551 DO102 0312582 DF400 0312613	0800 0000 0800 0000 0800 0000	11700-0000 -0036 11100 0000 -0036 11100 0000 -0003	50 -00105 012035 50 -00105 011435 36 -00105 012159
PAGE 1 - M	ORE			
MCMD DPVAL PAGE 2	MC 170 DAA ARG D850 A3322	SUPV GRP	A EMP CODE	PRTR REQ BY
3322	PD0400 0312644 00	000 0000 1	1100 0000 -00036	-00105 010959

 3322
 PD0400
 0312575
 0800
 0000
 11100
 0000
 -00136
 -00105
 011759

 3399
 PD8400
 0312706
 0800
 0000
 11100
 0000
 -00136
 -00105
 011759

 3399
 PD0400
 0312737
 0800
 0000
 11100
 0000
 -00180
 -00105
 012215

 322
 2299
 PD0102
 0407567
 0800
 0000
 11100
 0000
 -00720
 -00210
 010970

 2224
 PD0102
 0407598
 0800
 0000
 11100
 0000
 -00720
 -00210
 010970

PAGE 2 - END

Again, notice the three jobs with the highest values. All have different reasons for having a high value. The highest value is a nearby business (PDB) job, TTN 0312706, and will be the job that is dispatched to the craft. Next is the nearby PDF job TTN 0312613. The third highest job, TTN 0312551, has an earlier commitment (3:00) than the others. If the same report for the same

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#### ADJUSTING DISPATCH HEIGHTS USING ADW AND DPVAL

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jobs is run two hours from now, the early commitment job will be selected, rather than the PDB job. This would be caused by the "bonus" given to jobs within their Estimated Completion Time.

<u>CASE 5:</u> In this case, our next craft is in DAA 849, AA 1199. He/she has the same location as case 3, but we have decided to change the dispatch weights in the meantime. We set the new DTJ weight at 30, instead of 36:

ADW MC 170 EC 170		01-08-87 1111A
DISPATCH PARAMETERS	EXIST. WGT NEW WGT	
ESTIMATED COMPL TIME	150	
ACCESS WINDOW INCREMENT	0	
DISPATCH PARAMETER WEIGHTS		
TIME TO COMMITMENT	100	
DISTANCE TO JOB	30	-
DISTANCE TO BOD		
OUT OF CEDUTOE	- 10	
UUI-UF-SERVICE		
SUBSEQUENTS	40	
PRIORITY	40	
JOB TYPES:		
PDO 0 PDF 4 PDM PDG	O PDS O PDC O	
PDB 6 PD2 0 PD3 0 PD4	PD5 0 PWS * PWF *	
DISPATCH SELECTION AND TEST OPT	IONS	
	UTTU T OPTION? N	
CONCIDED SHTHER CONNITINENTS		N MTET2 N
CONSIDER FUTURE COMMITMENTS	TECT ON OCTIONS	N MILLI N
LEST ON DISPATCH? N	TEST ON RETURN? N	

TIME DELTA O

Figure 15. ADW Mask After Changing the DTJ Weight

This change will reduce the value given to nearby jobs, so the craft will travel farther to take a job that is due an hour earlier than he/she would have before. Notice that the faraway jobs (TTN 312541 and 312706) now have higher values than the nearby job (TTN 0312768) in the following DPVAL report:

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#### ADJUSTING DISPATCH WEIGHTS USING ADW AND DPVAL

MCMD DPVAL PAGE	MC 170 DAA ARG	SUPV GRP A EMP CODE	PRTR REQ BY
	DISPATCH EVALUATIO	IS FOR MC: 170 01-08-87 111	2A
DAA AA	ISTRTE TTN EST AWI 150 000	SA         SUBS         COMM         PRI         DIS           0080         0040         0100         0040         0030	HOME TOT
		PDOPDGPDFPDCPDM0000000000040000PDBPD2PD3PD4PD500060000000000000000	PDS 0000
849 1199 P 2299 P 2299 P	00400 0312768 00400 0312799 00400 0312830	0800 0000 11100 0000 -0003 0000 0000 11100 0000 -0015 0800 0000 11100 0000 -0015	0 -00007 011863 0 -00035 010915 0 -00035 011715
850 4431 P 4431 P 3322 P	DO102 0312551 DO102 0312582 DF400 0312613	0800 0000 11700 0000 -0045 0800 0000 11100 0000 -0045 0800 0000 11100 0000 -0045	0 -00105 011945 0 -00105 011345 0 -00105 011745
PAGE 1 - M	ORE		
MCMD DPVAL PAGE 2	MC 170 DAA ARG	SUPV GRP A EMP CODE	PRTR REQ BY
3322 3322 3399	PD0400 0312644 04 PD0400 0312675 04 PD8400 0312705 04	000 0000 11100 0000 -00450 000 0000 11100 0000 -00450 000 0000 11100 0000 -00450	-00105 010545 -00105 011345 -00105 011945
3399 922 2299 2224	PD0400 0312737 00 PD0102 0407567 00 PD0102 0407598 00	300 0000 11100 0000 -00450 300 0000 11100 0000 -00900 300 0000 11100 0000 -00900	-00105 011345 -00210 010790 -00210 010790

#### PAGE 2 - END

<u>CASE 6:</u> Up to this point, none of the troubles we have considered have had either subsequent reports or priority flags set. Now, several calls are received at the CRSAB. Two subsequents are taken against TTN 0312613, and one against TTN 0312644. In addition, the last caller was angry that the phone hadn't been fixed, so the RSA set both the Customer Irate (CIR) and Customer Commented (CC) flags. Now, when we look at the DPJ report to list our jobs, we see:

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#### ADJUSTING DISPATCH WEIGHTS USING ADW AND DPVAL

SUPV GRP A EMP CODE PRTR REQ BY MCMD DPJ MC 170 DAA PAGE ARG JOBS PENDING DISPATCH FOR MC: 170 01-08-87 1117A DAA IST RTE TTN TN LOCATION COMMIT TIME MCM OOS SUBS L 849 PDO 400 0312768 815-6262015 01-08-87 0600P 815254-1199 A B PDO 400 0321799 815-6262018 01-08-87 0600P 815254-2299 A 8 PDO 400 0312830 815-6262028 01-08-87 0600P 815254-2299 A В 01-08-87 0300P PDO 102 0312551 815-6262005 850 815254-4431 A В PDO 102 0312582 815-6262007 01-08-87 0600P 815254-4431 A В 01-08-87 0600P 2 PDF 400 0312613 815-6262011 815254-3322 A 8 01-08-87 0600P I PDO 400 0312644 815-6262085 815254-3322 A В 01-08-87 0600P PDO 400 0312675 815-6262086 PAGE 1 - MORE SUPV GRP EMP CODE PRTR REQ BY MCMD DPJ MC 170 DAA PAGE 2 ARG 815254-3322 A R 0600P PDB 400 0312706 815-6262031 01-08-87 B 815254-3399 A 0600P 01-08-87 PDO 400 0312737 815-6262035 815254-3399 A B 0600P 922 01-08-87 PDO 102 0407567 217-5462001 217315-2299 A 8 PDO 102 0407598 217-5462002 01-08-87 0600P 217315-2224 A В 01-08-87 0600P PDO 102 0407629 217-5462005 923 8 217315-2606 A PAGE 2 - END DPJ Report for the Example After Subsequent Reports Figure 16.

The corresponding DPVAL report (assuming group A, and in DAA 849, AA 1199) is: Page 26 (last mod 8/17/87)

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## ADJUSTING DISPATCH WEIGHTS USING ADW AND DPVAL

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MCMD PAGE	DPVAL	MC 170 ARG	DAA SUP\	/ GRP A	EMP CODE	PRTR	REQ BY
		DISPATCH EV	ALUATIONS FOR	R MC: 170	01-08-87 113	8A	
DAA /	AA	ISTRTE TTN	EST AWI SA 150 000 0080	SUBS COM 0040 010	M PRI DIS 0 0040 0030	HOME 0007	TOT .
			PDO 0000 PDB 0006	PDG PDF 0000 000 PD2 PD3 0000 000	PDC PDM 4 0000 PD4 PD5 0 0000 0000	PDS 0000	
849 1 2	1199 2299 2299	PDO400 031275 PDO400 031279 PDO400 031283	8 0800 9 0000 0 0800	0000 111	00 0000 -0003 00 0000 -0015 00 0000 -0015	0 -00007 0 -00035	011863 010915 011715
850 4 2	431 431 3322	PD0102 031255 PD0102 031258 PDF400 031261	1 0800 2 0800 3 0800	0000 117 0000 111 0800 111	00 0000 -004 00 0000 -004 00 0000 -004	i0 -00105 i0 -00105 i0 -00105	011945 011345 012545
PAGE	1 -	MORE					
MCMD PAGE	DPVAL 2	MC 170 ARG	DAA SUPV	GRP A	EMP CODE	PRTR	REQ BY
922	3322 3322 3399 3399 2299 2224	PDO400 03126 PDO400 03126 PDB400 03127 PDO400 03127 PD0102 04075 PD0102 04075	44 0800 04   75 0800 00   05 0800 00   37 0800 00   67 0800 00   98 0800 00	00 11100 00 11100 00 11100 00 11100 00 11100 00 11100	0800 -00450 0000 -00450 0000 -00450 0000 -00450 0000 -00900 0000 -00900	-00105 0 -00105 0 -00105 0 -00105 0 -00210 0 -00210 0	12545 11345 11945 11345 10790 10790

#### PAGE 2 - END

Note that these subsequents can dramatically change which job is dispatched. The two jobs with the highest values are now the two that have the subsequent reports and priority factors.

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#### ADJUSTING DISPATCH WEIGHTS USING ADW AND DPVAL

The purpose of these examples is to give you a broad overview of how the parameters interact. Experience in adjusting the parameters cannot be gained by just studying examples, therefore remember to let your own experience in your center guide your decisions.

<u>EFFECTS OF GROUP TURF SIZE ON THE JOB SELECTION FORMULA</u> The size of the pool of jobs that craft can work often affects the efficiency of the job selection formula. The job assigned to each supervisor group is a limit on the distance a craft can travel to obtain a "hot" job. If the turfs are strictly limited, a craft may not be able to cross into another area without manual intervention, and the "hot" job may not be dispatched right away, but have to wait until a craft needs a job in that little area. Overlapping turfs also allow the craft to flow into nearby areas with high workloads without intervention by a supervisor when the jobs in their home turf have been completed. This, again, is a decision to be made by management, and reflects your individual philosophy for handling the center. Detailed information about how to modify group turfs may be found in the document entitled "The AGT Transaction - Assign Group Turfs" (nfe\_mmagen.agt).

One way to combine group turfs with dispatch weights to produce better results . is to allow a little flexibility in the turfs that are assigned to supervisor groups. Rather than strictly limiting supervisor groups to small turfs that are mutually exclusive, they allow the craft to also take jobs from some of the neighboring DAAs in the turfs of other supervisors. Craft in other groups will likewise be able to cover parts of the first turf. If desired, the distance tables can be slightly modified to provide an extra penalty for traveling into the DAAs of another supervisor. This is done by increasing the distances between the outlying DAAs and the DAAs within the turf. (This is only necessary where the difference in the distances from the DAAs in the home turf and the neighboring DAAs is small. In most cases, just using a higher distance to home parameter will be sufficient.) In effect, this only puts another penalty on the craft: it makes the distance to home penalty even larger for moving to the neighboring DAAs. Therefore, on a normal basis, craft will only be assigned outside their home turf if there are very urgent jobs in the outlying DAAs.

NOTE: Before any changes to the distance tables are made, be sure that the group responsible for maintaining the tables is aware of, and approves these changes.

<u>SUMMARY</u> Many factors affect the performance of your MC. Effective adjustment of the dispatch weights can be used to compensate for these factors, but this is only a tool to be used, and not a solution to every problem. This document shows one method of adjusting the dispatch weights, and offers suggestions for changing them. Using your own experience is recommended, because every center is unique, in terms of load, workforce, local practices, and management. Take the time to plan in advance your response to changes in MC conditions; it will be weil rewarded.

(last mod 8/17/87)

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COMPANY:BSTTITLE:PERFORMANCE OF WORKPERIOD:TYE 12/31/93DATE:DEC 9. 1993AUDITOR:RKY

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WP NO. 46, PI

PSC staff rode in the truck with a service technician from the POTS category and a service technician from the cable repair category. Both are dispatched out the Mapper.

Staff observed how the technician accessed his jobs through the CAT, did his jobs, closed out jobs through the CAT, filled out his RF 152 time sheet and filled out his Work Activity Log for the sample.

WP NO 46-1 is the detail of staff observation.

PSC STAFF QUESTIONS

PSC staff noted three places where there might be a possibility for maneuvering the sample and asked questions to determine what controls were in place so there could be no maneuvering or bias.

The first two questions on on WP no. 46-2 and the company answers are on the same workpaper pages 2 and 3.

These questions involve when the ST's call in rather than accessing the jobs through the CAT and if the dispatcher can assign the tech a regulated job if the dispatcher knew the tech was in the sample.

Generally, the answer was that the dispatcher goes into Mapper himself and may verbally dispatch a job and, as stated in wp 45, "the system does not categorize work as regulated or deregulated." Also, the dispatcher "...is not provided with, or has reason to be conerned with which technicians are being sampled. See wp no 46-2, page 2

The third question involves what controls are in place so that the work performed by the service tech is entered in the sample and on his timesheet. How does the company make sure the service tech does what he says?

Besides filling out time sheets and the WAL in the smaple, the ST has to code into the CAT the disposition code of the work he did, and also type in a narrative of the work he did. Staff observed this in the field.

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46 p 1

COMPANY:BSTTITLE:PERFORMANCE OF WORKPERIOD:TYE 12/31/93DATE:DEC 9. 1993AUDITOR:RKY

WP NO. 46 p2

The coding and narrative in the CAT produce source documentation which is compared to the time sheet or WAL by the technical analyst in the Wassp Center in Birmingham. See wp no. 4%. This is inclouded in procedures for the technical analysts for the WALs, and in procedures for the tech supervisors for positive time reporting.

Also see Company answer to this third question of wp 46-3.

CONCLUSION:

The first two questions are really a part of the dispatch system and conclusions regarding that are on wp 45.

The third question is answered by the company shaping that there are procedures for the technical analysts to follow to verify the WAL. Also there are procedures for the tech supervisor in the positive time reporting system to verify the time reports.

Also, a part of this question is where do you stop looking over employees shoulders and go on trust. It would be virtually impossible to follow ST around and make sure they are reporting what they are doing.

Also, see 45 for Technical Analyst supervisors role in determining whether there is anything unusual in the profiles which are generated from this whole system.

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COMPANY: BST TITLE: OBSERVATIONS OF WORK AT DIFFERENT DFFICES AND OBSERVATIONS OF SERVICE TECH WORK PERIOD: TYE 12/31/93 DATE: NOVEMBER 29, 1993 AUDITOR: RKY WP ND. 46

TUESDAY, NOV 23

Went to Maintenance Center to meet service technician to ride with him. Daniel Martin.

the accessed his first job through the Computer Access Terminal (CAT). It was a service order and had to go to the cross box in the street, then to the meter room in the nursing home where the service order was requested. Went to the room of the person involved.

Went back to cross box and back to meter room. Service installed. Used CAT to test that service was DK.

Charged all time to cable time 45M and charged it to meter room 58E on his time sheet.

Then he filled out the sample form on which he checked off what he did.

The accessed a second job from the CAT. This was a No Dial Tone. Checked box back of house. Checked Cross box Checked Aerial drop Changed protector.

Use CAT to test that service was DK.

Charged his time at the cross box to 45M and at the aerial drop 248M.

He accessed a third job through the CAT. This was for an inside Jack. This was deregulated work and charged to 97BI, He put a new protector on the outside and that is regulated, charged to 248M. Used CAT to test that service was DK.

When he tried to access a fourth job through the CAT, the CAT did not have a job for him. He had to call in the Maintenance Center and was verbally given another job.

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I did not go on this fourth job with him.

COMPANY: BST TITLE: OBSERVATIONS OF WORK AT DIFFERENT OFFICES AND OBSERVATIONS OF SERVICE TECH WORK PERIOD: TYE 12/31/93 DATE: NOVEMBER 29, 1993

RKY

WP NO.

AUDITOR:

PSC staff questions:

When the CAT did not have any jobs for him and he called in, what controls are in place so that the person who is giving him the job does not arbitrarily give him a regulated job since he is in the sample?

What prevents the service tech who is in the sample from notifying the dispatcher and getting only regulated jobs if he calls in.

What controls are there so that you know what the service tech does is entered on the sample and on his time sheet. For example, on this second job, he said the trouble could be inside or outside As it -happens the job was outside and he charged it to outside. But, what what if it was inside (dereg) and he charged it to outside (reg). What controls are there to stop this from happening.

This would still happen if time sheets ware used -- still an area where can be manipulated if supervisor told them to do it.

Please explain "bulk" jobs. Explain and give examples on how this does not distort the sample. How arethey dispatched throug CAT.

WEDNESDAY, NOV 24

Went to Maintenance Center to meet service technician who is assigned to cable. Kerry.

He said he accessed his first job the night before because if he needed a digging team he could order them the night before and not wait when got to the job, which he did. He showed me how he accessed it on his CAT.

Went to site and encountered wany obstacles (non English speaking, locked gate, and dog in yard) before able to get to drop and complete his job. 3 hours.

Sometime in the beginning when there was a lack of communication and the tech could not figure out the problem the customer was complaining about, he said he would call in and get another job, get another job so that he can use his diggers as they were there with his already. He was going to do this to save time and money,

However, the customer got her husband on the phone who spoke English and explained to the Service Tech the problem. He never called in for another job at that point.

He finished the job, closed it out on his CAT and tested DK. Wrote up his time sheet and his sample sheet.

46-3

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COMPANY: BST TITLE: OBSERVATIONS OF WORK AT DIFFERENT OFFICES AND OBSERVATIONS OF SERVICE TECH WORK PERIOD: TYE 12/31/93 DATE: NOVEMBER 29, 1993 AUDITOR: RKY

WP NO.

He then accessed another job through the CAT. This job he needed his diggers for. This was a cut cable. Went with him to the next job and saw the cut cable and then left. It was lunch time.

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If he could call in and get a job that he needed a digger for, could that distort the sample? When the service tech calls in, what is the procedure for assigning the job? What controls are there that the sample is not distorted. Please explain and give examples.

Also, request results of all parallel time reporting to date by maintenance center in Florida.



WASSP REQUEST 4

11/30/93

PROVIDE BY 12/3/93

RE: DISPATCH SYSTEM

A. In my observation of a POTS service technician on Tuesday, Nov 23, when he went into his CAT to pull up his fourth job, there was no job available. He had to call in to the maintenance center and was given another job.

Please answer these hypothetical questions:

1. When the CAT did not have any jobs for him and called in, what controls are in place so that the person who is giving him the job does not arbitrarily give him a regulated job since he is in the sample.

2. What controls are in place to prevent the service tech who is in the sample from notifying the dispatcher and getting only regulated jobs if he calls in.

B. In my observtion of a cable technician on Wed. Nov 24, there was a point in the first job that he thought he might have to leave the job and go to another because of certain obstacles (this did not happen). However, he said that instead of calling in on the CAT, he would call the maintenance center and try to get a job where he needed his diggers since they were called out on this job with him. He said this would save time and money as they were already there and did not have to go back and out again. This did not happen because to obstacles were met.

However, please answer this hypothetical question:

If he could call in and get a job that he needed a digger for, could that distort the sample? When the cable service tech calls in, what is the procedure for assigning the job? What controls are there that the sample is not distored. Please explain, give examples, and documentation.

Answer the same hypothetical question for the POTS service technician.

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FPSC Request 4

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Question A (1)

When the CAT did not have any jobs for him and called in, what controls are in place so that the person who is giving him the job does not arbitrarily give him a regulated job since he is in the sample.

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Answer A (1)

The technicians are assigned to a DAA (DISPATCH ADMINISTRATION AREA). In the event the assigned DAA is cleared of all work items, the technicians CAT terminal will respond "no jobs available". The technician will call the IMC, and request instructions. The control supervisor will usually reassign the technician to another DAA with work available, or randomly select a future committed job in the same area if the drive time to the other DAA is excessive. In the event the technician is moved to another DAA the control supervisor may verbally dispatch the technician on a random job during the telephone call. The system does not categorize work items as regulated or de-regulated.

Question A (2)

What controls are in place to prevent the service technician who is in the sample from notifying the dispatcher and getting only regulated jobs if he calls in.

Answer A (2)

The system does not categorize troubles as regulated or deregulated. The technicians almost exclusively are dispatched on randomly selected jobs through their CAT terminal. In those instance when a live dispatch is required, the system will select a random job for dispatch. In addition, the IMC is not provided with, or has a reason to be concerned with which technicians are being sampled.

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Request 4 - page 2

Question B

If a technician (FT) could call in and get a job that required a digger, could that distort the sample? When the cable tech calls in, what is the procedure for assigning the job? What controls are there that the sample is not distorted. Please explain, give examples and documentation.

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Provide the answer to the question for POTS service technicians.

Answer B

The cable control supervisor is not aware of which technicians are being sampled. In the November 24, 1993 the FT had a outside contractor digging crew on the job site with him. The technician, in question primarily works in encapsulated plant based on his assigned DAA. In the event the original assignment needed to be left incomplete the technician stated he would call and request any known buried cable troubles due to the availability of outside contract labor. This would not distort the sample as the technician in question is generally performing the same work each day regardless of his status on the sample. In addition, unless the cable supervisor is aware of a known cut buried cable or major outage he could not be absolutely certain that the item of plant involved in the dispatched task is buried.

This situation would not occur with POTS service technicians.

BST Dispatch System

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WASSP REQUEST 7

11/30/93

PROVIDE BY 12/3/93

Re: Service Tech Time Reporting

What controls are there so that you know what the service tech does is entered on the sample and on his time sheet. For example, for the second job of the POTS service Tech, he said the trouble could be inside or outside. At it happens the job was outside and he charged it to outside. But what if it was inside (dereg) and he charged it to outside (reg). What controls are there to sop this from happening. (Staff realizes that this hypothetical situtation could happen with both time reporting and the statistical sampling method.).

Provide documentation, if any.

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FPSC Request 7



Service Technician Time Reporting

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There are certain controls in place to ensure accurate time reporting by technicians.

In the Positive Time Reporting mode field supervisors will verify 2 time labor reports per week per employee for accuracy against all source documents (BSP Section 620-700-001SV Paragraph 4.3 Labor Statistic Reports). In addition district and staff audits of the process are performed.

In the WASSP or Sampling mode, source documents must be verified for accuracy against Work Activity Logs (WAL's) for ALL sampled technicians EVERY day by the Technical Analyst ( BSP Section 620-700-002 Paragraph 4.0 Technical Analyst Group Responsibilities).

In both situations if a discrepancy or error is detected it must be corrected.

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4.3 The supervisor is responsible for reviewing Form 9360-AL to ensure reasonableness of time reported. A minimum of two (2) RF-152-I's per employee per pay period must be compared to the output provided on Form 9360-AL. Evidence of this review must be apparent in the review process. This evidence may include (but is not limited to) highlights, notes, or supervisor initials/ signature on Form 9360-AL for each employee review-q. If discrepancies are detected, the supervisor must ensure that the appropriate corrective actions are taken.

Persitive Time Repetint iss A Socian 620-700-0015V

- 4.4 After verification, supervisory approval of Form 9360-AL is mandatory in order to provide the FCC evidence of supervisory review of time reporting records. The supervisor MUST sign and date Form 9360-AL in the space provided, and like the RF-152-I must be retained for at least one (1) year after the close of the fiscal year.
  - NOTE: Where Company policy. Federal. State or Local Regulatory Agencies require retention of this documentation for a period longer than that specified above. those directives will prevail.

#### 5. SOURCE DOCUMENTATION

- 5.1 The FCC states that support documentation is required to support the entries on an employee's MTR Time-Labor Report (RF-152-I). This source documentation [e.g., RF-152-I, DCWS/DJI, Form 6025-1-SC (SCB), Form 6571 (SB), Form RF-299-CPE-LMOS] provides assurance that the information reported to the employee's RF-152-I is reliable.
- 5.2 Source documentation may consist of mechanical or paper records depending on the origination of a particular work assignment. The type(s) of work assignments and the system(s) out of which these are dispatched to the technician determine what source documentation is required to provide an audit trail.

#### POTS AND NON-DESIGNED SPECIALS

- 5.3 Service order related services which are classified as Plain Old Telephone Service (POTS) and Non-Designed Specials are input into the Service Order Communications System (SOCS). POTS trouble reports are provided out of the Loop Maintenance Operations Systems (LMOS).
- 5.4 Service orders and trouble reports which are dispatched out of MAPPER/TRACKER are provided to the technician via the Computer Access Terminal. When this occurs, a Display Craft Work Summary/Display Job Information (DCWS/DJI) FULL CLOCK NARRATIVE must be requested and retained as the source documentation (Exhibit 3).
- 5.5 The supervisor is responsible for obtaining the DCWS/DJI's on a daily basis. This effort should be coordinated with the appropriate management personnel in the IMC. Where the Administrative Supervisor position exists in a Field Manager's group, he/she should be responsible for obtaining the DCWS/DJI's. Detailed information pertaining to the scheduling of DCWS/DJI printouts can be found in the Sched Transaction Scheduler section of the AT&T LMOS/WM SOLID DOCUMENTATION.
- 5.6 The DCWS/DJI FULL CLOCK NARRATIVE report displays the <u>complete</u> job information associated with each work assignment performed in a given day by each technician. To satisfy audit trail requirements for source documentation, a <u>complete</u> DCWS/DJI must contain the following NARRATIVE information:
  - Actual work performed to explain each Field Code reported
  - Trouble/work activity location if other than customer's premises
  - Any other narrative required to provide complete closeout information, such as Service Order changes, reason for maintenance billing, Missed Appointment information, etc.

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(WASSP)

- 2.9 Completed Work Activity Logs are forwarded daily to the Technical Analysts centralized location for review and conversion to appropriate Field Reporting Codes (FRCs) for financial purposes.
- 2.10 An integral part of the Technical Analysts review of the Work Activity Log consists of a detailed review of selected technician logs. This review compares data reported by the technician on the Work Activity Log with the Source Documentation prepared by the sampled technician.
- 2.11 Technical Analysts accumulate and summarize all sampled data for input into the Mechanized Time Reporting (MTR) System via a unique data base.

## 3. TECHNICIAN SAMPLE SELECTION

- 3.1 The technician sample selection uses a data extract from the Payroll Masterfile Data Base (PMDB) and an Employee Selection Program to extract a random sample of technicians. PMDB is a BellSouth employee master database that is used to maintain information about an employee, i.e., Responsibility Code, Job Function Code, Social Security Number, etc.
- 3.2 Each state represents a unique sampling universe with each work group (job function) being a unique sub-universe within a particular state.
- 3.3 By the 20th of each month, the lists of technicians to be sampled in the following month are distributed via E-mail, CAT Terminal and/or paper copy to the appropriate state contacts and field management. Field management should then distribute the Work Activity Logs to the selected technician's supervisor for coverage with the technician.
- 3.4 Sample periods will cover a period of seven (7) calendar days, Sunday through Saturday.
- 3.5 Field management will not have the latitude to make any substitutions for selected technicians nor change any dates of the period being sampled.

## 4. TECHNICAL ANALYST GROUP RESPONSIBILITIES

- 4.1 The WASSP process is managed primarily through a centralized group of Technical Analysts with supervisory and technical Network expertise and knowledge of accounting classifications.
- 4.2 The primary functions of the Technical Analyst Group are as follows:
  - Receive the daily Work Activity Log sheets from field forces selected to be sampled for the week.
  - Track the return of all Work Activity Log sheets for each sampled technician by use of the Sample Selection/WAL Review Document.
  - Review the Work Activity Log sheets for completeness.

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• Review the Work Activity Log sheets for reasonableness of data reported and the accuracy of Total Hours reported versus hours shown in the individual work categories.

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- Conduct telephone interviews with the sampled technicians as required.
- Ensure accuracy of technician time reported on Work Activity Log sheets by comparing each original source document against the activity recorded on the Work Activity Log.
- Correct any errors found on the Work Activity Log sheets and tally the errors and other results of the interview process.

## 5. FIELD RESPONSIBILITIES

- 5.1 Field Management should ensure distribution of the Work Activity Logs to the Supervisors of those technicians selected for the sample.
- 5.2 Field Supervisors or equivalent have the responsibility of distributing the Work Activity Logs to those technicians under their responsibility who have been selected to be sampled as well as notifying those technicians sub-selected for telephone interviews.
- 5.3 Field Supervisors and sampled Technicians must fully understand and accurately follow the guidelines for completing the Work Activity Logs and the requirements for completing the telephone interview process.
- 5.4 Field Supervisors or their equivalent must ensure that sampled Technicians complete the Work Activity Logs after each work assignment.
- 5.5 Field Supervisors or their equivalent must review each completed Work Activity Log against the appropriate source documentation for completeness and accuracy. All mechanized source documentation narrative errors identified through this review process must be corrected to include LMOS DATH/WATH or WFA/DO Work Request Event Log (DOLOG) transactions as required. All non-mechanized source documentation (i.e., work tickets) narrative errors must be corrected manually as appropriate.
- 5.6 All completed Work Activity Logs and non-mechanized source documentation (i.e., work tickets) must be returned to the Technical Analysts in the WASSP Center by the next business day. Normal business days for the WASSP Center are Monday through Friday.
- 5.7 Technicians in the sub-selection sample must call the WASSP Center within two (2) business days for interview purposes.
- 5.8 In the absence of a technician who has been selected for sampling, i.e., vacation, illness, leave of absence, school, etc., the Supervisor or equivalent has the responsibility of completing the Work Activity Logs for that employee for the duration of the sample period.

# NOTE: Refer to the Exception Reporting Section of this practice for details in reporting employee absence from normal duties.

5.9 Supervisors or equivalent must ensure that accurate Source Documentation is generated by all technicians being sampled and that this Source Documentation is retained in accordance with Company retention guidelines.

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Page 3

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COMPANY: BST TITLE: SAMPLE SELECTION PERIOD: TYE 12/31/92 DATE: DEC 9, 1993 AUDITOR: RKY

WP NO. 47 III. Sample Selection

According to D&T report dated March 1993 a Stat Sample of technicians is taken from the Payroll Master Data Base (PMDB). This is a BellSouth Data Base used to maintain employee information. The sample program called Extract, stratified the universe of employees into homogenous categories based on state and JFC. The SAMPLER program selects random sample of techs to participate in work activity log portion. Those selected will participate for one week. The SAMPLER program also generates a random sample of the above techs to participate in the technical analyst interview (about 30% of sample). Logs for 3 days are selected for tech analyst review procedures. These procedures are described in wp No . 44-1p. /b

Sample size and structure of sample has been designed so that a 3-month Network Technician Labor distribution Profile is targeted to achieve a 95% confidence level with a preciaion of +or - 3% foréach field reporting code. The precision corresponds to approximately + or - 15 minutes. Technicians selected are over sampled in the sample selection Module to account for days not there (vacation, illness, weekend/weekday shifts.)

Staff interviewed the statistician, Keith Johnson, who wrote the program for the sample and explained his program in datail. See WP. No. 47-1 for details of how the program works and the controls.

According to Keith and Rick King, Keith is the person who wrote the program, and the only person who can change the program for the sample selection.

If necessary, Keith said anyone of the people he works with in his area could get into the program and understand it. It would take them a week to do this.

Bell South has a guide to Computer Asset Protection - It is is Executive Directive OOL. WP 47-4 is a quick reference guide. From this appears that each persons progress are protected. Staff did not further work on this.

We were supplied with documentation of the program written by Keith Johnson for the sample program. We are including this for future reference. If we audit the system we have this to start with. WP AD. 47-3

CONCLUSION:

From interview with Keith Johnson, 47-1, it appears that every service tech in the universe has a change of being in the sample each month.

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COMPANY: BST TITLE: INTERVIEW WITH KEITH JOHNSON, PERSON WHO WRDTE PROGRAM TO SELECT THE SAMPLE PERIOD: TYE 12/31/93 DATE: DECEMBER 8, 1993 AUDITOR: RKY

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WP NO.

Interview Keith Johnson at BST in Birwingham on Monday, Dec 6. Per Keith , he is the person who wrote the program to select the sample of service technicians (ST's) to sample in a particular month.

Rick has direct access to a copy of the payroll master file. He downloads five categories to the system in the WASSP center. (The payroll master filed is updated every week. Rick downloads to WASSP harddrive and them backs up the payroll master file and also backup and store the sample also to WASSP diskettes. Have on paper on on diskette too.

Keith's fields look as follows:

Responsibility	Name	SS #	Week #	Randon	random
code			to be audited	រាបធ	nua
			1-4 or 1-5	0-1	0~100
				١	
			example	0.375281	0-2.999
				0.761142	3-5.999
				et dia	6-9.999
			/	for sel	27 - 30
			(	ect of	30 are
				st /	30 up anyone over
					not inderviewed,
			/	Sort from	randomly chooses
			(	lowest to	the numbers.
			(	highest .	randomiv assignes
			· \		the schedule for
				$\sim$	interviews

This is considered simple random sampling. Formula to select the sample:

@Round (@Rand \* number of weeks + 0.5,0)

Simultaneously, everybody gets a week and everybody gets an interview schedule. Then a sort takes place in ascending order then cut off at the number you need for the sample.

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COMPANY: BST TITLE: INTERVIEW WITH KEITH JOHNSON, PERSON WHO WROTE PROGRAM TO SELECT THE SAMPLE PERIOD: TYE 12/31/93 DATE: DECEMBER 8, 1993 AUDITOR: RKY

₩P NO.

Per Rick King this is sampling without replacement. a 95% confidence level with a + or - 3% precision. The precision of three percent was arrived at by considering 15 minutes of an 8 hour day.

Confident that no further than 3% away from the truth. 95% sure that no more than 3% away from the truth.

The number of weeks is determined by the number of Wednesdays in the month. However the week goes from Sunday through Saturday.

When the sample and interview schedule is selected, all five week go out at once fra Rick's office. They usually leave 10 days to get to supervisors. The supervisors per Steve Shaw usually tell the techs the Fanday before the week they are being sample.

See wpNo. $48^{-3}$  for the way the service techs fill out forms.

see wp no. He for the way the Work Activity Logs (WAL's ) are collected reviewed, checked, interviewed, and input into the system in order to obtain a profile.

JOMPANY: BST TITLE: INTERVIEW WITH KEITH JOHNSON, PERSON WHO WROTE PROGRAM TO SELECT THE SAMPLE PERIOD: TYE 12/31/93 DATE: DECEMBER 0, 1993 AUDITOR: RKY

WP NO.

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Explanation of the Precision column.

For Pots SI, there are 2067 for Oct profile, 30 were selected every month, so there is 90 in the three month total.

The % of hours for Field reporting code 22M is 90 measurements of the # of hours on 22M. The % came out to 3.59% of all the hours spent in the field.

49.1

In the example here on wp....., for 22M there were 126 hours spent which were was 3.593 of the total hours spent. The precision column for this was 1.193.

Precision Column:

		(number of observations in profile sometimes
		more or less.)
person week	1	3.26 Look at those 90 and ask how much did they vary
person week	2	4.83 abund that answer. Precision closer to +_ 32
person week	3	3.57 more variation. at 0 no variation.

See workpaper NO. with formula for precision 1 - 2.

A very simplistic explanation of the precision number and how it is calcualted is look at the average % for a given code, in this case 3.59% for all 30 people. Somewhere in the formula add up all the differences between the individual weeks per person and compare with the average %, and come up with the precision.

If going to have person for a week, get all kinds of work, may not get for a day. Helps them manage the sample. In example many get <u>Score to be the sample of the source day</u> <u>but in the set for a get forme for all week</u>

The sample size for the next month is based on the precision of the previous month.

N1 = d squared \* N

d(one) squared

E.G. 68m Preicision = .0269 (See wp 49- /

.0269 squared \* 90

.03 squared (407.4074)

72 for three months divide by three and the sample size of approximately 25. The formula is set up so that the sample is no less than 30. in a particular month.

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CONPANY: BST TITLE: INTERVIEW WITH KEITH JOHNSON, PERSON WHO WROTE PROGRAM TO SELECT THE SAMPLE PERIOD: TYE 12/31/93 DATE: DECEMBER 8, 1993 AUDITOR: RKY

WP NO.

I asked how they selected a number to sample at the beginning. They said  $(\underbrace{\bigstar})$ 

The sample size as explained to me varies For example, PDTS in Florida doesn't vary much Cable in Florida has a high sample size because of diverse work (manhole, Network terminating Wire,) Corporate Communications is very varied, (herefoe a higher sample size.

Print King sind it was started in A Ne saint so techo were asked to fill out loop in the 3 areas of FI for a tall 2 150. He & Stare Vanderberg went from Center to carter & gethern date . Them the profils more man generated & math took one from there. The nearby Jorman is Eased on the See 47-2 - ps & have



8°C Rey IC  $\pi = \frac{x_i}{y_i}.$ Vi = hours in caligory for ill technician during with samples y: = total hours reported by it's techniciss during week sample Preusing fronte  $J(r) = \frac{1}{\sqrt{2}} \frac{N-n}{nN} \frac{2(x_i - r_i y_i)^2}{n-1} = \frac{1}{\sqrt{2}} \frac{N-n}{nN} \frac{S_i^2}{S_i^2}$  $d^2 = z^2 \hat{V}(r_1)$  *Jaman* pp 343-5

 $= z^{2} \frac{j}{y^{2}} \frac{N-n}{N} \cdot \frac{j}{n} \frac{s_{1}}{s_{1}} \qquad \text{letting } \frac{N-n}{N} = 1$  $d^2 = \frac{z^2 s_i}{\overline{z^2 n}} \implies d^2 n = \frac{z^2 s_i}{\overline{z^2}}$ 

assuming that 2232 is constant we have, for the desired precision, d,  $d, n, = \frac{z^2 \cdot \beta_1^2}{y^2} \quad so \quad the of \qquad muslen is somethy$  $d_i n_i = d_n \implies (m_i = \frac{d_n}{d_i^2})$ Nore: 2 (xi-ry;)= 2xi2+22yi2-22xiyi Jamene A 344 Conb-----

J = Average hours (wh) per technician N'= Universe sige (tot # of technician in JFC)

n = sample size

Z = Method Reliability as Z-sean set at Z=2 => 95% + certainty

d = Relative Precision

Nore: n, = din gives neu sample

size based on desired precision 1,

With d, = 0.03 and adding 1170

"evolion" the new sample singe for

a I month period is

 $n_1 = 1222.22 * d^2 n$ 174 Conf F01A93W 0000110

Dividing By 3 to get a 1-mart N. = 407, 4074 \* d'\*n where d = Highest aleserves princing M= 3-month simple sige use ------

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	DAN r		FLORIDA	<u> </u>	eg 16
	YDU		Profile - On	e month	
OCT 1	993	ç	for example	use 3	month
I&M PO	TS (4100)			Total Pr	oph yn
NO. OF	EMPLOYEES	= 2077			
NO. IN	SAMPLE =	30	ly	angle	<del></del>
				The mon	ed.
	FIELD CODE	TYPE	HOURS	*	PRECISION
2	22M	REG	66.25	5.39%	2.53%
3	22R	REG	57.50	4.68*	
4	45M	REG	230.00	18.71%	4.618
5	45R	REG	141.75	1 100 TT-034	0.069
5	248C	REG	72 75	1.403	2 492
· ·	2400	REG	55 25	4.582	2
9	5480	REG	47.50	3.86%	2.21%
10	548M	REG	81.00	6.59%	2.14
11	548R	REG	62.00	5.04	27211
12	12M	REG	21.75	1.77%	1.58%
13	12R	REG	3.50	0.28%	
14	52 <b>M</b>	REG	1.50	0.12%	0.17%
16	68E	REG	19.50	1.59%	0.90%
17 、	68M	REG	78.75	6.41%	6.50%
18	<b>68 X</b>	REG	63.25	5.15%	
29	257C	REG	0.50	0.04%	0.08%
30	257M	REG	1.50	0.12%	0.18%
31	257R	REG	1.00	0.088	0.16%
33	377R	REG	0.25	0.02%	0.04%
34	F257M	REG	0.50	0.04*	0.08%
30	F257K	REG	0.75	0.06%	0.12%
50	1237C	REG	2.50	0.20%	0.28%
50	37D1 672W	DREG	3 75	4.004	1.805
52.	07RD	DREG	149 50	12 023	2 662
52	9788	DREG	14.00	1.14%	0.52%
56	98ER	DREG	4.00	0.33%	0.37%
80	78M	REG	2.25	0.18%	0.38%
90	5532	COMM	33.75	2.75%	0.97%
94	5536	COMM	33.75	2.75%	1.13%
95	553A	COMM	47.75	3.89%	1.32*
	TOTAL	REG	646.50	52.60%	5.49%
	TOTAL	DREG	226.25	18.41%	3,21%
	TOTAL	COMM	115,25	9.388	2,27%
	TOTAL	TRVL	241.00	19.61%	2.70%
TOTAL	SAMPLE HOUR	S	1229.00		
ESTIMA	TED TOTAL H	OURS	340351.18		177
ESTIMA	TED MONTHLY	SAMPLE	REQ'D 52	C	87 (1)

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			1003	1004	1005	1006	1007	1008	1009
Ц	2	22M	0.	0.	0.	0.25	ο.	0.	0.
5	3	22R	0.	0.	2.75	0.	1.25	2.00	1.00
1	4	45M	0.	0.	0.	0.25	0.	0.	0.
-7	5	45R	0.	0.	0.	0.	1.75	1.50	0.75
ť	6	248C	0.	0.	Ο.	2.00	1.00	Ο.	ο.
8	8	248R	0.	0.	0.50	1.00	1.00	3.00	2.25
9	9	548C	0.	ο.	0.	0.	1.00	0.	0.
10	10	548M	ο.	0.	ο.	1.00	0.	0.	ο.
12	11	548R	0.	0.	0.50	0.	0.	0.	0.
12	50	97BI	0.	0.	0.	0.	0.25	Ο.	ο.
4	51	97BW	0.	0.	0.	1.50	0.	0.	0.
12	52	97BP	ō.	<b>0</b> .	4.50	2.25	0.	0.50	2.75
10	95	553A	0.	0.	0.	0.	ο.	1.25	0.
17	99	TRVL	0.	0.	1.25	1.00	2.50	2.50	2.50

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		1003	1004	1005	1006	1007	1008	1009
4	45M	ο.	3.00	1.00	1.50	2.75	0.	0.
5	45R	0.	0.	0.	Ο.	Ο.	Ο.	3.00
6	248C	ο.	Ο.	0.	Ο.	. 2.50	Ο.	ο.
9	548C	0.	2,00	3.00	3.50	1.50	0.	ο.
10	5 <b>48M</b>	Ο,	1.00	0.	1.00	0.	ο.	ο.
11	548R	ο.	0.	1.75	Ο.	0.	ο.	0.
33	377R	0.	σ.	0.	0.	0.	0.	0.25
50	97BI	Ο.	0.	0.	Ο.	0.25	0.	0.
5Z	97BP	0.	0.	1.75	1.50	0.	0.	2.25
94	5536	0.	0.	0.	0.75	1.00	0.	ο.
95	553A	0.	3.00	0.	0.	0.	0.	0.50
99	TRVL	0.	1.00	0.50	0.75	0.50	0.	2.00

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3		1003	1004	1005	1006	1007	1008	1000
J		1005	1004	1005	1000	1007	1008	1009
4 3	2 <b>2</b> R	0.	1.00	0.75	0.75	0.50	1.00	ο.
<u> </u>	45M	0.	Ο.	0.50	1.25	0.50	Ο.	ο.
65	45R	0.	Ο.	0.	0.50	Ο.	0.	ο.
77	248M	0.	Ο.	0.	2.50	1.50	0.50	Ο.
88	248R	0.	2.50	1.00	Ο.	0.	0.	0.
99	548C	ο.	0.	0.75	0.	ο.	0.	ο.
10 10	548M	ο.	0.	Ο.	Ο.	ο.	2.25	0.
11	548R	Ο.	0.75	2.00	0.	Ο.	0.	0.
12 50	97BI	0.	0.	1.25	0.25	0.	0.	ο.
B 52	97BP	ο.	0.50	1.50	0.75	4.25	0.75	0.
14 90	5532	0.	1.00	Ο.	ο.	0.	2.00	0.
15 99	TRVL	0.	2.25	1.25	2.00	1.25	1.50	0.
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		1003	0000	0000 -	0000	0000	0000	0000

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2			1003	1004	1005	1006	1007	1008	1009
2									
9	2	22M	Ο.	1.25	3.00	0.	ο.	ο.	ο.
5	3	22R	0.	Ο.	0.	ο.	1.00	ο.	0.50
6	4	45M	0.	Ο.	Ο.	0.75	ο.	ο.	0.
7	5	45R	0.	0.	0.	0.	0.75	3.25	0.50
8	6	248C	0.	ο.	0.	0.	ο.	Ο.	1.75
9	8	248R	0.	Ο.	0.	0.	0.	ο.	1.75
10	16	68E	Ο.	Ο.	0.	0.	1.00	0.	0.
11	17	68M	0.	0.	0.	Ο.	0.	1.50	1.50
12	18	68R	0.	0.50	0.	0.	0.	Ο.	0.
13	50	97BI	Ο.	ο.	0.50	ο.	0.	0.	0.50
14	51	97BW	0.	0.	0.	Ο.	0.	1.00	0.
15	52	97BP	0.	2.00	0.75	3.50	1.00	0.	Ο.
16	53	97BR	Ο.	1.75	0.	Ο.	0.	0.	Ο.
17	90	5532	0.	ο.	0.50	1.50	0.50	0.50	0.
18	94	5536	0.	1.00	0.50	1.00	1.25	Ο.	0.75
19	95	553A	0.	0.	1.00	1.00	2.50	0.75	0.
20	99	TRVL	0.	1.50	0.75	1.25	0.75	1.50	0.75

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		1003	1004	1005	1006	1007	1008	1009
18	68R	0.	0.	0.	0.	0.	0.	1.25
52	97BP	0.	Ο.	0.	0.	0.	0.	0.50
80	78M	0.	ο.	Ο.	0.	0.	0.	2.25
94	5536	0.	0.	Ο.	0.	0.	0.	3.50
95	553A	0.	0.	0.	Ο.	0.	0.	0.50
99	TRVL	0.	0.	0.	0.	0.	0.	1.00
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3			1003	1004	1005	1006	1007	1008	1009
4	3	22R	ο.	0.	0.	0.	ο.	0.	0.50
5	4	45M	ο.	0.	ο.	0.	0.	0.	1.00
6	5	45R	0.	0.	0.	0.	0.	0.	1.75
7	7	248M	0.	Ο.	0.	ο.	Ο.	0.	0.50
8	11	548R	0.	Ο.	0.	0.	0.	0.	1.25
9	18	68R	0.	7.50	8.50	8.50	9.50	7.50	0.
10	50	97BI	0.	ο.	ο.	0.	ο.	0.	0.50
11	94	5536	0.	Ο.	0.	0.	0.	0.	0.75
12	99	TRVL	Ο.	0.50	0.50	0.50	0.50	0.50	1.75

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		1003	1004	1005	1006	1007	1008	1009
2	22M	0.	2.00	0.	0.	0.	0.	ο.
4	4 5 M	0.	0.	4.50	5.50	1.50	1.00	4.00
5	45R	0.	0.	0.	0.	.0.	0.	2.50
11	548R	0.	Ο.	0.	0.	0.	4.00	0.
12	12M	0.	1.75	0.	Ο.	4.25	Ο.	ο.
16	68E	0.	0.	0.75	1.00	0.	0.	1.50
17	68M	0.	0.	0.	0.	0.50	0.	0.
18	68R	0.	1.00	0.	0.	Ο.	0.	0.
50	97BI	0.	ο.	1.00	0.	0.	0.	0.25
52	97BP	Ο.	1.00	0.	0.	0.	0.	Ο.
53	97BR	0.	0.	0.	0.	1.00	0.	0.
90	5532	0.	0.	2.00	ο.	Ο.	Ο.	0.
94	5536	0.	0.	0.	0.25	1.25	0.	0.
95	553A	0.	1.25	0.	0.	0.	3.50	0.
99	TRVL	• 0.	2.50	0.75	2.25	2.00	1.50	1.25

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1003 1004 1005 1006 1007 1008 1009 3 22R Ο. Ο. 1.75 0. 1.50 1.25 1.00 4 45M Ο. 0. 0. 0. 0. 1.75 0. 5 45R 3.50 4.00 2.50 Ο. 4.00 0.75 0. 2.00 8 0. 1.25 0.50 248R 0. 0. 0. 9 548C 0. 0. 1.50 ο. Ο. Ο. 0. 548R 2.25 0.50 1.75 0.75 11 Ο. 0. Ο. 12R Ο. 13 0. 0. 0. ο. 1.25 0. 1.50 18 68R 0. 0. 0. 0. 0. 0. 50 97**BI** 0. Ο. Ο. 1.25 0. 0. 0. 52 0.50 2.50 97**BP** ο. 1.00 1.50 2.75 2.75 94 0.25 0.50 0. 5536 0. 0. 0. 0.50 95 553A 0. 0.75 0. 0. 0. Ο. 0. 99 TRVL 1.50 1.25 1.50 1.50 1.75 1.00 0.

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3			1010	1011	1012	1013	1014	1015	1016
4 5 6 7 8 9 0 11 13 5 5 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	4 45M 5 45R 6 248C 6 68E 7 68M 8 68R 0 257M 0 97BI 2 97BI 0 5532 4 5536 5 553A 9 TRVI		0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.	0.50 2.00 0. 0.25 0. 0.25 1.75 0.50 0. 0. 2.75	1.00 0. 1.00 0. 0. 1.00 1.00 1.00 2.50	0.50 0. 0.50 0.50 0.50 1.25 0. 0.50 0.75 2.75	1.00 0. 4.00 2.00 0. 0. 0. 0. 0. 0. 0. 0. 0. 25	0. 0. 0. 0. 0. 1.00 1.50 0.50 0. 2.00 3.00	0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.
7 43	8700403	ł							
			1010	1011	1012	1013	1014	1015	1016
	4 45 <b>M</b>		0.	0.	0.50	1.00	1.00	0.	0.75
	5 45R		0.	4.50	1.75	0.	0.	2.25	0.
	9 548C		0.	Ó.	0.	2.00	2.25	0.	0.
1	0 548M	•	0.	1.00	1.25	0.50	0.	0.	0.
1	1 548R		0.	0.75	1.50	1.50	0.	1.00	1.50

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3		1010	1011	1012	1013	1014	1015	1016
4 3 5 5 6 18 7 52 8 90 9 95 10 99	22R 45R 68R 97BP 5532 553A TRVL	0. 0. 0. 0. 0. 0.	1.00 2.00 0. 2.50 0. 0. 2.50	1.00 3.50 0.25 2.25 0. 0. 1.00	0. 6.00 0. 0. 0.75 1.25	0. 0. 5.25 1.50 0. 1.25	0. 0. 1.50 1.50 0. 1.00	0. 0. 0. 0. 0. 0.
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		1010	1011	1012	1013	1014	1015	1016
4	45M	0.	0.25	ο.	0.50	0.	0.50	0.
5	45R	3.75	0.	1.75	0.50	2.25	2.25	0.50
8	248R	0.50	0.	0.	0.	0.	0.	ο.
10	5 <b>48M</b>	0.	0.25	0.	0.50	0.	0.	0.
11	548R	0.	2.50	0.	0.50	Ο.	0.	1.25
17	68M	0.	0.	0.	0.	ο.	1.75	ο.
18	68R	0.25	0.	0.	1.25	0.	0.	ο.
50	97BI	0.	0.25	0.50	0.25	ο.	0.	0.
52	97BP	0.75	0.75	2.00	0.25 -	0.	0.50	2.00
53	97BR 🔸	0.	0.	0.	ο.	1.00	0.	0.
90	5532	0.	1.50	0.	0.	1.00	0.	ο.
94	5536	0.	0.	0.	0.	1.00	0.	ο.
95	553A	0.	0.	0.75	1.00	0.	0.	0.75
99	TRVL	2.75	2.50	3.00	3.25	2.75	3.00	3.50

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.3			1010	1011	1012	1013	1014	1015	1016
4567891112145678	3 4 5 8 9 11 12 14 50 52 53 90 94 95 99	22R 45M 45R 248R 548C 548R 12M 52M 97BI 97BP 97BP 97BR 5532 5536 553A TRVL	0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.	0. 0. 1.00 2.00 0. 1.25 0. 0. 0. 1.25 0. 0. 50 0. 50 0. 75 1.25	0. 0. 1.75 0.50 0. 0.50 0.75 0. 2.25 0. 0.25 0. 0.75 1.25	0. 0.50 0. 1.50 1.50 0. 0. 1.50 1.75 0. 0. 0. 0. 1.25	0. 1.00 0.50 2.50 0. 0. 0. 0. 1.50 0. 1.25 0. 1.25	0. 0.75 2.50 0. 0. 1.00 0. 0. 0. 0. 0. 0. 0. 0. 75 1.50	1.50 0. 2.50 0. 0. 0. 0. 0. 50 1.50 0. 0. 75 1.25
19	0383	82949							
			1010	1011	1012	1013	1014	1015	1016
		45M		0 7E	2 25	٥	1.00	A 76	^
	4 5 6 7 8 9 11 14 16 18 50 52 53 90 4 5	45R 248C 248M 248R 548C 548C 548R 52M 68E 68R 97BI 97BP 97BP 97BR 5532 5536	0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.	0.75 1.50 0. 0.50 0. 0.75 0.75 0.50 1.00 0. 0.25 1.00	2.25 0. 2.00 0. 0.75 0. 0. 0. 0. 50 0. 0. 0. 0. 50 0. 75	2.75 0. 0. 1.00 0. 0. 0. 2.00 0. 0. 0. 0. 0. 0. 0.	0. 0. 0. 3.00 0. 0. 0. 0. 0. 0. 0. 0. 0.	4.75 0. 0. 0. 1.50 0. 0. 0. 0. 0. 0. 0. 0. 0. 0	1.00 0. 0. 0. 3.25 0. 0. 0. 0. 1.00 1.00 0. 50 0.

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3			1010	1011	1012	1013	1014	1015	1016
4	3	22R	0.	ο.	0.50	0.	0.	0.	0.
5	4	45M	0.	2.00	1.50	0.	0.	0.	0.
6	5	45R	2.75	Ο.	ο.	ο.	0.	0.	Ο.
7	7	248M	0.	0.	2.50	Ο.	Ο.	0.	0.
r R	10	548M	0.	1.50	0.	0.	Ο.	0.	0.
9	11	548R	1.00	ο.	ο.	0.	0.	ο.	Ο.
in	12	12M	0.	0.	.0.	7.00	ο.	ο.	0.
	50	97BI	0.	1.00	0.	0.	Ο.	0.	ο.
17	52	97BP	0.75	ο.	1.50	0.75	ο.	ο.	ο.
12	90	5532	0.	2.00	0.	0.	ο.	ο.	0.
10	94	5536	0.50	0.50	0.	0.	0.	0.	0.
15	99	TRVL	3.00	1.00	2.50	2.25	0.	0.	0.

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		1010	1011	1012	1013	1014	1015	1016
3	22R	0.	0.75	0.	1.00	0.75	0.	0.
4	45M	0.	0.	0.	1.50	0.25	0.	1.50
5	45R	0.	3.50	1.25	0.	Ο.	0.	0.
7	248M	0	0.50	σ.	Ο.	Ο.	ο.	Ο.
8	248R •	0.	1.75	0.	0.	0.	0.	0.
10	548M	Ο.	0.	0.	0.	Ο.	0.	2.00
12	12M	0.	0.	0.25	0.50	0.25	1.50	0.50
13	12R	0.	0.	0.	0.50	0.	1.00	ο.
18	68R	0.	0.	0.	0.	1.75	1.50	0.
50	97BI	Ο.	0.75	0.	0.	2.25	0.75	Ο.
52	97BP	Ο.	0.	3.00	2.75	1.25	0.	Ο.
53	97BR	Ο.	0.	0.	Ο.	0.	ο.	0.25
90	5532	0.	0.	0.	0.	0.	1.00	0.
94	5536	0.	0.	2.25	0.	0.25	0.75	1.25
95	553A	Ο.	0.	0.	0.75	0.	1.00	Ο.
99	TRVL	0.	0.75	1.25	1.00	1.25	1.00	2.50

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3			1017	1018	1019	1020	1021	1022	1023
4	4	45M	0.	0.	0.25	ο.	1.50	0.50	ο.
1	5	45R	0.	0.	0.	ο.	ο.	Ο.	1.25
ິ	7	248M	0.	0.	1.25	0.	0.	Ο.	0.
67	8	248R	0.	0.	1.25	0.	0.	1.25	Ο.
	9	548C	ο.	Ο.	0.	ο.	3.50	ο.	0.
ç	11	548R	0.	0.	ο.	0.	ο.	ο.	2.50
	12	12M	0.	0.	0.	0.	0.50	ο.	0.
11	17	68M	0.	Ο.	0.50	Ο.	Ο.	0.25	0.
12	50	97BI	Ο.	0.75	Ο.	0.	0.	0.	0.
13	52	97BP	0.	3.00	0.50	0.	0.	3.75	1.25
14	90	5532	0.	0.	0.	0.	0.75	0.	0.
- IK	94	5536	0.	0.75	0.	0.	0.	Ο.	0.
16	95	553A	0.	0.75	1.00	0.	0.	0.	0.
17	99	TRVL	0.	2.75	3.25	0.	1.75	2.25	3.00
18 4	1577	07568							
			1017	1018	1019	1020	1021	1022	1023
	4	45M	0.	1.00	1.25	2.00	1.00	1.00	ο.
	5	45R	0.	0.	2.75	0.	ο.	1.00	0.
	8	248R	0.	4.50	0.	0.75	0.	Ο.	0.
	9	548C	0.	0.75	2.50	0.	4.00	1.00	0.
	10	548M	0.	0.75	0.	0.	0.	0.	0.
	16	68E	0.	0.	0.	2.50	0.	0.	0.
	18	68R	0.	0.	ο.	0.50	2.00	0.	0.
	39	F257C	0.	0.	0.	0.	0.50	0.75	0.
	50	97BI	0.	0.	0.50	0.25	0.75	1.50	0.
	52	97BP	0.	0.	0.	0.	0.	1.25	0.
	95	553A	0.	0.50	0.	0.	0.	0.	0.
	99	TRVL	0.	1.00	1.00	2.25	0.75	1.50	Ο.

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3			1017	0000	0000	0000	0000	0000	0000
4	2618	03461							
			1017	1018	1019	1020	1021	1022	1023
	4	45M	0.	0.50	0.	0.25	0.50	0.	0.
	5	45R	0.	0.	2.25	0.	0.	0.75	0.
	9	548C	Ο.	0.	Ο.	ο.	0.	0.25	ο.
	10	548M	0.	0.	ο.	0.25	0.	0.	0.
	11	548R	0.	1.75	1.50	0.	ο.	2.00	0.
	16	68E	0.	1.00	ο.	0.50	ο.	ο.	ο.
	34	F257M	0.	Ο.	0.	0.50	Ο.	ο.	Ο.
	50	97BI	Û.	0.25	Û.	0.75	ο.	0.25	Ο.
	51	97BW 🔒	0.	0.	1.25	0.	Ο.	0.	0.
	52	97BP	0.	2.00	0.50	Ο.	3.25	2.50	0.
	53	97BR	0.	0.	0.75	0.50	0.	0.	0.
	90	5 <b>532</b>	0.	0.	0.75	0.50	0.	0.	0.
	94	5 <b>536</b>	0.	0.50	Ο.	Ο.	0.50	0.	0.
	95	553A	0.	Ο.	0.25	1.75	0.75	0.	Ο.
	99	TRVL	0.	2.00	1.75	3.00	3.00	2.25	0.

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3		1017	1018	1019	1020	1021	1022	1023
4 <b>3</b>	22R	<b>0.</b> ·	0.75	0.	ο.	0.	0.	0.
5 4	45M	0.	0.50	1.50	0.	ο.	1.75	0.50
<b>6</b> 5	45R	ο.	0.75	0.50	1.75	2.50	0.50	0.75
78	248R	0.	0.	0.	0.	2.25	Ο.	0.
8 9	548C	ο.	ο.	1.00	1.00	0.	0.	0.
9 <b>10</b>	548M	0.	1.00	0.	0.	0.	Ο.	0.
10 11	548R	0.	0.	0.	1.00	1.50	0.	1.25
. 16	68E	ο.	0.50	Ο.	0.	0.	2.25	0.
12 17	68M	0.	0.50	Ο.	0.	0.	0.	0.
13 18	68R	0.	ο.	0.50	0.25	0.	0.	0.50
4 35	F257R	0.	ο.	ο.	0.	0.	0.	0.75
1/ 39	F257C	0.	0.25	0.	Ο.	0.	1.00	0.
50	97BI	0.	0.25	0.	0.75	0.	0.	0.25
<sup>16</sup> / <sub>7</sub> 52	97BP	0.	Ο.	2.25	<b>1.</b> ÚÚ	<b>0.50</b>	1.00	1.75
.√ 53	97BR 🖌	ο.	ο.	0.25	0.	0.50	0.	0.
in 56	98ER	ο.	0.75	0.	0.	0.	ο.	0.
2090	5532	0.	0.	· O.	0.50	0.	Ο.	0.
94	5536	0.	0.	0.	Ο.	Ο.	Ο.	0.25
<u>ک</u> 2 95	553A	0.	1.25	0.50	1.00	0.75	1.50	0.50
<sub>23</sub> 99	TRVL	0.	2.00	2.50	2.25	1.50	1.50	2.50
24 2651	39991							
		1017	1018	1019	1020	1021	1022	1023
4	45M	0.	2.00	2.25	0.50	0.50	0.	0.
9	548C	ο.	1.50	Ο.	Ο.	1.00	Ο.	0.
12	12M	ο.	ο.	Ο.	0.50	0.	· O.	0.
18	68R	Ο.	0.	Ο.	2.00	0.	0.	0.
50	97BI	ο.	2.00	2.00	1.50	1.50	0.	0.
52	97BP	ο.	Ο.	0.	1.00	0.	0.	0. 189
53	97BR	0.	0.	0.	0.50	0.	0.	0. R011039 000010
95	553A	ο.	1.50	1.00	0.	0.	0.	0. FOIN93# 0000124
99	TRVL	.Ο.	2.00	2.75	2.00	1.00	0.	0.

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		1017	1018	1019	1020	1021	1022	1023
3	22R	0.	1.25	0.	0.50	0.	0.	1.75
4	45M	0.	1.50	1.00.	1.50	2.50	1.00	0.50
5	45R	0.	Ο.	0.50	0.	ο.	0.50	0.75
9	548C	ο.	1.50	3.00	ο.	0.	0.50	Ο.
10	548M	0.	0.50	0.	Ο.	0.	0.	Ο.
11	548R	0.	0.	0.	1.00	3.00	1.50	0.
16	68E	0.	0.	0.50	0.50	0.25	0.	0.
17	6 <b>8M</b>	ο.	0.	Ο.	1.00	0.	0.50	2.25
50	97BI	0.	0.	1.75	0.	1.25	0.50	1.25
52	97BP	0.	0.50	1.50	2.25	0.75	1.00	Ο.
53	97BR	0.	0.	0.	0.50	ο.	0.	0.
90	5532	ο.	2.25	Ο.	0.	Ο.	0.50	0.
94	5536	0.	0.	0.	ο.	ο.	1.00	ο.
95	553A	0.	0.	0	0.	ο.	0.	0.50
99	TRVL	0.	1.50	0.75	1.75	1.25	2.00	1.50

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	1024	1025	1026	1027	1028	1029	1030
22R 45M 45R 248C 248M 248R 548C 548R 68R 257M 97BI 97BP 97BP 97BR 5532 5536 TRVL	0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0	1.75 0.75 1.75 0.25 0. 1.00 0. 0. 0. 1.00 1.00 1.00 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.	1.75 0.50 0. 0.75 0. 1.50 0. 1.75 0.50 0. 1.25 0.50 0. 0. 0. 0. 0. 0. 0. 0. 0. 0	0. 0. 0. 1.25 0. 1.00 0. 0. 1.00 0. 3.00 0. 3.00 0. 1.75	0. 0.50 1.00 2.50 1.00 0. 0. 0. 0. 0. 0. 0. 50 0. 50 0. 50 0. 1.50	1.25 0. 0. 0. 1.00 0. 2.50 0. 0. 0. 0. 1.25 0.75 0. 0. 2.51 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.	0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0
79233			1				
	1024	0000	0000	0000	0000	0000	0000
	22R 45M 45R 248C 248M 248R 548C 548R 68M 68R 257M 97BI 97BP 97BP 97BR 5532 5536 TRVL	1024 22R 0. 45M 0. 45R 0. 248C 0. 248C 0. 248R 0. 548C 0. 548C 0. 548R 0. 68R 0. 257M 0. 97BI 0. 97BI 0. 97BP 0. 97BP 0. 97BR 1.50 5532 0. 5536 0. TRVL 0.	1024       1025         22R       0.       1.75         45M       0.       0.75         45R       0.       1.75         248C       0.       0.         248M       0.       0.25         248R       0.       0.         548C       0.       1.00         548R       0.       0.         68M       0.       0.         68R       0.       0.         97BI       0.       1.00         97BP       0.       1.00         97BR       1.50       0.         5536       0.       0.         79233       1024       0000	1024       1025       1026         22R       0.       1.75       1.75         45M       0.       0.75       0.50         45R       0.       1.75       0.         248C       0.       0.       0.         248R       0.       0.25       0.75         248R       0.       0.25       0.75         248R       0.       0.       0.         548C       0.       1.00       1.50         548R       0.       0.       0.         68M       0.       0.       0.50         257M       0.       0.       0.         97BI       0.       1.00       1.25         97BP       0.       1.00       0.50         97BR       1.50       0.       0.         5532       0.       0.       0.         5536       0.       0.       0.         79233       1024       0000       0000	1024       1025       1026       1027         22R       0.       1.75       1.75       0.         45M       0.       0.75       0.50       0.         45R       0.       1.75       0.       0.         248C       0.       0.       0.       0.         248C       0.       0.       0.       0.         248R       0.       0.25       0.75       1.25         248R       0.       0.       0.       0.         548C       0.       1.00       1.50       1.00         548R       0.       0.       0.       0.       0.         68R       0.       0.       0.       0.       0.         97BI       0.       1.00       1.25       0.         97BP       0.       1.00       1.25       0.         97BR       1.50       0.       0.       0.         5536       0.       0.       0.       0.       0.         79233       1024       0000       0000       0000	1024       1025       1026       1027       1028         22R       0.       1.75       1.75       0.       0.         45M       0.       0.75       0.50       0.       0.50         45R       0.       1.75       0.       0.       1.00         248C       0.       0.       0.       0.       1.00         248C       0.       0.       0.       0.       1.00         248M       0.       0.25       0.75       1.25       2.50         248R       0.       0.       0.       0.       1.00         548C       0.       1.00       1.50       1.00       0.         548R       0.       0.       0.       0.       0.       0.         68R       0.       0.       0.50       0.       0.       0.         97BI       0.       1.00       1.25       0.       0.50         97BP       0.       1.00       1.25       0.       0.50         97BR       1.50       0.       0.       0.       0.       55         5536       0.       0.       0.       0.       0.       0.	1024       1025       1026       1027       1028       1029         22R       0.       1.75       1.75       0.       0.       1.25         45M       0.       0.75       0.50       0.       0.50       0.         45R       0.       1.75       0.       0.       1.00       0.         248C       0.       0.       0.       0.       1.00       0.         248C       0.       0.25       0.75       1.25       2.50       0.         248R       0.       0.       0.       1.00       1.00       1.00         548R       0.       0.       0.       0.       0.       0.       0.         548R       0.       0.       1.75       0.       0.       0.       0.         548R       0.       0.       1.75       0.       0.       0.       0.         57M       0.       0.       0.       1.00       0.50       0.       0.         97BI       0.       1.00       1.25       0.       0.50       0.       0.         97BR       1.50       0.       0.       0.       0.       0.50

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3		1024	1025	1026	1027	1028	1029	1030
4 2	22M	0.	2.25	0.	0.	0.	0.	0.
5 3	22R	0.	1.25	0.	1.25	0.	2.00	0.25
65	45R	0.	0.	0.50	0.	ο.	Ο.	0.50
- <b>8</b>	248R	0.	1.25	Ο.	0.	2.75	1.75	2.25
8 9	548C	0.	Ο.	0.	2.00	Ο.	Ο.	0.
9 <b>16</b>	68E •	0.	0.50	0.	Ο.	ο.	Ο.	0.
10 17	68M	0.	0.	0.75	0.	0.	1.25	0.
ji 18	68R	0.	0.	° 0.	0.	0.75	0.	0.
ູ່, 50	97BI	0.	2.75	1.50	1.50	0.75	3.00	0.
j 52	97BP	0.	0.	1.25	2.75	1.00	Ο.	1.00
ີ 53	97BR	0.	0.	1.00	0.	0.	0.	0.
<u> </u> 90	5 <b>532</b>	0.	0.	0.50	1.00	0.	ο.	0.
94	5536	0.	ο.	0.	0.	ο.	ο.	2.25
17 95	553A	0.	0.	1.25	Ο.	0.75	0.	0.
18 99	TRVL	0.	1.00	2.25	1.75	3.00	1.00	1.75
17 2660	49786							
		1024 *	1025	1026	1027	1028	1029	1030
3	22R	0.	٥.	1.50	4.50		0.	0. 192
5	45R	0.	5.50	5.00	2.50	6.50	7.00	0. FOLA93W 000012'
90	5532	0.	1.50	0.	0.	0.	0.	0.
90	TPVI.	0	1 00	1 50	1 00	1.50	1.00	0.
	71/41	••	<b>T</b> • <b>A A</b>	<b>T</b> • <b>A</b> A	T . 44	<b>1.20</b>	<b></b>	

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3		1024	1025	1026	1027	1028	1029	1030	
<b>ч</b> 4	45M	0.	0.75	0.	0.	0.	0.	0.	
' <sub>δ</sub> 5	45R	0.	3.50	1.50	1.00	0.	ο.	0.	
6	248C	0.	0.	0.	2.00	0.	0.	0.	
a 7	248M	0.	0.	0.25	0.	0.	0.	0.	
8 8	248R	Ο.	0.75	1.50	0.	0.50	0.	Û.	
9 10	5 <b>48M</b>	• 0.	Ο.	0.25	0.25	0.	0.	0.	
io 11	548R	0.	0.	0.	2.75	6.25	0.	0.	
11 16	68E	0.	0.50	• 0.	0.75	0.	0.	0.	
12 17	68M	0.	0.50	0.	0.	0.	0.	Ο.	
13 18	68R	0.	Ο.	0.75	0.	0.	0.	Ο.	
_ j́i 31	257R	0.	Ο.	1.00	0.	0.	0.	0.	
<u>5</u> 50	97 <b>BI</b>	0.	2.25	0.75	0.	0.	0.	Ο.	
jo 52	97 <b>BP</b>	Ο.	0.25	0.75	0.75	2.00	ο.	0.	
53	97BR	0.	0.	0.	0.50	ο.	Ο.	ο.	
, <b>56</b>	98ER	0.	0.	1.50	0.	Ο.	0.	0.	
i 90	5532	0.	0.	Ο.	0.50	Ο.	0.	ο.	
27 99	TRVL	0.	1.50	1.75	1.50	1.00	0.	0.	
21 265	921262								
		1024	1025	1026	1027	1028	1029	1030	1 °
									F01493W 000012
3	22R	1.75	2.25	1.25	4.00	2.25	1.25	0.	
4	45M	0.	1.50	0.	0.	0.	0.	1.00	1
5	45R	0.	0.	0.75	0.	2.50	1.50	1.75	Nell

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6	248C	0.	ο.	ο.	Ο.	0.	0.	1.00
7	248M	0.75	0.25	0.25	0.75	0.75	0.	0.
8	248R	0.	0.	0.75	ο.	0.	0.	ο.
10	548M	0.50	0.425	1.00	0.	0.50	1.50	0.
11	548R	1.00	Ο.	0.	ο.	ο.	0.	0.
12	12M	0.	0.75	0.	0.	0.	0.	0.
13	12R	0.	0.75	0.'	0.	0.	0.	0.
16	68E	0.	0.	0.	0.	ο.	Ő.	0.75
17	6 <b>8M</b>	Ο.	0.75	0.	0.	0.	0.	0.
18	68R	0.75	Ο.	0.	0.	0.	1.00	ο.
50	97BI	ο.	0.	ο.	0.	0.	0.	1.25
52	97BP	0.50	1.25	0.	1.50	0.75	1.75	0.
56	98ER	0.	0.	1.75	0.	<b>0.</b>	0.	ο.
90	5532	ο.	ο.	0.	ο.	0.75	0.	Ο.
94	5536	0.75	0.	0.50	0.50	0.	0.50	0.50
95	553A	0.	0.	1.50	1.00	0.	0.	0.
99	TRVL	2.00	2.25	2.25	2.25	2.50	2.50	1.75

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2	263941584	261880904	416541535	045408621	0903 <b>61911</b>	158304082
3	264134167	264271214	266712276	128423222	438700403	175388804
4	211460685	261709853	+038382949	291504628	266271138	266218243
5	457707568	261861671	261803461	265256769	2651399 <b>91</b>	266196467
6	546687892	266179233	267771491 '	266049786	+266718142	265921262

ENTER SSN ENTER -1 TO DO ALL SSN'S IN THIS FILE ENTER 1 TO LIST SSN'S IN THIS FILE ENTER 0 (OR 'ENTER') TO TERMINATE PROGRAM RUN

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<u>-</u>				$\vdash$			╂—	╞	⊢	╂─	╂	╉──	┢	+	┼──	+	╞	<del> </del>		╀	┢	╂──	+-	+	╋	+	+-	+-	+
3						-	<u> </u>	┢╸	┢╴			╞	┢╴	+	┼─	-	╞─	$\vdash$	<u> </u>	┢	┞		┼─	+	╏	+	+	+	┢
4								Ľ																T				1-	Γ
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1	$\vdash$				÷		}—	┝	┢		├	┼─	┢─	+		+				┢	┢─	+		┿╾	╀			ŀ	+
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10										1		1	t		1					1-	t		1-	$\top$	t	1	+	+-	t
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14		····-			-		<b> </b>	$\vdash$	┢		├	┢──	┠─		┝					┢				+	┢	+—	+	+	┢
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## **BellSouth**

Computer Asset Protection Quick Reference Guide

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This document highlights major areas of importance in BellSouth's Computer Asset Protection (CAP) Policies, Executive Instructions and Standards.

Further details, clarification and other CAP rules are included in Executive Directive 001, Executive Instructions Number 15 and BSP008-140-XXXSV.

Questions or variance requests should be referred to a CAP Team representative or the CAP organisation at 305 988-1370.



NOTICE

Not for use or disclosure outside BellSouth or any of its subsidiaries except under written agreement.

#### **Executive Directive Highlights**

\* Employees shall access only authorized systems, applications, networks and data. Employees shall not access public or private computer builetin boards from BellSouth facilities or assets.

\* Employees shall not access vendor computer services without written authorization.

\* Employees shall not import, use or distribute public domain software in BeliSouth.

#### **Executive Instruction Highlights**

\* All computer systems, applications, and computer communications networks will be designed, implemented and operated by or for the Company in accordance with CAP standards.

\* Employees and contracted agents are to comply with CAP Instructions, standards, practices and guidelines.

\* A device or software will not be configured <u>to avoid manually</u> entering an ID and password.

 Files, software or data will not be uploaded or downloaded between a BellSouth and a non-BellSouth computer, system, or network unless specifically approved by CAP. However, employees may use personally owned computers to perform Company business if they ensure no jeopardy to BellSouth.

\* Workstations, terminals, PCs, etc. will be logged off when unattended.

 Output media, printed material and magnetic media will be marked with the appropriate proprietary information warning and will be disposed of properly.

#### **Helpful CAP Tips**

- Be extremely careful about giving information over the phone or sending something outside the Company to someons you do not know. identify recipients of information.
- Shred anything that could help an intruder.
- Protect the confidentiality of data.
   Treat copies like originals.
- \* Do not create unauthorized in-dial access paths to Company computers.

\* If you use a company PC:

Use company supplied software.

Do not use or make unauthorized copies of software.

Make and keep good backup files in another area away from your PC.

Protect diskettes with software or important files from theft.

Ensure that diskettes are disposed of properly.

Write protect software to avoid virus contamination.

#### CAP Variances

A request for a variance from a CAP standard should be discussed first among CAP team members. Official requests must have concurrence from the originating department AVP and will be submitted to the AVP for information Systems-Technical Planning/ Corporate Communications.

19-1

#### 1. USIR IDENTIFICATION

Each system user will be uniquely identified. IDs will not be shared.

- ID mechanisms will not be bypassed.

- BellSouth common user ID format will be used.

System users and administrators will be reidentified at least annually.

- IDs inactive for 60 days will be disabled.

2. USIR AUTHINTICATION

User IDs must be authenticated (proven) by passwords or other approved means.

Authentication mechanisms will not be bypassed by anyone.

- Passwords will not be shared.

 Passwords will be user assignable, known only to the user and be able to be changed at least daily.

 User passwords must be at least 6 characters. Privileged user, administrative or critical system passwords should be 6 characters.

 Passwords must contain at least 2 alpha and 2 numeric characters, and should contain at least one special character.

 Passwords will be aged every 60 days;
 30 days on critical systems or for privileged users.

 Users will only be allowed to self-restore expired passwords for 15 days. Privileged users or users of oritical systems should not be allowed to restore their own expired passwords.

 Systems will encrypt and further protect stored passwords.

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#### **J. ACCCESS CONTROL OR AUTHORIZATION**

System access will be allowed, denied and otherwise controlled by authorization mechanisms. Access control/authorisation will be based on authenticated user ID.

Users and administrators will be allowed access to only necessary commands and data.

 Access control mechanisms, data files and tables will be protected.

- Users and administrators will be disconnected or reauthenticated after 30 minutes or less of non-use.

 In-dial access will be protected with an additional level of authentication outside the system.

- Dial back is not an acceptable Sprimary means of in-dial protection.

) - In-dial access to a Network Administrations, Maintenaros and Provisioning) support systems will be through a protected network.

 Remote diagnostic access will be controlled and made available only by specific authorization at the time of access.

 Access to a data network or systems via in-dial will not be allowed unless the user has at some point been individually identified and suthenticated, and an audit trait has been established.

 Bystems and networks will recognize a hang up or other communications interruption and terminate the user netsion.

 Interrupted in-dial access sessions will not be resetablished without the use of identification and authentication procedures.

 A system or network's login process will abort if incorrectly attempted 3 times.

 Access to Company systems by nonemployees will be in accordance with the BSP.

4. CONFIDENTIALITY

 Access control and/or authorization mechanisms must be used to help keep transmitted and stored data confidential.  Encryption should be used to protect private, sensitive or other critical stored data.

 Encryption should be used to protect private.
 sensitive or other critical data transmitted by other than point-to-point communications or other trusted mease.

 Keys used to decrypt data will be transmitted directly from person to person or via private paper mail.

#### 5. DATA INTEGRITY

 Ensure that stored data cannot be modified by unauthorized entities.

 After-the-fact integrity checks should be accomplished through audit activity.

 Error detection protocols, edits, check sum programs, etc., will be used.

 File system and disk integrity checks will be run on a regular basis.

 Bystems will be able to identify the origin of received/maintained data.

4. SERVICE AVAILABILITY -

 Systems will be designed and maintained to ensure that scheduled services are available.

 Approved disaster recovery and contingency processing plans, and off-site storage programs for data and software must ensure the continuation of critical functions.

#### 7. ACCOUNTABILITY

- Personal accountability will be accomplished by tracing activity back to the responsible party via audit mechanisms.

 An after-the-fact audit process must include the orsation and use of both audit records for appropriate activities and procedures for the timety analysis of such activities.

. Key questions for audit trails are who did (or scossed) what, when and (from) where.

- Intrusion and improper activity detection in real-time will be strongly considered.
- Audit log access will be "read only" by authorized persons and the log will be protected from both modification and destruction.



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A:AD79:	[W5] @VLOOKUP(\$AQ79,\$DAYS,1)
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Dept.	Phone + 205-977-2818
305-261-2318	Pax I

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COMPANY: BST DATA COLLECTION TITLE: TECHNICAL ANALYST PROCEDURES TYE 12/31/93 PERIOD: DATE: DEC 9. 1993 AUDITOR: RKY

WW /14/43

WP NO.

IV. A. DATA COLLECTION 8. TECHNICAL ANALYST PROCEDURES

Per Rick King, the program generates a sample every month as explained in up 45. He inputs the data thatgenerates the sample.



Per D&T the technical analyst sends prior to the week samples 1) a list of technicains selected 2) the appropriate logs, and 3) Instructions to the Technicians Manager. The Tech Manager gives to tech supervisor. According to my conversations with Rick King, Steve Vanderberg and Steve Shaw, the technical analyst dues not send the samples out, Rick King and Steve Venderberg send the samples out. Also, in my conversations with Rick King, Steve Venderberg and Steve Shaw, the whole month of sample selection is sent to the tech manager at one time and sent to the tech supervisor at one time. Also, the tech supervisor notifies the tech to be sampled the Friday before his week.

Per D&T the tech's report time in 15 minute intervals on the logs. Staff 1-14 observed this also. When completed the techs give logs to supervisor and any discrepancies resolved. The supervisor sends to the technical analyst for additional review.

49-1

See next page for PSC staff observations regarding data collection and controls and observations regarding technical analysts interviews and controls.

CONCLUSIONS:

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I. Procedures are instituted so that:

All WALS received are checked against the names of the ones that are supposed to be received.

All WALS received are agreed to all appropriate documentation by the technical analyst.

All WALS are received at Wassp center next business day.

Approximately 30% of the sample selected are interviewed for three days of sample week.

The Service Tech himself is interveiwed as required by the FCC rather than the service tech supervisor.

The interview observed (technical analyst) follows the interview technique training.

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All the above were also observed by the PSC staff on a haphazard basis.

COMPANY:	8ST
TITLE:	DATA COLLECTION
	TECHNICAL ANALYST PROCEDURES
PERIOD:	TYE 12/31/93
OATE :	DEC 9. 1993
AUDITOR;	RNY

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There are no documented procedures for correcting the WAL sample or the DCWS's of the sample. There are documentated procedures for this for the positive time reporting. There are documental procedures 48-3RECOMMENDATION: W.P. No. 48-20 WAL's also - See W.P. No. 48-20 War 4.2 See 48-2

Document procedures for Wassp corrections.



II. The controls to determine that the TA does his job correctly are not documented. As explained by Steve Vanderberg, he is the Technical Analyst Supervisor and he reviews the technical Analysts work in terms of consistency and he provides interpretation to the anlyst based on his knowledge of the FCC and PSC.

Steve does periodic reviews, nothing specific at this point, informal. he sits in on interviews and looks at TA completed work; compares WALs to source documentation. Steve said that because of all the audits he has been doing this almost 100%.

He stated that as part of performance reviews for next year, they are going to set up a specific number of interviews that he will observe and do periodic spot checks on the accuracy of the WAL and interpretation of analyst. A number will be set.

#### RECOMMENDATION:

Document how the supervisor will review the technical analyst's work.

III. The SI knows he is being sampled usually the Friday before the week sampled. Based on all the conclusions drawn In 45,46,47 and 48, it does not appear that this will bias the sample.

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 COMPANY:
 BST

 TITLE:
 OBSERVATION OF TECHNICAL ANALYST

 PERIOD:
 TYE 12/31/93

 DATE:
 DEC 8, 1993

 AUDITOR:
 RKY

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48-1 ₩P NO.

PSC staff sat and observed the job routine of Ronnie McFarland, the technical analyst for Florida.

I listened in on three interviewes and observed Mr. McFarland side of the interview on three others.

According to the WASSP procedures  $30^{\circ}$  of all ST sampled have to be interviewed.

PSC Staff Observations

The ST faxes in their WAL's when completed. If ticket involved, faxes that too. The TA pulls up the ST DCWS for each WAL. Pulls up by Employee code and prints out.

48 2 Per FCC each WAL should be checked (everyone is checked 100%) by TA to source documents (OCWS, tickets) to see if they agree. The technical analyst said if there is an error or questions in those that are checked to agree, the TA calls the supervisor, not the tech. The supervisor talks to the tech and tries to straighten this out. The supervisor will call the TA back. If there is an error on the DCWS, a OATH will be produced by the supervisor. The DATH is a corrected DCWS. The TA pulls this up and adds to documentation.

If there is an error on the WAL, the TA can change this, but sometimes the ST after speaking to his supervisor sends in a corrected WAL.

According the Wassp procedures, the supervisors are to be interviewed for 30% of the WAL's. FCC required that the TA interview the ST rather 48-2- than the supervisor, that is what is happening per RY observation. Per new procedures wp no 48-2/1 and 48-2/2.

RY observation of the interview process by the TA.

On the interview, the tech analyst answers the call ins (the ST call in). The tech analyst states the phone number from the WAL he is looking at and then asks the ST what he did. The TA sees if what the ST says agrees with the WAL and source doc'm. If there is an error, the TA talks directly to the ST and asks the ST to have his supervisor call the TA. If the error is on the DCWS (incomplete narrative, fiber or copper is missing, wrong) then the supervisor puts in a corrected DATH and this becomes part of the documentation. Supervisor has to talk to the ST and find out exactly what he did. If there is a nerror on the WAL, the ST may send a corrected one, but the TA can change the WAL after interview if put on wrong line; as long as it agrees with the source documentation. But the TA cannot change the DCWS. Needs to be changed by the supervisor.

WP 48-3 has examples of WAL and source documentation and verification output.

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COMPANY:BSTTITLE:OBSERVATION OF TECHNICAL ANALYSTPERIOD:TYE 12/31/93DATE:DEC 8, 1993AUDITOR:RKY

WP NO.

TA can pull up the dCWS by the ST employee number. To see if there is a corrected OCWS (OATH) pulls up by telephone number.

The DATH is the Display Abbreviated Trouble History vs the DLETH (Display Long extended trouble history.)

The last thing the TA does is ask the ST how many hours he worked that day.

It appears to me that the questions asked by the TA are open ended and asked in a way that the ST will do the talking -- not the TA. It appears that the analyst follows the interview technique training as recommended by the FCC 48-2/3.

I asked how far in advance the supervisor knows who will be sampled and how far in advance the ST is notified that he has to fill out the logs.

Steve Shaw says he sends the sample to the supervisors about 10 days before the month. The supervisors notify the ST around Friday of the week before.

For what the tech supervisors are supposed to do, see wp no. 48-2/1, pg 4 of 8. Staff did not observe this.

The techanical analyst has a procedure for checking off the WAL's as he checks them 100% to the source documentation.( See up 48-3/5 for sample list offwhat the TA checks off). He also has a procedure for checking off the interviews he does. Supposedly each technical analyst does the same so one can pick up for another. This is documented in the Technical Analyst Handbook.

Also, Per Rick King, the TA are switched every so often from state to state. Check this with Rick.

The IA brings his weeks work to the input area and logs in what he brings in. The input clerks put into system and log in what they put in. In my observation they made sure the hours added up each day to the total on the WAL.

Then a verification sheet is printed of the data that is input. Someone else checks this. Talk to Rick about this.

Cont

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 COMPANY:
 BST

 TITLE:
 OBSERVATION OF TECHNICAL ANALYST

 PERIOD:
 TYE 12/31/93

 DATE:
 DEC 8, 1993

 AUDITOR:
 RKY

WP NO.

I also spoke with the supervisor of the Technical Analyst, Steve  $V_{\mbox{anderberg}}$  in Brimingham.

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I asked him what controls were in place so that the TA does his job correctly.

He said the the TA is hired for his network tech experience as well as his accounting experience.

Once they are hired there are sessions of training in the WASSP process and in FASC (Functional Accounting Sytem Code). After that the Tech Analyst is assigned a state.

Steve Vanderberg said that is reviews the TA work in terms of consistency, he provides interpretation to the analyst based on his knowledge of the FCC and PSC.

He does periodic reviews, nothing specific at this point. kind of informal. He goes in and sits in on inverviews. He also looks at the completed WAL and compared with the source documentation to make sure the TA did the right thing.

Doesn't have a specific number because of all audits going on is doing almost 100% checking on the TA's and he doesn't think that is warranted.

As part of peformance reviews for next year, they are going to set up specific number of interviews that Steve will sit in on and go in and do periodic spot checks on the accuracy of the WAL and interpretation of analyst, set a number.

Steve Venderberg also goes in and check the verifications sheets after input. Goes in and looks at what has been verified. Look at what individuals are doing in terms of input.

Steve also sent out the sample.

The FCC is requiring the WAL to be at the WASSP center no later than the next business day. Interview no later than 2 business days. Then they go to Steve U. Part of the TA responsibilities is to close out within the specified time. This is auditable.

Cont

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# BELLSOUTH

Sulte 900 1133-21st Street, N.W. Washington, D.C. 20038 202 463-4113

October 25, 1993

Maarice P. Telbot, Jr. Director-Federal Requisiory

Ken Moran, Chief Accounting & Audits Division Federal Communications Commission 2000 L Street, NW, Room 812 Washington, D.C. 20554

### RE: Enhancements to BellSouth's Work Activity Statistics: Sampling Process (WASSP)

#### Dear Mr. Morani

As a result of the meeting on September 16, 1993, between representatives of BellSouth and Commission staff members, BellSouth agreed to make certain enhancements to its WASSP process. BellSouth also agreed to inform the staff as to the status and the completion of the implementation of these enhancements. The purpose of this letter is to notify you that BellSouth has completed the implemention of the enhancements and recommendations made by the FCC staff.

Following are the five FCC staff requested enhancements to the WASSF process and the corresponding action taken by BellSouth to implement each requirement.

1. The field supervisor must review the WASSP Work Activity Log (WAL) for accuracy and completeness and transmit to the WASSP center no later than the business day following the completion of the work.

BellSouth has implemented the procedure described by PSC ptyl in Item 1. See Attachment 1(BellSouth Practice -WASSP Time Reporting Procedures For Technicians) paragraphs 5.5 and 5.6. pg 4218

2. Analysts must perform a 100% review of submitted WALS each day. Also, the analysts will conduct technician telephone interviews on a sub-selection of the technicians in the overall sample.

> BellSouth has implemented the procedure described in Item 2. See attachment 1(BellSouth Fractice

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15-2 p. 2

41-2 p 3218

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48-2 pr. 3018 - WASSP Time Reporting Procedures For Technicia paragraphs 4.2 and 5.7. Also see Attachment 2 - WASSP Time Reporting Procedures For Technicians) (WASSP Policies and Procedures Manual) paragraph 6.04.

> 3. The WASSP analyst (instead of supervisor) must interview field technicians within two business days of work completion. Toll-free numbers have been established to facilitate this process.

BellSouth has implemented the procedure described in Item 3. See Attachment 1(BellSouth Practice WASSP Time Reporting Procedures For Technicians) paragraphs 4.2 and 5.7. BellSouth has also installed an automated call distribution device to allow technicians to contact the appropriate analyst for an interview.

4. Analysts must receive interview technique training,

All analysts and the analysts' supervisor have completed an "Interviewing Skills Workshop" training course. This course was designed specifically for the WASSP technical analysts by a senior instructor with the BellSouth Leadership Institute.

The course focused on the interview skills required for successful data gathering, centering mainly around the use of "open-ended" questioning techniques. The course also utilized role-playing as a training method to insure each analyst could become familiar with ways in which to probe for information through the interview process, and be critiqued on his/her performance.

Included as Attachment 3 is training material from the workshop.

A technician / supervisor training package must be documented. This training package will be in the form of the updated BellSouth Practice.

> A conference was held involving all the State WASSP Coordinators to cover each of the required enhancements resulting from the meeting with the FCC staff. This conference produced the required revisions to the pre-existing Time Reporting Procedures.

> Attachment 1 is the updated BellSouth Practice for Time Reporting Procedures for field forces involved in the WASSP process, this includes the technicians as well as supervisors and other managers. This

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updated practice has been covered in each network district in each of BellSouth's states.

Also provided herein is the following information requested by the FCC staff at our meeting of September 16, 1993.

Write-up on how work is dispatched 6. 45-5

See Attachment 4.

Analyst / Technician interview. (Illustrative 7. quastions).

See Attachment 3, page 14.

Notification that states have been informed of 8. process enhancements.

> All states have been notified in writing of the WASSP process changes.

BellSouth has implemented all enhancments and recommendations proposed by the FCC staff and is prepared to proceed solely with the WASEP process. SellSouth respectfully seeks your expeditious approval prior to November 29, 1993, so that we may discontinue the dual time reporting and proceed with WASSP.

Sincerely,

· Maurice

Naurice P. Talbot, Jr. Director - Federal Regulatory

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co: Ken Ackernan

Attachments



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#### WORK ACTIVITY STATISTICAL SAMPLING PROCESS TIME REPORTING PROCEDURES FOR TECHNICIANS

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EXE	IBIT 4 - RELIEVING SUPERVISOR	
EXF	UBIT 5 - AFFILIATE BULLING	••••••
EXF	HBIT 6 - WORKING OUTSIDE "NORMAL" JOB F	UNCTION CODE
EXF	HBIT 7 - SCHEDULE CHANGE REPORTING	••••••
EXE	HBITS - INCOMPLETE JOB ON WORK ACTIVIT	Y LOG

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#### WORK ACTIVITY STATISTICAL SAMPLING PROCESS TIME REPORTING PROCEDURES FOR TECHNICIANS

#### 1. GENERAL

- 1.1 This Section describes technician time reporting procedures necessary to ensure regulatory compliance with the Joint Cost Order (JCO).
- 1.2 When this Section is reissued, the reason(s) for reissue will be listed in this paragraph.
- 1.3 On February 6, 1987, the Federal Communications Commission (FCC) released its Joint Cost Order in CC Docket No. 86-111, commonly referred to as Part X. The Order established the requirements that a regulated carrier must meet if it intends to use its resources (assets and employees) to provide deregulated products and services.
- 1.4 The FCC, State Regulatory Commissions and the Company require an audit trail of all time charged for every work assignment performed by the technician. To comply with regulatory requirements and an auditable record of employee time reported must be maintained.

#### 2. OVERVIEW

- 2.1 The Work Activity Statistical Sampling Process (WASSP) represents a change from positive plant time reporting procedures that utilized complex financial guidelines, to a functional process that simplifies the process from a field perspective and places the responsibility of recording financial information at a more appropriate point in the flow of data.
- 2.2 The WASSE process requires the involved technicians to report the time associated with various work functions being performed in "English language" format versus a financial format, i.e., Field Reporting Codes (FRCs). This "English language" information is translated "down stream" in the flow of data into the appropriate financial information.
- 2.3 Translation of technician reported data into appropriate financial information is performed by a centralized group of Technical Analysts. These analysts have technical expertise in both network and accounting.
- 2.4 The functional reporting by the technician greatly simplifies the process for field forces and provides enhanced information to management.
- 2.5 The WASSP process utilizes statistical sampling to gather the needed functional information to develop financial profiles for the involved technicians. These profiles are converted into accounting codes for recording dollars to the proper level of detail within specified regulated and deregulated accounts.
- 2.6 WASSP is designed specifically for non-management, work reporting technicians whose normal time reporting distributions are consistently reported to the same accounting classifications and whose activities are predominantly classified to expense accounts.
- 2.7 Technicians assigned to be sampled under the WASSP process are selected by the Company's Statistics and Econometrics organization to ensure the appropriate precision levels based on the variability of the data.

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- 2.8 Sampled technicians complete a Work Activity Log (WAL) of the functions he/she performs for the sampled work day. This log includes time spent by work function as well as associated items that give rise to the work, i.e., service order, trouble report, etc. Functions are not converted to Field Reporting Codes (FRCs) by the sampled technician.
- 2.9 Completed Work Activity Logs are forwarded daily to the Technical Analysts centralized location for review and conversion to appropriate Field Reporting Codes (FRCs) for financial purposes.
- 2.10 An integral part of the Technical Analysts review of the Work Activity Log consists of a detailed review of selected technician logs. This review compares data reported by the technician on the Work Activity Log with the Source Documentation prepared by the sampled technician.
- 2.11 Technical Analysts accumulate and summarize all sampled data for input into the Mechanized Time Reporting (MTR) System via a unique data base.

#### 3. TECHNICIAN SAMPLE SELECTION

- 3.1 The technician sample selection uses a data extract from the Payroll Masterfile Data Base (PMDB) and an Employee Selection Program to extract a random samp of technicians. PMDB is a BellSouth employee master database that is used to maintain information about an employee, i.e., Responsibility Code, Job Function Code, Social Security Number, etc.
- 3.2 Each state represents a unique sampling universe with each work group (job function) being a unique sub-universe within a particular state.
- 3.3 By the 20th of each month, the lists of technicians to be sampled in the following month are distributed via E-mail, CAT Terminal and/or paper copy to the appropriate state contacts and field management. Field management should then distribute the Work Activity Logs to the selected technician's supervisor for coverage with the technician.
- 3.4 Sample periods will cover a period of seven (7) calendar days, Sunday through Saturday.
- 3.5 Field management will not have the latitude to make any substitutions for selected technicians nor change any dates of the period being sampled.

#### 4. TECHNICAL ANALYST GROUP RESPONSIBILITIES

- 4.1 The WASSP process is managed primarily through a centralized group of Technical Analysts with supervisory and technical Network expertise and knowledge of accounting classifications.
- 4.2 The primary functions of the Technical Analyst Group are as follows:
  - Receive the daily Work Activity Log sheets from field forces selected to be sampled for the week.
  - Track the return of all Work Activity Log sheets for each sampled technician by use of the Sample Selection/WAL Review Document.
  - Review the Work Activity Log sheets for completeness.

- Review the Work Activity Log sheets for reasonableness of data reported and the accuracy of Total Hours reported versus hours shown in the individual work categories.
- Conduct telephone interviews with the sampled technicians as required.
- Ensure accuracy of technician time reported on Work Activity Log sheets by comparing each original source document against the activity recorded on the Work Activity Log.
- Correct any errors found on the Work Activity Log sheets and tally the errors and other results of the interview process.

#### 5. FIELD RESPONSIBILITIES

5.7 28-2

- 5.1 Field Management should ensure distribution of the Work Activity Logs to the Supervisors of those technicians selected for the sample.
- 5.2 Field Supervisors or equivalent have the responsibility of distributing the Work Activity Logs to those technicians under their responsibility who have been selected to be sampled as well as notifying those technicians sub-selected for telephone interviews.
- 5.3 Field Supervisors and sampled Technicians must fully understand and accurately follow the guidelines for completing the Work Activity Logs and the requirements for completing the telephone interview process.
- 5.4 Field Supervisors or their equivalent must ensure that sampled Technicians complete the Work Activity Logs after each work assignment.
- 5.5 Field Supervisors or their equivalent must review each completed Work Activity Log against the appropriate source documentation for completeness and accuracy. All mechanized source documentation narrative errors identified through this review process must be corrected to include LMOS DATH/WATH or WFA/DO Work Request Event Log (DOLOG) transactions as required. All non-mechanized source documentation (i.e., work tickets) narrative errors must be corrected manually as appropriate.
- 5.6 All completed Work Activity Logs and non-mechanized source documentation (i.e., work tickets) must be returned to the Technical Analysts in the WASSP Center by the next business day. Normal business days for the WASSP Center are Monday through Friday.
  - Technicians in the sub-selection sample must call the WASSP Center within two (2) business ) days for interview purposes.
- 5.8 In the absence of a technician who has been selected for sampling, i.e., vacation, illness, leave of absence, school, etc., the Supervisor or equivalent has the responsibility of completing the Work Activity Logs for that employee for the duration of the sample period.

## NOTE: Refer to the Exception Reporting Section of this practice for details in reporting employee absence from normal duties.

5.9 Supervisors or equivalent must ensure that accurate Source Documentation is generated by all technicians being sampled and that this Source Documentation is retained in accordance with Company retention guidelines.

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### NOTE: Refer to the Source Documentation Section of this practice for detailed source document requirements.

- 5.10 Field Supervisors should maintain locally a copy of completed Work Activity Logs for thirty (30) days following the completion date of the Log itself.
- 5.11 Sampled technicians and their immediate Supervisors must respond in a timely manner to the Technical Analyst requests for information needed to ensure the accuracy of Work Activity Logs. Toll free numbers are available for field use in responding to Technical Analyst requests for this information.

#### 6. WORK ACTIVITY LOG

- 6.1 The Work Activity Log (WAL) is a form utilized by the technician to report all time associated with various work functions performed.
- 6.2 Work Activity Logs are both state specific and Job Function Code (JFC) specific. Each Job Function Code Work Activity Log lists the predominant work activities for that specific work group. However, the WALs are not all inclusive. Technicians will have the capability/responsibility to "write in" a detailed work description work activity performed that is not preprinted on the WAL itself.
- 6.3 As the Work Activity Logs are revised, the new forms will be distributed to field management by the appropriate group within the WASSP Center.

#### 7. PREPARATION OF THE WORK ACTIVITY LOG

- 7.1 The Work Activity Log contains three (3) sections. These sections are GENERAL, DIS-TRIBUTED HOURS BY ACTIVITY and TOTAL HOURS WORKED.
- 7.2 The GENERAL section should be competed as follows:

Name	-	Enter the employee's first and last name on all three pages of the WAL.
Date	-	Enter the date under report on all three pages.
Emp. [D#		Enter the employee's LMOS/WFA identification number.
SSN	-	Enter the employee's Social Security number, the check digit is not required.
Resp. Code	—	Enter the employee's Responsibility Code.
Supy. Name	-	Enter the employee's Supervisor's name.
Supv. Tel/Pager #		Enter the Supervisor's telephone and/or pager number including area code.

- 7.3 The DISTRIBUTED HOURS BY ACTIVITY section should be completed as follows upon completion of each job/activity:
  - Select the appropriate line/work function and enter the the appropriate amount of time in quarter hour increments, i.e., .25, .50, .75, 1.00. The selected activity must correspond to the narrative entry documented by the technician on the source documentation.

- Document the telephone number, circuit number or miscellaneous activity associated with the work.
- Total the hours for each line/activity in the TOT HRS column.
- NOTE: ALL TECHNICIANS ARE ASSIGNED OR ALLOWED TWO 15 MINUTE RELIEF PE-RIODS EACH DAY. ALSO, THE MAJORITY, IF NOT ALL, JOBS HAVE TRAVEL TIME ASSOCIATED WITH THEM. THEREFORE, IF THERE IS NOT AN ENTRY FOR TRAVEL AND BREAKS ON THE WAL A WRITTEN EXPLANATION IS REQUIRED ON THE LOG.
- 7.4 Completion of the TOTAL HOURS WORKED is accomplished by:
  - Enter the total hours for the day which <u>must</u> be equal to the total of all time entries for the day.
- 7.5 Completed Work Activity Logs should be returned to the Technical Analyst in the WASSP Center by the next business day.

#### 8. SOURCE DOCUMENTATION

- 8.1 Source Documentation may consist of mechanical or paper records depending upon the origination of the particular work assignment. The type(s) of work assignments and the system(s) out of which these are dispatched to the technician determine what Source Documentation is required to provide an audit trail.
- NOTE: ONLY ONE (1) SOURCE DOCUMENT SHOULD BE CREATED AND RETAINED IN FILE AS AN AUDIT TRAIL FOR WORK ACTIVITY LOGS. DUPLICATE SOURCE DOCUMENTATION MUST NOT BE PREPARED.

#### POTS, NON-DESIGNED SPECIALS AND PUBLIC COMMUNICATIONS

- 8.2 Service order related services which are classified as Plain Old Telephone Service (POTS), Non-Designed Specials and Public Communications are input into the Service Order Communications System (SOCS). POTS trouble reports are provided out of the Loop Mainte-, nance Operations System (LMOS).
- 8.3 Service orders and trouble reports which are dispatched out of MAPPER/TRACKER are provided to and completed by the technician via the Computer Access Terminal. When this occurs, Source Documentation in the form of a Display Craft Work Summary/Display Job Information (DCWS/DJI) FULL CLOCK NARRATIVE is created and retained in accordance with Company retention guidelines.
- 8.4 The DCWS/DJI FULL CLOCK NARRATIVE report displays the <u>complete</u> job information associated with each work assignment performed in a given day by each technician. A <u>com-</u> <u>plete</u> DCWS/DJI must provide a sufficiently detailed NARRATIVE that describes the actual work performed.
- 8.5 The NARRATIVE entry must support each work function reported by the technician on the Work Activity Log.
- NOTE: The Regional narrative requirements to support all work functions documented on the Work Activity Log shall take <u>precedence</u> over all State and/or Local narrative requirements when populating narrative fields on the DCWS/DJI masks. 2<sup>22</sup>

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- 8.6 The DCWS/DJI reports must be requested for all technicians being sampled and printed following the completion of that day's work assignments. These reports must be filed and retained for a period of not less than one (1) year after the closing of the fiscal year.
- NOTE: Where Company policy, Federal, State or Local Regulatory Agencies require retention of this documentation for a period longer than that specified above, those directives will prevail.
- 8.7 Service orders, trouble reports and any other work assignments (e.g., message reports, routines) which are not dispatched out of MAPPER/TRACKER must continue to be documented, i.e., Work Tickets (Form 6025 - 1 - SC, Form 6571 - C) or other documents that detail the work activity performed, and retained as Source Documentation for all Work Activity Log entries. Retention of this Source Documentation is for a period of not less than one (1) year after the close of the fiscal year.
- NOTE: Where Company policy, Federal, State or Local Regulatory Agencies require retention of this documentation for a period longer than that specified above, those directives will prevail.
- 8.8 Sampled technicians must provide sufficiently detailed NARRATIVE statements on the Work Tickets to support each work function documented on the Work Activity Log.
- 8.9 Source Documentation is <u>not required</u> to support Work Activity Log entries for other unclassified productive time, e.g., meetings, school, etc. However, a detailed description of the time spent on such activities must be properly documented on the Work Activity Log.

#### DESIGNED SPECIALS

- 8.10 Service order requests for Designed services and trouble reports on Designed circuits are originated and dispatched out of the Work Force Administration/Dispatched Out (WFA/DO) System. WFA/DO has the capability of storing mechanized records of work assignments performed by an individual employee for an indefinite period of time. Therefore, work assignments dispatched out of WFA/DO and performed by a technician do not have to be printed daily. By utilizing the WFA/DO Tech Log, complete work assignment information may be requested out of WFA/DO by Trouble Ticket Number or by Circuit Layout Order (CLO) number for any given day.
- 8.11 WFA/DO provides for the display of the <u>complete</u> job information associated with each work assignment performed in a given day by each technician. The technician must provide a sufficiently detailed narrative on the WFA/DO Completions Screen that describes the actual work performed.
- 8.12 The NARRATIVE entry must support each work function reported by the technician on the Work Activity Log.
- NOTE: The Regional narrative requirements to support all work functions documented on the Work Activity Log shall take <u>precedence</u> over all State and/or Local narrative requirements when populating narrative fields on the WFA/DO masks.

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- 8.13 Service orders, trouble reports and any other work assignments, message reports, routines, etc., which are not dispatched out of WFA/DO must continue to be documented, i.e., Work Ticket (Form 6025-1-SC, Form 6571-C) or other documents that detail the work activity performed, and retained as Source Documentation for all Work Activity Log entries. Retention of this Source Documentation is for a period of not less than one (1) year after the close of the fiscal year.
- NOTE: Where Company policy, Federal, State or Local Regulatory Agencies require retention of this documentation for a period longer than that specified above, those directives will prevail.
- 8.14 Sampled technicians must provide sufficiently detailed NARRATIVE statements on the Work Tickets to support each work function documented on the Work Activity Log.
- 8.15 Source Documentation is <u>not required</u> to support Work Activity Log entries for other unclassified productive time, e.g., meetings, school, etc. However, a detailed description of the time spent on such activities must be properly documented on the Work Activity Log.

#### 9. EXCEPTION REPORTING

- 9.1 The proper assignment of Job Function Codes (JFCs) is critical to financial applications of the Company. The proper assignment and reporting of JFCs is equally critical to the WASSP process and sampling as a whole.
- 9.2 In this regard, the JFC assignments pertinent to the sampling process should be reviewed to assure proper distinction between sampled groups. This review should include an analysis of dominant work done by technicians and a comparison of the results of the analysis to data contained on the Payroll Masterfile and corrections made via Payroll Change Reports as appropriate.
- 9.3 As a rule, the technician must be assigned a JFC which represents the predominant work functions (more than 50%) performed by the technician.
- 9.4 A technician may occasionally perform work functions which are different from those the technician normally performs. When a technician performs work outside his/her "normal" or preassigned job function code group, exception reporting to the job function describing the work performed is required. Work performed "on behalf of" or on a "loaned" basis which is outside the technician's "normal" job function code group must be exception reported.
- 9.5 It is recognized that in certain areas technicians can do work as a <u>normal course of business</u> between technician groups. For example, in certain areas where POTS technicians do certain cable repair functions as a normal course of their job or in other cases where Special Services technicians routinely handle POTS type work, no <u>exception reporting is required</u>. If, however, these same technicians do work "on behalf of" or on a "loaned to" basis, exception reporting is required.

LOANED TO CONSTRUCTION

9.6 Any technician eligible to participate in WASSP, as defined by his/her preassigned JFC, must exception report to the appropriate Construction JFC if they are loaned to Construction.

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#### AFFILIATE COMPANY BILLING

- 9.7 The primary function of the WASSP process is to <u>replace</u> technician labor hours reporting via Section L (Labor Classification) of Form RF-152-I, Mechanized Time Reporting Time-Labor Report.
- NOTE: ONE LABOR SECTION EXCEPTION REMAINS. BST AFFILIATE BILLING VIA RE-GIONAL BILLING NUMBERS (RB#) WILL CONTINUE TO BE REPORTED UTILIZ-ING SECTION L, LABOR CLASSIFICATION, OF FORM RF-152-I. ALL TECHNI-CIANS, BOTH SAMPLED AND NON-SAMPLED, WILL BE REQUIRED TO POSITIVELY REPORT AFFILIATE BILLING UTILIZING SECTION L OF FORM RF-152-I. LABOR HOURS, FIELD REPORTING CODES (FRCs), APPROPRIATE RB# AND SOURCE DOCUMENTATION REQUIREMENTS REMAIN <u>UNCHANGED</u> FROM PREVIOUS POSITIVE TIME REPORTING REQUIREMENTS FOR <u>ALL</u> TECHNICIANS.

**REGIONAL BILLING NUMBERS CURRENTLY IN EFFECT ARE AS FOLLOWS:** 

RBM001803Bills BellSouth Communications Systems (BCS) for work per-<br/>formed by a BST technician on BellSouth Customer Provided<br/>Equipment (CPE) and non-basic inside wire.<br/>(See RL: 91-12-031SV)

FRCs applicable include 108BP, 108BR, 108BW, 208BP, 208BR, 208BW, 308BP, 308BP, 308BR, 308BW, 408BP, 408BP, and 408BW.

- 9.8 The WASSP process <u>does not</u> perform the exception reporting functions of the remaining sections of Form RF-152-I, Mechanized Time Reporting Time-Labor Report. These sections are as follows:
  - Schedule Information (S)
    - Benefits (B)
  - Payroll, FASC And Tax Exceptions (P)
  - Differentials And Allowances (D)
- 9.9 All technicians must continue to utilize Form RF-152-I. Sections S. B. P and D. for exception reporting repardless of their involvement in the WASSP sampling process.
- 9.10 Payroll and other technician time reporting exceptions which need to be reported via the RF-152-I may include but are not limited to the following:

**EXCEPTIONS TO PAYROLL, FASC AND TAXES** 

- Loaned to another state
- Loaned to or work performed (RB#) for another BellSouth company

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Attachment 1 Page 10 of 18

- Loaned to another Job Description .
- First day benefits or military leave
- Return from benefits or military leave

#### DIFFERENTIALS AND ALLOWANCES

- Central City .
- Evening/Night
- Higher Rated Job •
- Training
- **Relieving Supervisor**

#### **EXCEPTIONS TO SCHEDULED HOURS ON FILE IN MTR**

- Overtime
- Call Out
- Absences

#### CASUALTY ESTIMATE REPORTING

#### REFER TO THE MECHANIZED TIME REPORTING (MTR) PROCEDURES MANU-NOTE: AL FOR DETAILED INSTRUCTIONS ON EXCEPTION REPORTING

- Forms RF-152-I, Mechanized Time Reporting Time-Labor Reports, initiated for payroll 9.11 and other time reporting exceptions must continue to be processed as currently required.-

Where Company policy, Federal, State or Local Regulatory Agencies require retention of NOTE: this documentation for a period longer than that specified above, those directives will prevail

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Exhibit 1 -

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#### **Mechanized Time Reporting**

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#### **Time-Labor Report**

Corrected Report

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# Exhibit 2 - Loaned To Another State

This technician has been formally loaned to Florida from Alabama to restore service affected by Hurricane WASSP. The Billing Indicator to be reported is 'FU' and the Florida Responsibility Code to be charged is 'N7654321'. The Casualty Estimate Authoriza-tion for Hurricane WASSP is 'ESK4321'. In addition, this technician normally performs Comports Communications work activities (JFC 4120) in Alabama, but in Florida the technician is performing POTS - I&M functions (JFC 4100).

A technician is scheduled to work Monday through Friday from 3.00 s.m. - 1.6.00 p.m. + 7.00 p.m., the technician works his regular schedule and two (2) hours authorized overtime (5.00 p.m. - 7.00 p.m.). .m. On Thursday,

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Attachment i Page 12 of 18 •

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## Exhibit 3 - Union Activities Paid

A technician is acheduled to work Monday through Friday from 8:00 a.m. - 11:30 a.m. and 12:30 p.m. - 5:00 p.m. On Monday, the technician participates in union activities paid by the Company from 3:00 p.m. until 5:00 p.m. Remember, Labor Classification information is not required, so the technician should not report SPPC 5533. Also, please note that <u>unpaid</u> union activities should be exception reported to Time Reporting Code 'UK'.



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Page 13 230

NOTICE

# Exhibit 4 - Relieving Supervisor

To report this exception, the technician should enter his preassigned Job Function Code (JFC - 4100) and an Environment Code of '9' in the Payroll, FASC, and Tax Exceptions section. Labor Classification information is not required, but the technician must report a relieving supervisor differential (Code 'RD') in the Differentials and Allowances section of the appropriate Time-Labor Report (RF-152-1) as currently reported.

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## Exhibit 5 - Affiliate Billing

In addition, four (4) hours must be reported to Field Code 'SAMP' in the Labor Classification section to account for the remaining hours in the technician's acheduled eight (8) hour day.

The technician MUST report the valid Authorization (Salee/Service Order Number - SS 1234547890) for the work being periormed as well as the appropriate Supplemental Authorization (RBM001803) in the Labor Classification Section of the appropriate Time - Labor Report (RF = 152 - 1). Any unvel and break time (TRVL) should not be reported separately, but included in the time reported to 308BL

A technician is scheduled to work Monday through Friday from 8:00 n.m. - 12:00 noon and 1:00 p.m. - 5:00 p.m. On Wednesday, the technician performs his normal work duties between 8:00 n.m. and 12:00 noon. After hunch, the technician spends four (4) hours installing Furndyne modems (FRC 30681) for BellSouth Constitueications Systems (BCS) between 1:00 p.m. and 5:00 p.m.

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# Exhibit 6 - Working Outside "Normal" Job Function Code

A technician is acheduled to work Moaday through Friday from 8:00 a.m. = 12:00 noon and 1:00 p.m. = 5:00 p.m. On Tuesday, the technician is leaned from Coastruction (e.g. JFC 4200) to a POTS = 1&M work group (JFC 4100) for the entire day. Since the POTS = 1&M work group performs work activities outside his normal work functions the technician must exception report the entire day to JFC 4100. However, since JFC 4100 is a participate in WASSP JFC (e.g., 4100) to a Construction JFC (e.g., 4200, 4220) must exception report Labor Classification information as currently reported

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Exhibit 7 - Schedule Change Reporting

NOTE: If this technician had a Schedule Change Report (Form RF = 1.53) submitted to MTR to reflect this change in his normal schedule, preparation of Form RF = 153 = I on Theoday and Schuday is not required. Completed Schedule Change Reports must be received and keyed at the appropriate MTR Input location during the pay period in which they become effective. Ideally, all Schedule Change Reports should be received at the MTR Input location on their effective date.

rescheduled to work

If an employee is rescheduled to be off on a day that the technician's MTR schedule indicates that be normally works, the technician MUST exception report code OFF on the day in which he is rescheduled off (Theeday) on Form RF = 132 = 1. Also, the technician MUST exception report code SC on the day in which he is rescheduled to work (Samriay) on Form RF = 152 = 1. Otherwise, the MTR system will pay the technician eight (b) hours of unsubertime evertime on the behaviory in which he has been cian based on his schedule on file in MTR and pay the technician eight (b) hours of unsubertime evertime on the behaviory in which he has been

A technician is normally scheduled to work Monday through Friday from 8:00 a.m. – 12:00 noon and week the same technician is scheduled off on Tuesday so that he can provide coverage on Saturday.

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#### WASSP WORK ACTIVITY LOG

I&M - POTS JFC 4100

Attachment 1 Page 18 of 18

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#### \* 1993 BellSouth

On a cable pair change through CAS – Gateway, where the trouble is automatically "pulled" to have the Central Office (C.O.) Equipment changed, a narrative will not be provided on the DCWS. In this instance, the technician should provide a detailed narra-tive of the work having performed and the job # in the "OTHER" section of the appropriate Work Activity Log. For example, "(3) CHANGED PAIR – AERIAL CABLE".

NOTE: Non-Productive time (i.e., vacation, illness) as well as Differentials and Allowances (e.g., higher rated job) should continue to be reported as shown today in the MTR PROCEDURES MANUAL.

Exhibit 8 - Incomplete Job On Work Activity Log

23-1

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Attachment 2 Page 1 of 2

#### BELLSOUTH TELECOMMUNICATIONS

Records System (CPRS) and a Employee Selection Program to extract a random sample of technicians that will participate in the sample data collection process. CPRS is a BellSouth employee master database that is used to maintain information about an employee (e.g., Responsibility Code, Job Function Code, Social Security Number).

5.05 Sample sizes and the structure of the sample are designed so that the three (3) month rolling total for a given State will obtain a precision equivalent to plus (+) or minus (-) 15 minutes per person-day. The Employee Selection Program searches the whole universe of technicians from the CPRS and uses the sample size by Work Group to identify the technicians who will participate in the data collection process. All technicians selected to participate in the data collection process are sampled every day for one (1) week (7 days).

#### DATA COLLECTION

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- 6.01 By the 20th of each month, the lists of the technicians to be sampled in the following month are distributed via E-mail, CAT terminal and/or paper copy to the state contacts and field management. Field management then disseminates the Work Activity Logs (WALs) to the selected technician's supervisor for coverage with the technician.
- 6.02 Technicians participating in WASSP report their time by work activity in minimum increments of fifteen (15) minutes. WALs have been developed for each Work Group listing the predominant work activities of that Work Group. Though most inclusive, the WALs may not include every work activity. "Write-in" activities are reviewed by the Technical Analyst and assigned accounting codes. Any exceptions to normal work activities, such as non-productive time paid (e.g., vacation, jury duty, illness) and overtime hours paid must be reported individually through the existing Payroll Exception process.
- 6.03 Prior to submitting the completed WALs to the Technical Analyst, the Supervisor (or appropriate field personnel) of the sampled technician(s) should compare the work activity information reflected on the WAL to the relevant source documentation.
- 6.04 To ensure the accuracy of work activities reported by those technicians sampled through WASSP, the Technical Analysts conduct telephone interviews with a sample of the sampled technicians. For the remainder of the sampled technicians, the TA compares the logs to the source documentation. The

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Attachment 2 Page 2 of 2

#### BELLSOUTH TELECOMMUNICATIONS

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SEPTEMBER 1993

number of interviews as well as the days to be verified via the interview process, are determined by the Statistics and Econometrics group as a part of the Sample Selection process. If errors are detected on the WAL, the Technical Analyst corrects the information reflected on the WAL.

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COMPANY: 8ST TITLE: DATA COLLECTION 100/11/193 TECHNICAL ANALYST PROCEDURES PERIOD: TYE 12/31/93 DATE: DEC 9, 1993 AUDITOR: RKY WP NO. 48-3

Part of this section is an example of the work product of the process.

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чp	48-3/1-2/1	These are part of the source doucmentation backing up the WAL. This is a ticket.

- wp 48-3/1-2/2 These are part of the source doucmentation backing up the WAL. This is the DCWS.
- wp 48-3/1-3 These are the WAL that agree with the verification printout for two days for one ST.
- wp 48-3/1-3/1 These are part of the source doucmentation backing up the WAL. This is a ticket.
- wp 48-3/1-3/2 These are part of the source doucmentation backing up the WAL. This is the DCWS.

wp 48-3/2 and entire section is the same thing as above, but for another service technician.

Other Work products of the process,

- wp 48-4 Procedures for correcting MTR RF-152 and DCWS for Positive Time Reporting. This is not for Wassp.
- up 48-5 Example of the sample produced and used by the Technical Analyst to check off his reviews.

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AERIAI	L SERVICE WIRE (DROP/NI/PROT/GRND)											
* Insta	ll (New)											6
* Rear	range/Routine/Rouse											7
₹ Repa	ir/Replace											8
BURIE	D SERVICE WIRE (DROP/NI/PROT/GRND)											
* Insta	il (New)						-					9
• Rear	range/Routine/Reuse											10
+ Repa	ur/Replace		1			· · ·						11
BUILD	ING ENTRANCE CABLE		<u></u>									
• PXI	Rearrange/Routine/Reuse											12
* Repa	ir/Pair Change/Came Clear											13
INTRA	BUILDING NETWORK CABLE											
• PXJ/	Rearrange/Routine/Rouse		1									14
* Repa	ir/Pair Change/Came Clear		$\square$	1								15
DIGIT	L CENTRAL OFFICE										~	
(Inciude	s Channel Units & Testing)		]				]	]				32
* Plac	e/Change/Returninge/Routine		+		┼──	<u> </u>	┨	┨────				33
* Rep	air/Replace/Re-Insert/Came Clear							ţ				
(Include	ork terminating wire 16 Nî)									,		14
+ Inst	ull (New)		4		-	-						10
• PXJ	/Rearrange/Routine/Reuse			1		<b> </b>		<b> </b>	<u> </u>			17
+ Rep	air/Replace			<u> </u>							ļ	3 18
* Dise	connect/Removal				•							21

U-25-93 UV:U2 AM FROM BELLE GLADE 99	Pogs										
Steyen D. Kauzlick	1	DIST	UBUI	ED I	IOUR	S BY	лст	VITY			
10-24-93	1	2	3	4	5	6	7	8	9	TOT HRS	FRÇ
AL SUBSCRIBER PAIR GAIN		Rep	ort Ap Belo	propri w Foi	iate Al Each	ipha D Activ	esigna vity'	tion			
: (F) or Metallic (M)											
office (I), Feeder (F) or Distribution (D)											
ace (New - Service Order Authority)											
unge/Rearrange/Routine											
:pair/Replace/Re-insert/Came Clear											
LIC CPE - COCOT CO Facilitics Between Bidg Term. & NI)		,				,					
stailation	<u> </u>				ļ	ļ					79
.epair/Replace/Rearrange/Routine/Reuse					<b> </b>	ļ					80
Disconnect/Removal					<b> </b>	<u> </u>	ļ				81
Trouble Isolated to COCOT Equip. (Charges Apply)		]									56
IC INSIDE WIRE (Includes Materials)			,			<b>-</b>				· · · · · · · · · · · · · · · · · · ·	······································
install & Rearrange		 			<u> </u>	ļ	ļ	ļ			50
Repair - Warranty (Within 30 Days of New Install.)			<u> </u>	ļ	<u> </u>		ļ	ļ			51
Repair - Maintenance Plan					<u> </u>	<u> </u>					52
Repair - No Plan (Isolate/Set Trbl/T.D. Only)		<u> </u>									53
N-BASIC INSIDE WIRE (Includes Materials)		· · ·				,		····			
Install & Rearrange		Í							ļ		- 54.
Repair - Warranty (Within 1 Year of New Install.)						<u> </u>			<b> </b>		55
Repair/Isolate/CPE Trol (Charges Apply)											56
) ACCESS - TROUBLE INSIDE (Tested at NI)									,	j	· · · · · · · · ·
' Maintenance Plan (Basic)					<u> </u>	1	<b>_</b>		ļ	<b>[</b>	52
<sup>a</sup> No Mainténance Plan (Basic)					1_	-	<u> </u>		<u> </u>	<b></b>	53
• Non-Basic											56
O ACCESS, SL, SO, SR, CANCEL * Non-Combination Job, Report Reg/DeRsg Activity			-								
+ Combination (Reg/DeReg) INSTALLATION Job							1	1-		<b></b>	94
* To the Network Interface (Trouble Unknown)										1	94

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	ABCOE Revised: 09/01/93 FLORIDA Page 1 of 3
GENERAL INFORMATION	DESTRIBUTED HOURS BY ACTIVITY
Name Steven D. Kauzlick	7el No, CHID. or Misc. Activity
Date 0-25-93 LMOS ID # 304	- C & HOURS
SSN 266-71-8142/5	
Resp. Code NS330304	
Supv. Name Roy Goodson	8 8 8 8 8 8 J
Supv. Tel/Pager # (407) 936-7538	1 2 3 4 5 6 7 8 9 HRS FR
MISCELLANEOUS MEETINGS (Describe) e.g., Bond Drive, APP, Meeting w/Supv.	والنفاة والمسمول أسمعن كالكنز فالنقة فمحمد وسنبدر ومحمد منتكف متحدة كالتعر
	90
CLASSROOM TRAINING (Describe)	
QUALITY OF WORK LIFE (QWL)	
INION ACTIVITIES - COMPANY PAID	91
NO TROUBLE POIND - ACCESS CAMER	
IKAVEL & BREAKS	
OTHER (Describe)	╶┼┈┼╾┠╶┠╶┠╶┠╶┠╶╢┯┯╶┟╌╸
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	OFFICE USE ONLY
RTD	Jam 10
	Reviewed ULLS by Math
Verified by UCI 25 1993	Date 10-26-75 Time 10-61 7
I CONTICUL ADRIVE	Correction Required (Check One) Yes No
Date	***************************************
	Input by Date 113

FROM BELLE GLADE 996 8324 401-996

10-26-93 07:20 AM FROM BELLE GLADE 99 I&M -	96 8324 POTS FLO	4 RIDA	JFC	4100					P002	09/0 Page	1/93 2 of 3	
Name Steyen D. Kauzlick	1	DIST	RIBU?	red i	HOUR	es by	ACT	TVITT	2			
Date 0-25-93	1	2	3	4	5	б	7	8	9	TOT HRS	FRC	
AERIAL CABLE (Includes Air Pressure)												
* PXJ/Rearrange/Routine/Reuse											2	
* Repair/Pair Change/Came Clear											3	
BURIED CABLE (Includes Air Pressure)												
* PXJ/Rearrange/Routine/Reuse		50	5							,75	4	
* Repair/Pair Change/Came Clear	100		125	Y.25						3,50	5	
AERIAL SERVICE WIRE (DROP/NI/PROT/GRND)												
* Install (New)											6	
* Rearrange/Routine/Reuse		· · · · · ·									7	
* Repair/Replace	15									27,	8	
BURIED SERVICE WIRE (DROP/NI/PROT/GRND)											3	
* Install (New)											9	
* Rearrange/Routine/Reuse											10	
* Repair/Replace										, <sup>4</sup>	11	
BUILDING ENTRANCE CABLE									·			
* PXJ/Rearrange/Routine/Reuse											12	
* Repair/Pair Change/Came Clear											13	
INTRABUILDING NETWORK CABLE	-						·	<b>*</b>				
* PXJ/Rearrange/Routine/Reuse						ļ					14	
* Repair/Pair Change/Came Clear											15	
DIGITAL CENTRAL OFFICE												
* Place/Change/Rearrange/Routine											32	
* Repair/Replace/Re-insert/Came Clear										· ·	33	
NETWORK TERMINATING WIRE												
(Indiades NI)			12							50	16	
* Install (New)		Y_		1		1	1	1		50	17	
* PXJ/Rearrange/Routine/Reuse		1.20				+	+	+			18	
* Repair/Replace				 	+					l	21	
* Disconnect/Removal		j										

0-26-93 07:20	AM F	ROM	BELLE	GLADE	996	8324
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1&M • PC	DTS FLOE	JF IDA	C 41	00						09/0 Page	1/93 3 of 3
Name Steven D. Kauzlick		DISTI	IBUT	TED I	IOUR	S BY	ACT	IVITY		TOT	
Date 10-25-93	1	2	3	4	5	6	7	8	9	HRS	FRC
DIGITAL SUBSCRIBER PAIR GAIN (Includes Channel Units & Testing)	ŕ	Repo	ort Ap Beic	propri	iste Al Each	pha D 'Acti	esign vity'	ntion			
Fiber (F) or Metallic (M)											
Interoffice (I), Feeder (F) or Distribution (D)											
* Place (New - Service Order Authority)											1
* Change/Rearrange/Routine											
* Repair/Replace/Re-insert/Came Clear											
PUBLIC CPE - COCOT (TELCO Facilities Between Bldg Term. & NI)											
* Installation											79
* Repair/Replace/Rearrange/Routine/Rouse							ļ	<u> </u>			80
* Disconnect/Removal		ļ		ļ	L			<b> </b>			81
* Trouble Isolated to COCOT Equip. (Charges Apply)	·										56
BASIC INSIDE WIRE (Includes Materials)										 	
* Install & Rearrange		22						<u> </u>		2.25	50
* Repair - Warranty (Within 30 Days of New Install.)					₿Ş	<u> </u>	ļ		ļ	\ 	51
* Repair - Maintenance Plan	<b></b>	<u> </u>		<u> </u>	1.35	<u> </u>	<u> </u>	<u>_</u>		.25	52
* Repair - No Plan (lsolate/Set Trbl/T.D. Only)											53
NON-BASIC INSIDE WIRE (Includes Materials)			ļ	-1							
* Install & Rearrange		ļ	<u> </u>		<u> </u>	<u> </u>	4	<u> </u>	<u> </u>	<u> </u>	54
* Repair - Warranty (Within 1 Year of New Install.)				<u> </u>	<u>_</u>		-		ļ		55
* Repair/Isolate/CPE Trbl (Charges Apply)											56
NO ACCESS - TROUBLE INSIDE (Tested at NI)				-							
" Maintenance Plan (Basic)				-	+	+-	-				52
* No Maintenance Pian (Basic)	-	+			+	-		-		-	64
* Non-Basic		1									
ND ACCESS, SL, SO, SR, CANCEL * Non-Combination Job, Report Reg/Deres Astrvity				-				1			94
* Combination (Reg/DeReg) INSTALLATION Job		4-	-	+-		+-			+-		94
* To the Network Interface (Trouble Unknown)											

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Bryle Terhet 12/9/97 P004 10-26-93 07:20 AM FROM BELLE GLADE 996 8324 0671-C (5-00) E D Outside Plant Field Ticket 15 102693 -A214 12 OrF Non B hRd BP Color Pelr Too B Cable TTY 548 473 RILO AWINTHAN 4.50 F1 16 225 #2 23 54 0.0.6 Barles R. Z 1rbi 1.0 D Pre. Cird. 111 Tutal H 28 0 154 5R -TIM TDO . 0 80 54 HHOYON Color O SW0 400 DPN 460 RAN 1000 1300 NFE REA 1700 DI TO 2000 2300 2800 2800 LST-A LST-LET-I LST-S Replaced Defection /op 000 3200 0C8-1 Ste OCB-N C-N Time Imp. 1 See IDZLIMTE нп Total Jucompt 10-26-93 06:16AM Se Sono Conb FROM BELLE GLADE 996 8324 407-996-8324 FO1A93W 0000162 B

the party

PRTR MCMD DCWS MC 962 SUPV GRP EMP CODE: 304 DAA REO BY PAGE 3 ARG MON FULL DJI NARR CLOCK OSC 2 3 FST 0401 304 0837A 1:38 4 NARR: : OC 600 UNK/CHG BF1 TO 9X1336X286/PL A ONI COMM: 10-25-93 0600P REACH: 9927676 5 closed TN: 407 9967700 В APOSTOLIC; CHURCH OF JP FELD ACCESS: A 6 8-3 1316 W CANAL ST S, B SC: 1FB RTE: 407 226 1112 CS: BUS 7 LAST CLRD: 10-27-92 1.2 \*NMC \* TROUBLE: OOSN TRAN LXD WTH 9969320; ACN 9927676 VER: 6 SUMMARY: SPEECH CTTN: SCRN RSLT: NARR: (OVR) 1 RING LOUD BURST OF STATIC THEN CUTS OUT FAC CABLE RESTRICTED SERV 8 0591 0391 F1 F 1401 NW AVENUE D F2 1401NWAVD 0243 0000 O-W+Y-G FZ R 625 NW 14TH ST OE: AA07-0-13-31 WKG TTR ON 0151252 992 304 4079927333 DPO 0839A 304 CCA 1230P 3:51 0128P 0190 304 FST 4:49 NARR: :41 500 CP/3BPXJ/PL 3NTW@BLDG TRM/I3 VCA& RJ11C

PAGE 3 - MORE
MCMD DCWS	MC 962 DAA	SUPV G	RP EMP	CODE 304 )	PRTR	REQ BY
PAGE 4	ARG MON FULL D	JI NARR CLOC	K OSC			-
				$\sim$ $\times$ /		
} closed	TN: 407 9927	333	COMM: 10-2	5-93 1200F	REACH:	4079928600
4 OLAN; MII	LLS STUDIO	181	ACCESS: A	B 12	OOP AC: X	EST: 021
5 1075 S MA	IN ST, BL*G		SN: RPWJ93	8 T:	N SC: 1F	B IBI:
🖗 RM 150	•		AHN:	RO:- N	RTE: 407	226 3202
7 ACC RMK 0	900-1700; 9-5 CC	ON JOANNE DO	YLE/RMK 99	2-8600		
8 S&E: TN:3	MTN4079927333/*I:	B RJ11C/*I3	VCA/*I3 EE	N/*I3 1FB/	'TN 992-73	33, 4090, 80
9 60/NLC Y3	/*I3 TTB/TN 992-	7333, 4090,	8060/11 CF	EX4/TN 992	-7333/I1	CREX4/TN 99
IO FAC	CABLE PAIR BP (	COLOR	TE	RMINAL ADD	RESS	
F1	3 2484 59		F	802 S MAIN	I ST	[I]
12 F2	802SM 550 50		I.	1075-1 S M	LAIN ST	[I]
13 /F1 /PXJ	/F2 /PIW #/407992	24090 <b>4</b> IF1/CA	3/PR 2482	/BP 57/TEA	F 802 S	MAIN ST/RT
HIOE AA01	1-04-28 02 /PXJ,	/IF2/CA 802S	M/PR 523/E	SP 23/TEA 1	: 107 <b>5-1</b> S	MAIN ST /CL
15 ON 03	59851 992 304	4079929494	C	PO 0128P		
	304		C	CA 0345P	2:17	
	304		F	ST 0346P	2:18	0190
<sup>16</sup> NARR: :45	500 CP/BPXJ/CH H	3F2 802SMX62	3/INST NTW	LE INI		
17 closed	TN: 407 99294	94	COMM: 10-2	5-93 0500P	P REACH:	4079967707
18 (NON-PUB)	RITE; AID		ACCESS: A	1200P B	AC: W	EST: 009!
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PAGE 4 - MORE

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SUPV GRP E MCMD DCWS MC 962 DAA EMP CODE/ 304 PRTR REO BY 2 PAGE 5 ARG MON FULL DJI NARR CLOCK OSC 1 3 916 S MAIN ST, BL\*G SN: RH7W395 T: N SC: 1FB IBI: \*CHANGE\* RO: N RTE: 407 226 3202 AHN: 4 ACC RMK SEE PHRMACIST 9AM TO 9PM ... 5 S&E: DEL I1 VCA& DEL I1 RJ11C&& 6 FAC CABLE PAIR BP COLOR TERMINAL ADDRESS 7 3 2414 14 F1 F 802 S MAIN ST [I] 8 F2 802SM 621 21 R 916 S MAIN ST [I] 9 /F1 /PXJ /BCF BP 14 TEA F 802 S MAIN ST/F2 /PDW 10 IOE AA00-1-02-0 304 40799678073 ON 0002452 992 DPO 0346P 11 304 48 CCA 0515P 1:29 1:35 「ィース 304 FST 0521P 0401 12 NARR: : 0 600 UNK/CHGD B F2 TO 802SMX400X100 13 closed TN: 407 9967807 COMM: 10-26-93 0200P **REACH: 9967742** 14 SHARMA, SHEKHAR V M\* ACCESS: A В MELBA 15 1201 S MAIN ST SC: 1FB RTE:\*\* 407 226 3202 CS: BUS IG UNIT MDCL OFC LAST CLRD: 10-01-82

PAGE 5 - MORE

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PBC Q	POTS // FLOR	B DA	FC: 4	100 0	3				Re Pa	vised: 09/ ge 1 of 3	01/93
GENERAL INFORMATION	I	DISTR	IBUT	ED H	OUR	BY	ACTI	VITY			
Name Steven D. Kauzlick		Te	No.,	CKID	), or h	lisc. /	Activi	Ŋ			
Date (0-21-93 LMOS ID # 304				1						TOT	AL
SSN 266-71-8142/5			ষ্ঠ	R	5					WOR	KED:
Resp. Code NS330304 48	- 9	고쮜	4	21	Š				l	[ <b>P</b> .	70
Supv. Name Roy Goodson 3	5	สี	भ	ନ	F					TOT	
Supv. Tel/Pager # (407) 936-7538	1	2	3	4	5	6	7	8	9	HRS	FRC
MISCELLANEOUS MEETINGS (Describe)											
e.g., Bond Drive, APP, Meeting w/Supv.				i.							90
										<i>,</i>	_
CLASSROOM TRAINING (Describe)											1
											<b> </b>
QUALITY OF WORK LIFE (QWL)											92
UNION ACTIVITIES - COMPANY PAID	·										91
NO TROUBLE FOUND - ACCESS GAINED										Ч	95
TRAVEL & BREAKS	25	,75	,25	,25	125		[			136	99
OTHER (Describe)	1										
Travel time to Plu Supplies & Drop aff	1_		L				<b> </b>	 			
WASSP Log								<u> </u>			+
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Cont

10-51-33 11:30 VN LEON BETTE CIVDE 336 8354

4=30% EV/10/20 EEOM BEFFE CTVDE 330 8354 401-336-8354 10-51-33 03:51VM 6005 #14 6 30 5 mm

	FLO	RIDA			_					Pag	2 0[ 3
Name Steven D. Kauzlick		DIST	UBU	TED H	IOUR	s by	ACT	IVITT		TOT	
Date 10-26-93	1	2	3	4	5	6	7	8	9	HRS	FRC
AERIAL CABLE (Includes Air Pressure)											1
* PXJ/Rearrange/Routine/Reuse											2
* Repair/Pair Change/Came Clear						-					3
BURIED CABLE (Includes Air Pressure)						,					
PXJ/Rearrange/Routine/Reuse	<u> </u>										4
• Repait/Pair Change/Came Clear		150								1.501	5
AERIAL SERVICE WIRE (DROP/NI/PROT/GRND)											
* Install (New)										<u> </u>	6
* Rearrange/Routine/Reuse		Τ			.25				<u> </u>	.25 Y	7
" Repair/Replace		1.50								1.50	8
BURIED SERVICE WIRE (DROP/NI/PROT/GRND)							<i>.</i>				
* Install (New)								<u> </u>		<u> </u>	9
* Rearrange/Routine/Reuse				,25						.25	10
• Repair/Replace											• 11
BUILDING ENTRANCE CABLE				_		-					
+ PXJ/Rearrange/Routine/Reuse											12
* Repair/Pair Change/Came Clear											13
INTRABUILDING NETWORK CABLE											
* PXJ/Rearrange/Routina/Reuse							7			-	- 14
* Repair/Pair Change/Came Clear		1	1	1	T	1	1-	T	T		15
DIGITAL CENTRAL OFFICE				-		1					
(includes Channel Units & Testing)			}		]	]		}_	T		32
* Place/Change/Rearrange/Rousine		+	┾╌	+	╈	┼─	┿╾	┼─	+-		33
* Repair/Replace/Re-insert/Came Cloar										_	
NETWORK TERMINATING WIRE (Includes NI)			1		_	1	-				10
* Install (New)	-		+-	+-		-+		-+			17
* PXJ/Rearrange/Routine/Reuse			-	+-		+-		-+-			1 18
* Repair/Replace		1.7	5		+-	+			+	-1-12	21
Disconnect/Removal					_						
									ł	101 <b>893W</b> ( 2.6	57 57

10-51-33 11:30 WW LEOW BEFTE CIVDE 336 8354

FROM BELLE GLADE 996 8324 407-996-8324 10-27-93 09:274 MOR

I&M - PC	8-966 <b>)TS</b> FLOR	JF	≠zɛs C 41(	966 <b>)0</b>	N D E	(19 3	BELL	ROM	न् ्	09/ Page	%96 21/93 3 of 3
Name Steven D. Kauzlick		DIST	UBUT	ED H	OUR	S BY	ACT	IVITY	2	τοτ	
Date 10-26-93	1	2	3	4	5	6	7	8	9	HRS	FRC
DIGITAL SUBSCRIBER PAIR GAIN (Includes Channel Units & Testing)		Rep	ort Apj Belov	oropria w For	tte Al Each	pha D 'Acti	esigns vity'	tion			
Fiber (F) or Metallic (M)	M										
Interoffice (I), Feeder (F) or Distribution (D)	F						_				
* Place (New - Service Order Authority)											
* Change/Rearrange/Routine											
* Repair/Replace/Re-insert/Came Clear	1.00									1.00	31
PUBLIC CPE - COCOT (TELCO Facilitics Between Bldg Term. & NI)											
* Installation					-						79
* Repair/Replace/Rearrangs/Routine/Reuse											80
* Disconnect/Removal										<u> </u>	81
* Trouble Isolated to COCOT Equip. (Charges Apply)								1			56
BASIC INSIDE WIRE (Includes Materials)						-					
* install & Rearrange		.75						<u> </u>	<u> </u>	.75	50
* Repair - Warranty (Within 30 Days of New Install.)									<u> </u>		51
* Repair - Maintenance Plan	.50			25				<u> </u>	ļ	.75/	52
* Repair - No Pian (Isolate/Set Trbl/T.D. Only)									<u> </u>		53
NON-BASIC INSIDE WIRE (Includes Materials)									-		
* Install & Rearrange			<u> </u>		<b>_</b> _	<u> </u>	_	<u> </u>	4		54
* Repair - Warranty (Within 1 Year of New Install.)				╡ ┿╼╍╍╍			┥—		_		55
* Repair/Isolate/CPE Trbi (Charges Apply)			1.50			]			}	1.50	• 56
NO ACCESS - TROUBLE INSIDE (Tested at NI)		_,	_,				_		- <b>-</b>		
* Maintenance Plan (Basic)				<u> </u>		1_	4_		<u> </u>		52
* No Maintenance Plan (Basic)				<u> </u>			4			_	53
* Non-Basic											56
NO ACCESS, SL. SO, SR. CANCEL * Non-Combination Job, Report Reg/DeRes Activity								_			<b>\$4</b>
* Combination (Reg/DeReg) INSTALLATION Job	<b></b>	-	4-	+			-	+-			94
* To the Network Interface (Trouble Unknown)											
										FO1A93W	0000173 7 < \$

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I MCMD DOWS MC 962 DAA SUPV GRP EMP CODE 304 PRTR REQ BY 2 PAGE 7 ARG MON FULL DJI NARR CLOCK OSC 3 F1 9 0534 0134 1100 CENTER RD 4 F2 ŕ. 5 FZ 1100CR 0535 0000 6 OE: WKG TTR AA07-0-19-12 ON 0484564 994 304 4079968214 7 DPO 0523P g TTN: 0484564 TN: 407 9968214 COMM: 10-26-93 0700P REACH: 4079968214 9 DORSEY, Wa 48-3 ACCESS: A 0400P B 0700P MS SUB 10 151 NW 9TH AV, SOUTH CS: RES SC: IFR RTE: 407 226 3328 1-3 LAST CLRD: 04-15-91 // TROUBLE: PHYS OOSN LIVING RM JCK NWKG FALLING OUT OF WALL 12 VER: LU SUMMARY: LINE IN USE CTTN: 13 SCRN RSLT: NARR: DEF JK/IW CALL B4 GOING (OVR) 14 FAC CABLE CCS IWP 15 F1 PG501 0473 0548 F 700 PALM BEACH RD 16 F2 17 FZ 603 0225 0025 R 160 NW 10TH AV OE: ZR01-1-03-00 WKG TTR INC 994 304 0634P

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GENERAL INFORMATION	i	DIST	UBU	TED I	IOUR	S BY	ACT	IVITY	<u>,</u>		
Name Kevin Yates		Te	l No.	, CKI	D, or	Misc.	Activi	ily			
Date 10/10/93 LMOS ID # 285					C					TO HO	
SSN 038-38-2949/0	U		U	1	T	1				WOR	KED:
Resp. Code NS 330301	Ľ		T	$\searrow$	÷,	$\mathcal{N}$					<u>&gt;</u>
Supv. Name Jim Dunlop	0								·	TOT	
Supv. Tel/Pager # ( 40] 936-7587	1	2	3	4	5	6	7	8	9	HRS	FRC
MISCELLANEOUS MEETINGS (Describe)	•									-	
e.g., Bond Drive, APP, Meeting W/Supv.						]					90
CLASSROOM TRAINING (Describe)									P;		
QUALITY OF WORK LIFE (QWL)											92
UNION ACTIVITIES - COMPANY PAID											91
NO TROUBLE FOUND - ACCESS GAINED											95
TRAVEL & BREAKS											99
OTHER (Describe)											
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Verified by		Date		_Time	
Tec	hnical Analyst	Correction Requ	ired (Check One)	Yes No	·
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10-11-93 10:40AM FROM BST OPCC/IAM HE CO	,	CO 12	0597'	70844	•		. PO	02/0	03	FOLA	.93W 0000]
I&M -	POT: FLC	S . Rida	JFC	4100		8	Les	Å 9	y y	7 <sub>09/</sub> Pag	01/93 © 2 of 3
Name Keyin Yates		DIST	RIBU	TED I	IOUR	S BY	ACT	IVIT	Y		
Date 01.093	1	2	3	4	5	6	7	8	9	TOT HRS	FRC
AERIAL CABLE (Includes Air Pressure)											
* PXJ/Rearrange/Routine/Reuse											2
* Repair/Pair Change/Came Clear							i				3
BURIED CABLE (Includes Air Pressure)											ş
* PXJ/Rearrange/Routine/Reuse											4
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AERIAL SERVICE WIRE (DROP/NI/PROT/GRND)											
* Install (New)											6
* Rearrange/Routine/Reuse											7
* Repair/Replace											8
BURIED SERVICE WIRE (DROP/NL/PROT/GRND)		-				L		<u></u>			
* Install (New)											9
* Rearrange/Routine/Reuse											10
* Repair/Replace											11
BUILDING ENTRANCE CABLE						·			<u></u>		
* PXJ/Rearrange/Routine/Reuse											12
* Repair/Pair Change/Came Clear											13
INTRABUILDING NETWORK CABLE			! 					I			
* PXJ/Rearrange/Routine/Reute									·		14
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DIGITAL CENTRAL OFFICE			1			1	l	1	1		
(Includes Channel Units & Testing)				1		ſ		1			32
* Place/Change/Rearrange/Routine		-	<b>_</b>	<u> </u>						<b> </b>	
* Repair/Replace/Re-insert/Came Clear											33
NETWORK TERMINATING WIRE (Includes NI)					T	ł		T			16
* Install (New)				<b> </b>					+		
* PXJ/Rearrange/Routine/Reuse			<u> </u>							-	1/
* Repair/Replace				ļ				-			18
* Disconnect/Removal										1	21

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i&M - PC	)TS FLOR	JF 1DA	C 41	DO		J.	Una	L B	3 ' 	09/ Page	01/93 : 3 of 3	
Name Kevin Yates	I	DISTR	RBU	ED E	IOUR	S BY	ACT	VITY	,			
Date 10/10/93	<sub>(</sub> 1	2	3	4	5	6	7	8	9	TOT HRS	FRC	
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* Place (New - Service Order Authority)												
* Change/Rearrange/Routine												
* Repair/Replace/Re-insert/Came Clear												
PUBLIC CPE - COCOT (TELCO Facilities Between Bldg Term. & NI)												
* Installation											79	
* Repair/Replace/Rearrange/Routine/Reuse											80	
* Disconnect/Removal											81	
* Trouble Isolated to COCOT Equip. (Charges Apply)											56	
BASIC INSIDE WIRE (Includes Materials)												
* Install & Rearrange											50	
* Repair - Warranty (Within 30 Days of New Install.)									· ·		51	
* Repair - Maintenance Plan											52	
* Repair - No Plan (Isolate/Set Trbi/T.D. Only)											53	
NON-BASIC INSIDE WIRE (includes Materials)												
* Install & Rearrange											54	
* Repair - Warranty (Within 1 Year of New Install.)											55	
* Repair/Isolate/CPE Trbl (Charges Apply)											56	
NO ACCESS - TROUBLE INSIDE (Tented at NI)												
* Maintenance Plan (Basic)						<u> </u>	<b> </b>	<u> </u>	<u> </u>		52	ļ
* No Maintenance Plan (Basic)					<b> </b>	<u> </u>		ļ			53	<b> </b>
* Non-Basic		ļ									56	
NO ACCESS, SL, SO, SR, CANCEL * Non-Combination Job, Report Reg/DeReg Activity					1							
* Combination (Reg/DeReg) INSTALLATION Job											94	1
* To the Network interface (Trouble Unknown)											94	269

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/	GENERAL INFORMATION	ļ	DIST	RIBUT	FEDI	IOUR	S BY	ACT	THEY	,			
-	Name Kevin Yates		T	el No.	, CKI	D, or	Misc.	Aciivi	uy		•		
5	Date 10-11-93 LMOS ID 1 285 2019	5	6	-	る	0		S.	7		тот	AL	
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9	Supv. Name Jim Dunlop	5	68	ل في	39	83	83	ر ع	5	- 1			
	Supv. Tel/Pager # ( 40] 936-7587	1	2	3	4	5	6	7	8	9	TOT .HRS	FRC	
	MISCELLANEOUS MEETINGS (Describe) e.g., Bond Drive, APP, Meeting w/Supv.											······	
	Meg W/SUP						.9.5			_	:25	90	
	CLASSROOM TRAINING (Describe)												
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	QUALITY OF WORK LIFE (QWL)											92	
	UNION ACTIVITIES - COMPANY PAID				-							91	
	NO TROUBLE FOUND - ACCESS GAINED							- 5a 9				95	
	TRAVEL & BREAKS		-25	.50	)5		ମ୍ମ		•50		2,00	99	
	OTHER (Describe) 5534 WEATHER DY						•	<b>.5</b> 0			.50	94	
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• 1993 BellSouth

Input by

10-12-93 09:06AN FROM BST OPCC/1&M HH CO TO 12059770844 P002/003 FOLA93W 0000135

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I&M - POTS JFC 4100 FLORIDA											1/93 2 of 3
Name Kevin Yates		DIST	RIBUT	TED I	IOUR	S BY	ACT	IVITY	,		
Date 10/11/93	1	2	3	4	5	6	7	8	9	TOT HRS	FRC
AERIAL CABLE (Includes Air Pressure)											
• PXJ/Rearrange/Routine/Reuse				_							2
* Repair/Pair Change/Came Clear											3
BURIED CABLE (Includes Air Pressure)											
• PXI/Rearrange/Routine/Reuse		25			.50					.75	4
* Repair/Pair Change/Came Clear	1.50									1.50	5
AERIAL SERVICE WIRE (DROP/NI/PROT/GRND)				_							
* Install (New)											6
* Rearrange/Routine/Reuse						5	,			.50	7
* Repair/Replace										·	8.
BURIED SERVICE WIRE (DROP/NI/PROT/GRND)				<u></u>							
• Install (New)											9
• Rearrange/Routine/Reuse											10
* Repair/Replace											11
BUILDING ENTRANCE CABLE											
• PXJ/Rearrange/Routine/Reuse					_						12
* Repair/Pair Change/Came Clear						1					13
INTRABUILDING NRTWORK CABLE											
* PXJ/Rearrange/Routine/Reuse				-75						.75	14
* Repair/Pair Change/Came Clear											15
DIGITAL CENTRAL OFFICE											
(Includes Channel Units & Testing)											32
* Place/Change/Rearrange/Routine	<u> </u>										23
* Repair/Replace/Re-insert/Came Clear										ļ	
NETWORK TERMINATING WIRE (Includes NI)							• ··				16
* install (New)	-	125			.50					.75	
* PXJ/Rearrange/Routine/Reuse		ļ									• 1/
* Repair/Replace			,50		<u> </u>					.50	18
* Disconnect/Removal											21
										K	2

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# 10-12-93 09:06AM FROM BST OPCC/ILM HH CO TO 12059770844 P003/003 FOLA93W 0000136

I&M - POTS	JFC 4100	
FLOR	IDA	

09/01/93 Page 3 of 3

Name Kevin Yates		DIST	RIBU	TED I	IOUR	S BY	ACT	IVITY	1		
Date 10/11/93	1	2	3	4	5	6	7	8	9	tot HRS	FRC
DIGITAL SUBSCRIBER PAIR GAIN (Includes Channel Units & Testing)		Rep	on Ap Belo	propri	iate Al r Each	lpha D 'Actí	)esign: viry'	tion			
Fiber (F) or Metallic (M)											
Interoffice (I), Feeder (F) or Distribution (D)											
• Place (New - Service Order Authority)											
* Change/Rearrange/Routine											
* Repair/Replace/Re-insert/Came Clear											
PUBLIC CPE - COCOT (TELCO Facilities Between Bldg Term. & NI)							v.a.				
* Installation											79
* Repair/Replace/Rearrange/Routine/Reuse											80
* Disconnect/Removal											81
* Trouble Isolated to COCOT Equip. (Charges Apply)											56
BASIC INSIDE WIRE (Includes Materials)	: 								_		
* Install & Rearrange		ۍ.				2				.50	50
* Repair - Warranty (Within 30 Days of New Install.)											51
* Repair - Maintenance Plan							1.00			1:00	52
* Repair - No Plan (Isolate/Set Trbi/T.D. Only)	:		- 4 - 16 16 71				4 5.77				53
NON-BASIC INSIDE WIRE (Includes Materials)											
* Install & Rearrange											54
* Repair - Warranty (Within 1 Year of New Install.)											55
* Repair/Isolate/CPE Trbl (Charges Apply)								_			56
NO ACCESS - TROUBLE INSIDE (Tested at NI)				<u> </u>							
* Maintenance Plan (Basic)											52
* No Maintenance Plan (Basic)											53
* Non-Basic											56
NO ACCESS, SL, SO, SR, CANCEL Non-Combination Job, Report Reg/DeReg Activity											
* Combination (Reg/DeReg) INSTALLATION Job							 	 		$ \sim $	94
* To the Network Interface (Trouble Unknown)										$(\mathcal{S})$	94

		6571-C	
Ar .		(5-90)	
1		ISICE Plant Field Ticket	Outside Plant Field Ticket
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FOLA93W 0000140 273 10-13-93 01:40PM P001 #27

4076973628

FROM BST OPCC/ILM HE CO





SUPV GRP; P

10/11/93

12-11-93 04:33 PM FROM BellSouth WPB ASM

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CRAFT WORK SUMMARY EC: 285 YATES.K

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NARR: : Ø 300/DEF P/E/REP DEF NTW		10 112.04	W (01	W 3 0 W
PAGE 16 - MORE				

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. MC 962 DAA SUPV GRP P EMP CODE PRTR X559 RED BY RLM RCND DCWS PAGE ARG DJI NARR FULL CLOCK 3 COMM: 19-11-93 0600P REACH: 0000000 TN: 407 6891917 closed 483 CARVELS ICE CREAM BA ACCESS: A В RTE: 407 229 1108 2076 N HAVERHILL RD CSI BUS SC: 1FB LAST CLRD: 04-04-9 ALPHNS TLOA- 10P/NASAP 6 TROUBLE: NOT DOSY 7 VER: 41 SUMMARY: OPEN OUT: BALANCED CTTN: S SCRN RSLT: NARR: BAU 9 FAC CABLE MAC IWP NARR: BAL OPEN OUT // MAY BE CPE TOL 10 F1 17 0864 0014 4911 OKEECHOBEE BLVD 1) F2 /2 DE: 01017-001-40 WKG TTR 13 ON 0273361 686 285 4076871881 DPO 1125A AJR 1127A 285 Ø:Ø2 14 closed TN: 407 4971981 COMM: 10-11-93 0200P REACH 13 BNADEKER. WILLIAH E ACCESSI A В 16 234 GUAVA AV. H\*P\*B CS: RES SC: 1FR RTE: 407 229 3110 LAST CLRD: Ø1-Ø1-7 17 PAGE 17 - MORE 18 TROUBLE: CBC DOSN BSY FROM #4074870733 19 VER: 11 SUMMARY: CROSS TO WORKING PAIR CTTN: 20 SCRN RSLT: NARR: (DOS) X'D BATT B/S 60V 2/ FAC CABLE CCS IMP 22 F1 32 2219 0669 RESTRICTED SERV 22 F1 F 235 GUAVA AV 723 FZ 2356 1690 0002 R 8604 PAPAYA RD 25 QE: 01021-031-42 WKE TTR 26 ON ØØ13519 686 286 4976865352 DPD 1127A 285 CCA 1210P 0:43 FST 1214P #:47 285 Ø43Ø 27 NARRI :27 100/TELCO/REPL MISSING DLDG PKJ 28 closed TN: 4#7 6868332 COMM: 10-11-93 0600P REACH: #074789397 29 ELKIND, E 30 162 CANBRIDGE & CENT ACCESS: A RERD TO ANN 8 RTE 18487 229 1118 CS 🗞 RES SC: NFR \*NHC \* LAST CLRD: 01-22-9 PRMED RECONN 10/8 STL NHKG HEDICAL EMERG NEASP AC TROUBLE: NDT DOSY VER: SU SUMMARY: INTERCEPT CTTN: PAGE 18 - MORE

MC 962 DAA

SUPV GRP P EMP CODE

PRTR X559 RED BY RLM

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RCMD DCWS

FASE SCRN RSLT: NARR: (DVP) DPEN OUT 99% CABLE FAC 2 F1 22 1899 0499 SO DORCHESTER BLDG C 34 F2 FZ DORC 0043 0018 CAMBRIDGE G1 1 BLDG 01019-151-21 285 407 83261 10 DE: ON ØØ261Ø5 833 DPD 1215P 7 48-3 285 A00 Ø216P 2:03 295 FST #218P 2:#3 0190 8 NARR: :41 500/50 CP/PL 2 8PXJ/CAT พรม COMM: 10-11-93 1200F REACH: 3057921234 TNN 407 8326175 9 closed B 1200P ACI W EST: 01E Tr N SC: 1FB IBI: (A (NON-PUB) COMM: 800 ACCESS: A ,1 1515 S FLAGLER DR. W SN: R#65620 AHN: ROI V RTE: 407 223 4105 12 ACC RMK BOB WENTZEL/ZDIS /RMK 792-1234 13, 58E: TN: 2MTN4#78326178/1HTG A 832-6178. 6281/12 HTG/11 TTB(TN 832-6178/11 1FE 14 TN 832-6170 NMC /NLC 00/11 CREX4/TN 832-6170/81 HNR/RMKR (A)/11 TTB/TN 832-62 15 FAC CABLE PAIR BP COLOR TERMINAL ADDRESS 16 PAGE 19 - MORE 17 F1 26 270 270 1515F 399 399 1515-1.1 S FLAGLER DR c I ! 18 F2 1515-11.1 S FLAGLER DR CIL A /RMK /BCT 1815 S FLAGLER DR APT 1949/EXJ /F1 /PXJ /BCT BP 270 TEA 1815-1.1 S 2010E 004-005-011 AGLER DR/FZ /CDW 44078326281/1F1/CA 26/PR 199/BP 199/TEA 15 2 | ON \$487323 832 285 4978328317 DPO 0219P 265 CCA Ø365P 1:36 FST Ø355P 285 1:36 1210 22 NARR: 196 210/CUST ACT/DEF CPE/RTN AONI/H W/SUPERV 23 closed TN: 497 8328317 COMM: 10-11-93 0600P REACH: 000000000 24 PEREZ. IDEGARDE ACCESSE A B 25 916 PASED ANDORRA /ZA CS: RES SC: 1FR RTEL 407 223 6124 LAST CL.RD: 01-05-91 26 TROUBLE: NOT ODSY SNACN/ALPHS/BBI/NDS ASAP HAS ILL BABY/TAKES CARE 27 VER: 99 SUMMARY: ANALYSIS OF FULL RESULTS NEEDED SUB(1) CTTN: 24 SCRN RSLT: NARR: (OVR) NOT HELD IN OFC-DISP OUT PER SCC-24 FAC CABLE CCS IMP RESTRICTED S RESTRICTED SERV 30 F1 31 F2 13 0230 0280 R 901 SOUTHERN BLVD 32PAGE 20 - MORE ها ها ها مهمه وما الدار المتحالية من المحاليا الم . . 33 RCMD DCWS SUPV GRP P EMP CODE MC 962 DAA PRTR X559 REQ BY RLM 34 PAGE ARG DJI NARR FULL CLOCK 35 FZ 1305 0125 0000 BL-W+V-5 SOP 2194 31 DE: 001-224-001 HK9 PTR 286 487 6553765 487 ON 0345374 932 090 37 Ø355P 285 2-2 CCA Ø530P 1:35 285 FST Ø533P 1:38 \$8 NARR: 127 210/CUST ACT/REP DEF IN/HEATHER DLY 1210 39 closed TN: 407 6553765 COMM: 10-12-93 1200P REACH: 9649430 40 GONEZ. CARLOS ACCESS: A 8 MRS.VILLAR U, 1836 VANDEVENTER ST. h CSI RES SC: 1FR RTE: 487 223 6124 D LAST CLAD: 10-06-92 42JROUBLE: NOT OUSY CBC-BSY ACN: 9649430 3-ELDERLY PEOPLE SICK IN RES VER: 71 SUMMARY: ROH SUB(2) CTINE SCRN RSLT1 fiz3 ARRI COOSS SHT BRING TRPS FAC

ARG DJ1 NARR FULL CLOCK

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1 F1	13 0344 0019	F 1046 VAN DE VENTER ST
2 12		
3 OE :	882-286-883 WKG TTR	
4 PAGE	21 - MORE	
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y 2077	N MILITARY TR.	CSI BUS SC: 1FB RTE: 407 229 2115
10		LAST CLRD: 06-24-93
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	FROM BellSouth WPB ASM	

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Room 14JJ1 Southern Beil Tower 301 W. Bay Street Jacksonville, Florida 32202 1904) 350-3586

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T. C. Taylor Operations Manager-IMC

JANUARY 29, 1992 FILE CODE: 710.0400

# MIDNERANIDEM

TO: Operations Managers, Network Operations - Florida

FROM: T. C. Taylor, Operations Manager - South Operations ISM/IMC Implementation Support

SUBJECT: Plant Time Reporting Correction Procedures

BellSouth Practice 620-700-001SV "Time Reporting Requirements For Technicians" provides the necessary procedures to be followed to ensure compliance with the BellSouth Cost Allocation Manual (CAM), as well as Federal and State regulatory agencies.

At times, due to supervisory review of MIR time Sheets and associated documentation, it may be necessary to correct errors found.

The attached document "Time Reporting Correction Procedures" has been developed to assist field personnal in determining the appropriate corrective action.

Please distribute this document within your organization to all affected personnel. If additional information is desired, the following Implementation Staff managers may be contacted:

South Florida Steve Shaw 305/644-4994

S/E Florida De

Denise Maggert 305/492-3332

North Florida

Lorretta Zezulak 904/350-4118

Taylor

Attachment

cc: General Managers - Florida Doug Harkness David Ruckstt

SOUTH OPERATIONS NETWORK OPERATIONS I&M/IMC IMPLEMENTATION SUPPORT February 1992

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TIME REPORTING CORRECTION PROCEDURES

## 1. GENERAL

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- 1.1 On February 6, 1987, the Federal Communications Commission (FCC) released its Joint Cost Order (JCO) in FCC Docket No. 86-111, commonly referred to Part X. The order established the requirements that a regulated carrier MUST meet if it intends to use its resources (assets and employees) to provide deregulated products and services.
- 1.2 The FCC and State Commissions require the company to provide an audit trail of ALL TIME charged for EVERY WORK ASSIGNMENT performed by the technician. To comply with regulatory requirements and Part X accounting, an auditable record of employee time reported must be maintained.
- 1.3 Management personnel must properly review time reporting documents. In addition, sufficient documentation must be maintained to substantiate that an employee's labor hours and associated costs have been charged to the correct account code. -
- 1.4 Each field code reported must be substantiated by the close out narrative. Work activities must be detailed to the point that a post inspection can be made from the information on the DCWS or 6571 Work Ticket.
- 1.5 MTR Time Labor Report RF-152-I should be completed as outlined in BSP 620-700-001SV.
- 2. POSITIVE TIME REPORTING (PTR)
- 2.1 BellSouth Telecommunications, Inc. uses positive time reporting to classify costs to the appropriate Part 32 accounts, apportioned between regulated, and deregulated activities to pay PTR employees.
- 2.2 Technicians are plant occupational employees and are considered PTR, or positive time reporting employees. Technicians cost are a significant part of plant construction and maintenance expenditures. Since technicians perform both regulated and deregulated activities, accurate time reporting is essential for proper assignment of costs.
- 2.3 All plant occupational employees, whether performing a particular job function 100% of the time, or on a regulated/deregulated split, must prepare a time-labor report every day. Once entered into the Mechanized Time Reporting System (MTR), these reports are subject to a series of edits which validate the information. ANY ERRORS FOUND IN THE REPORTED DATA ARE IDENTIFIED AND AN ERROR 2.82 REPORT IS TRANSMITTED FOR CORRECTION AND RESUBNITTAL.

- 2.4 THE SUPERVISOR IS RESPONSIBLE FOR REVIEWING OUTPUT REPORTS TO ENSURE REASONABLENESS OF TIME REPORTED. Any errors detected as a result of reviewing documents must be corrected, and noted on the original forms
- 3. SUPPORT DOCUMENTATION

- 3.1 Technicians are required to provide narrative descriptions in such detail as to support the use of every account code charged on the MTR Form RF-152-1.
- 3.2 Support documentation for technicians dispatched out of LMOS-MAPPER is considered to be the DCWS (Full, Clock, Narr). All tasks not dispatched out of MAPPER require a completed 6571 work ticket. This ticket must be completed as outlined in BSP 620-700-001SV paragraph 6.1.
- 3.3 Support documentation for those technicians working on Designed Specials, Routine, Projects, Helping, Employee Reports etc., a completed 6571 work ticket is required as outlined in 3.2 above.
- 4. REVIEW PROCESS
- 4.1 Supervisors are required to review MTR documents (6571 Work Tickets, DCWS's, RF152-I, Form 9360) to ensure the accuracy of the time reported. Requirements for review are outline in BSP 620-700-001SV.
- 4.2 Verification, review and approval of MTR Form 9360-AL is mandatory. Evidence of this review must be apparent by means of (but not limited to) highlights, notes, or initials.
- 4.3 When a discrepancy or error is detected the reviewing manager is responsible for ensuring the appropriate corrective action is taken.

### 5. CORRECTING DOCUMENTS

5.1 When it is determined by review of the support documentation that the account code charged by the technician in MTR is incorrect the correction must be made on the time report in <u>"RED\_INK" or</u> a corrected time report must be prepared with "CORRECTED REPORT" written across the top of the RF-152-I. These changes must be made by the technician to maintain accurate time reporting, and ensure coverage of error regardless of its origin.

Note: Revisions are being made to Form RF-152-I to provide for a box to check if the information contained is a correction of a previous report.

- 5.2 The corrected information must be called or forwarded to the MTR input center.
- 5.3 MTR Form 9360-AL will reflect the changes made to correct the account code errors if received and input into the MTR system no later than the Monday following the close of the 283 plant payroll period.

- 5.4 If the correction to the time report is made after the Monday following the close of the plant payroll period Form 9360-AL will not reflect the corrections and will have to be noted by the appropriate supervisor in the field.
- 5.5 In those instance when the support documentation is not complete, or fails to support the account codes charged by the technician, the support documentation must be corrected.
- 5.6 Corrections to the DCWS can be made by creating a DATH/WATH entry into the LMOS system. The DATH must be printed, initialed by the technician and supervisor, then attached to the DCWS.

THE TECHNICIAN MUST BE CONSULTED TO OBTAIN THE CORRECT NARRATIVE INFORMATION BASED ON THE WORK PERFORMED TO SUPPORT THE ACCOUNT CODES CHARGED. IF THE NARRATIVE CANNOT SUPPORT THE CODES CHARGED THE MTR REPORT SHOULD BE CORRECTED AS INDICATED IN 5.1 ABOVE.

5.7 Corrections to 6571 work tickets should be made by the original technician after it is determined that the information on the ticket does not support the account codes charged in the MTR System.

IF THE TECHNICIAN ADVISES MANAGEMENT THAT THE NARRATIVE IS CORRECT, THE MTR TIME REPORT SHOULD BE CORRECTED AS OUTLINED IN 5.1 ABOVE.

5.8 The attached form (attachment A) should be used to initiate any changes to Disposition/Cause Codes or narrative entries when the technician determines a need to correct or modify these items prior to management review.

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EXAMPLE

FLORIDA	UNIVERSE SIZE =	2077
4100	SAMPLE SIZE $=$	30
June 1994	# OF WKS IN MONTH	5



RC NAME		SSN	WK	<b>WK BEGINS</b>	INTERVIEWS							
					S	Μ	Т	W	Т	F	S	
NS220404	HEADRICK, ROBERT P		1	june 1	I	1	1		· ·	1	l	1-7
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NS220601	STURGES, BRUCE C		1	june 1	ļ		ļ	ļ	•		ļ	
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NS220602	MATTSSON, RICHARD D		1	june 1	ļ	1	ļ		ļ	ļ	ļ	!/
NOOFOOO				• •	1	ļ		Į.	<b>!</b> •	ļ	ļ	!/
NS250804	ALEXANDER, JR		1	june 1	1	ļ		ļ	Į –	ļ	ļ	!/
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NS320206	WALKER,KATHYD		1	June 1			l	!	ļ	<b>I</b> <sup>-</sup>		A
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Example

FLORIDA	UNIVERSE SIZE =	2077
4100	SAMPLE SIZE $=$	30
June 1994	# OF WKS IN MONTH	5

RC	NAME	SSN	WK	WK BEGINS	INTERVIEWS						
NS210308	EICHHOLZ, RICHARD D		2	june 8	S I	M   *	T   *	W I	T I	F   *	S I
NS310202	CARANO, CLAUDIO F		2	june 8		*	   *			i *	
NS310508	FLOURNOY,C		2	june 8		ĺ	 	İ I		1	
NS330304	SMITH, RONNIE D		2	june 8				ł			 
NS330A0A	GUTHRIE, DOUGLAS L		2	june 8			 			 	
NS420705	BANKS, CALVIN L		2	june 8	ļ		*	*	*		
NS42070D	ESCARDA, JOSE M		2	june 8							

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Example

FLORIDA	UNIVERSE SIZE $=$	2077
4100	SAMPLE SIZE $=$	30
June 1994	# OF WKS IN MONTH	5

RC	NAME	SSN	WK	<b>WK BEGINS</b>	INTERVIEWS						
					S	Μ	Т	W	Т	F	S
NS210309	SCOTT JR, EARL R		3	june 15							
NS230301	BARBO,M S		3	june 15	İ						
NS320204	SAN MARTIN, ROGELI(		3	june 15							
NS320602	TANTON, MARY P		3	june 15							
NS320606	EDDIE, ROBERT B		3	june 15		*	*	*			
NS320609	FERRANTE, SANTE		3	june 15							
NS410201	MUMFORD, RONNIE A		3	june 15			*	*	*		
NS410604	PICHE, DENNIS G		3	june 15			*		*	*	
NS42070D	ARMAS, EFREN S		3	june 15							
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EXAMPLE

FLORIDA	UNIVERSE SIZE =	2077
4100	SAMPLE SIZE =	30
June 1994	# OF WKS IN MONTH	5



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ENAMICE	E	XA	ml	2	e.
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FLORIDA	UNIVERSE SIZE =	2077
4100	SAMPLE SIZE =	30
June 1994	# OF WKS IN MONTH	5

RC	NAME	SSN	WK	WK BEGINS			IN	TERVIEV	VS		
					S	M	Т	W	Т	F	S
NS220603	RILES JR,G W		5	june 29		[	1	ļ		ļ	ļ
					!			1		ļ	ļ
NS250305	STORMANT, TED W		<b>5</b>	june 29	ļ	ļ	ļ	ļ		ļ	
100000100			_	• ••		ļ			· ·		ļ
NS330A02	AMMER, DOUGLAS W		5	june 29	!	Į	-			~	
NG410610	TAMADOO CADLOS		E	iumo 20				1			
113410010	TAMANGO,CANLOS		J	jui 10 29		1				1	1
NS430102	MORALES ALEXANDER		5	iune 29	1	l f		1		 	1
110100102			Ŭ		Ì						ĺ
NS430105	CANCHON.MIGUEL		5	iune 29						Ì	İ
				,	1		•		•	•	•

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FLORIDA Profile - One month In example use 3 month total Profile for Extend

OCT 1993 I&M POTS (4100) NO. OF EMPLOYEES = 2077 NO. IN SAMPLE = 30

	FIELD CODE	TYPE	HOURS	*	PRECISION
2	22M	REG	66.25	5.39%	2.53%
3	22R	REG	57.50	4.68%	
4	45M	REG	230.00	18.71%	4.61%
5	45R	REG	141.75	11.53%	
6	248C	REG	17.25	1.40%	0.96%
7	248M	REG	73.75	6.00%	2.49%
8	248R	REG	56.25	4.58%	
9	548C	REG	47.50	3.86%	2.21%
10	548M	REG	81.00	6.59%	2.14%
11	548R	REG	62.00	5.04%	
12	12M	REG	21.75	1.77%	1.58%
13	12R	REG	3.50	0.28%	
14	52M	REG	1.50	0.12%	0.17%
16	68E	REG	19.50	1.59%	0.90%
17	68M	REG	78.75	6.41%	6.50%
18	68R	REG	63.25	5.15%	
29	257C	REG	0.50	0.04%	0.08%
30	257M	REG	1.50	0.12%	0.18%
31	257R	REG	1.00	0.08%	0.16%
33	377R	REG	0.25	0.02%	0.04%
34	F257M	REG	0.50	0.04%	0.08%
35	F257R	REG	0.75	0.06%	0.12%
39	F257C	REG	2.50	0.20%	0.28%
50	97BI	DREG	56.00	4.56%	1.86%
51	97BW	DREG	3.75	0.31%	0.34%
52	97BP	DREG	148.50	12.08%	2.66%
53	97BR	DREG	14.00	1.14%	0.52%
56	98ER	DREG	4.00	0.33%	0.37%
80	78M	REG	2.25	0.18%	0.38%
90	5532	COMM	33.75	2.75%	0.97%
94	5536	COMM	33.75	2.75%	1.13%
95	553A	COMM	47.75	3.89%	1.32%
	TOTAL	REG	646.50	52,60%	5.49%
	TOTAL	DREG	226.25	18.41%	3.21%
	TOTAL.	COMM	115.25	9.38%	2.27%
	TOTAL	TRVL	241.00	19.61%	2.70%
TOTAL	SAMPLE HOURS	5	1229.00		
ESTIM	ATED TOTAL HO	DURS	340351.18		

ESTIMATED MONTHLY SAMPLE REQ'D 52

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2 OCT4100 FLORIDA

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3 2639	41584			í				
4		1003	1004	1005	1006	1007	1008	1009
<sup>3</sup> , 2	22M	0.	0.	ο.	0.25	0.	0.	ο.
6 3	22R	0.	0.	2.75	0.	1.25	2.00	1.00
7 4	45M	0.	0.	0.	0.25	0.	0.	ο.
s⁄ 5	45R	0.	0.	0.	0.	1.75	1.50	0.75
96	248C	0.	0.	ο.	2.00	1.00	0.	0.
10 8	248R	Ο.	0.	0.50	1.00	1.00	3.00	2.25
<i> 1</i> 9	548C	Ο.	0.	0.	Ο.	1.00	Ο.	0.
10 ير	548M	0.	0.	0.	1.00	0.	0.	0.
13 11	548R	0.	0.	0.50	0.	0.	0.	0.
50 بَرَ	97BI	0.	0.	0.	Ο.	0.25	0.	0.
15 51	97BW	0.	0.	0.	1.50	0.	0.	0.
16 52	97BP	0.	0.	4.50	2.25	0.	0.50	2.75
17 95	553A	0.	0.	0.	0.	0.	1.25	0.
18 99	TRVL	0.	0.	1.25	1.00	2.50	2.50	2.50
/% <b>2618</b>	80904							
		1003	1004	1005	1006	1007	1008	1009
4	45M	0.	3.00	1.00	1.50	2.75	Ο.	ο.
5	45R	0.	0.	0.	0.	0.	0.	3.00
6	248C	0.	0.	0.	0.	2.50	0.	0.
9	548C	0.	2.00	3.00	3.50	1.50	0.	0.
10	548M	0.	1.00	0.	1.00	Ο.	0.	0.
11	548R	Ο.	0.	1.75	0.	0.	0.	0.
33	377R	0.	0.	0.	0.	0.	0.	0.25
50	97BI	0.	0.	0.	0.	0.25	0.	0.
52	97BP	0.	0.	1.75	1.50	0.	0.	2.25
94	5536	0.	0.	0.	0.75	1.00	0.	0.
95	553A	0.	3.00	0.	0.	0.	0.	0.50
99	TRVL	0.	1.00	0.50	0.75	0.50	0.	2.00

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/ OCT4100 FLORIDA

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4165	41535			i				
3		1003	1004	1005	1006	1007	1008	1009
4 5 6 7 8 9 10 11 5 52 9 9 11 12 52 99 15 99	22R 45M 45R 248M 248R 548C 548M 548R 97BI 97BP 5532 TRVL	0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.	1.00 0. 2.50 0. 0.75 0. 0.50 1.00 2.25	$\begin{array}{c} 0.75\\ 0.50\\ 0.\\ 0.\\ 1.00\\ 0.75\\ 0.\\ 2.00\\ 1.25\\ 1.50\\ 0.\\ 1.25\end{array}$	0.75 1.25 0.50 2.50 0. 0. 0. 0. 0. 2.50 0.75 0. 2.00	0.50 0.50 0. 1.50 0. 0. 0. 4.25 0. 1.25	1.00 0. 0.50 0. 2.25 0. 0. 0.75 2.00 1.50	0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.
16 0454	08621							
		1003	0000	0000	0000	0000	0000	0000

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3			1003	1004	1005	1006	1007	1008	1009
ÿ	2	22M	0.	1.25	3.00	0.	0.	0.	0.
5	3	22R	0.	0.	0.	0.	1.00	0.	0.50
6	4	45M	0.	Ο.	0.	0.75	0.	0.	ο.
7	5	45R	0.	0.	Ο.	0.	0.75	3.25	0.50
8	6	248C	0.	0.	Ο.	Ο.	0.	0.	1.75
9	8	248R	0.	0.	ο.	Ο.	ο.	Ο.	1.75
io	16	68E	0.	ο.	Ο.	0.	1.00	0.	0.
11	17	68M	Ο.	0.	Ο.	0.	0.	1.50	1.50
12	18	68R	0.	0.50	0.	Ο.	0.	Ο.	0.
13	50	97BI	Ο.	0.	0.50	0.	0.	0.	0.50
14	51	97BW	Ο.	0.	Ο.	0.	0.	1.00	0.
15	52	97BP	Ο.	2.00	0.75	3.50	1.00	0.	0.
16	53	97BR	Ο.	1.75	ο.	0.	ο.	0.	Ο.
17 9	90	5532	0.	ο.	0.50	1.50	0.50	0.50	Ο.
18 9	94	5536	ο.	1.00	0.50	1.00	1.25	0.	0.75
19 !	95	553A	0.	0.	1.00	1.00	2.50	0.75	0.
20	99	TRVL	0.	1.50	0.75	1.25	0.75	1.50	0.75

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		1003	1004	1005	1006	1007	1008	1009
18	68R	0.	0.	0.	0.	0.	0.	1.25
52	97BP	Ο.	ο.	0.	Ο.	ο.	0.	0.50
80	78M	0.	0.	0.	Ο.	0.	0.	2.25
94	5536	0.	ο.	ο.	Ο.	0.	0.	3.50
95	553A	Ο.	0.	0.	ο.	Ο.	0.	0.50
99	TRVL	0.	0.	0.	0.	0.	0.	1.00

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3			1003	1004	1005	1006	1007	1008	1009 <sup>·</sup>
ÿ	3	22R	0.	Ó.	ο.	0.	0.	0.	0.50
5	4	45M	Ο.	0.	Ο.	Ο.	0.	Ο.	1.00
6	5	45R	Ο.	0.	0.	0.	0.	0.	1.75
7	7	248M	0.	ο.	ο.	0.	0.	Ο.	0.50
`۲	11	548R	0.	0.	0.	0.	0.	ο.	1.25
9	18	68R	0.	7.50	8.50	8.50	9.50	7.50	ο.
io	50	97BI	0.	0.	0.	Ο.	0.	ο.	0.50
1/	94	5536	0.	0.	0.	0.	0.	0.	0.75
12	99	TRVL	0.	0.50	0.50	0.50	0.50	0.50	1.75

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		1003	1004	1005	1006	1007	1008	1009
2	22M	Ο.	2.00	ο.	0.	0.	0.	ο.
4	45M	0.	0.	4.50	5.50	1.50	1.00	4.00
5	45R	0.	0.	0.	· 0.	0.	0.	2.50
11	548R	0.	0.	0.	Ο.	0.	4.00	0.
12	12M	0.	1.75	0.	0.	4.25	0.	0.
16	68E	0.	0.	0.75	1.00	0.	0.	1.50
17	68M	0.	0.	0.	0.	0.50	0.	0.
18	68R	0.	1.00	0.	0.	0.	Ο.	0.
50	97BI	0.	0.	1.00	0.	0.	0.	0.25
52	97BP	0.	1.00	0.	0.	0.	0.	0.
53	97BR	0.	ο.	0.	0.	1.00	0.	ο.
90	5532	0.	0.	2.00	0.	0.	0.	ο.
94	5536	0.	0.	0.	0.25	1.25	0.	0.
95	553A	0.	1.25	0.	0.	0.	3.50	0.
99	TRVL	0.	2.50	0.75	2.25	2.00	1.50	1.25

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		1003	1004	1005	1006	1007	1008	1009
3	22R	0.	<b>o</b> .	1.75	0.	1.50	1.25	1.00
4	45M	0.	Ο.	0.	0.	0.	1.75	0.
5	45R	0.	3.50	4.00	2.50	4.00	0.	0.75
8	248R	0.	0.	0.	0.	1.25	2.00	0.50
9	548C	0.	0.	0.	0.	1.50	0.	0.
11	548R	0.	2.25	0.50	1.75	Ο.	0.	0.75
13	12R	0.	0.	0.	0.	0.	1.25	0.
18	68R	0.	0.	0.	1.50	0.	0.	0.
50	97BI	0.	Ο.	0.	0.	1.25	0.	0.
52	97BP	0.	1.00	1.50	2.75	0.50	2.50	2.75
94	5536	0.	0.25	0.50	0.	Ο.	0.	0.50
95	553A	0.	0.	0.	0.	0.	0.	0.75
99	TRVL	0.	1.50	1.25	1.50	1.50	1.75	1.00

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ر		1010	1011	1012	1013	1014	1015	1016
<sup>4</sup> 4	45M	0.	0.50	1.00	0.50	1.00	0.	ο.
5 5	45R	0.	2.00	0.	0.	Ο.	0.	Ο.
66	248C	0.	ο.	0.	0.	4.00	0.	ο.
7 16	68E	0.	0.	1.00	0.50	2.00	0.	Ο.
¥ 17	68M	0.	0.25	0.	0.	0.	0.	0.
9 18	68R	0.	0.	0.	0.50	Ο.	Ο.	ο.
10 30	257M	0.	0.	0.	0.50	0.	0.	Ο.
// 50	97BI	0.	0.25	1.00	1.25	0.	1.00	0.
12 52	97BP	0.	1.75	1.00	0.	0.	1.50	ο.
13 90	5532	0.	0.50	1.00	0.50	0.75	0.50	Ο.
19 94	5536	0.	0.	0.	0.75	0.	0.	0.
15° <b>95</b>	553A	0.	0.	0.50	0.75	Ο.	2.00	0.
16 99	TRVL	0.	2.75	2.50	2.75	0.25	3.00	0.
174387	00403							
		1010	1011	1012	1013	1014	1015	1016
4	45 <b>M</b>	0.	0.	0.50	1.00	1.00	0.	0.75
5	45R	0.	4.50	1.75	0.	Ο.	2.25	0.
9	548C	0.	0.	0.	2.00	2.25	0.	0.
10	548M	0.	1.00	1.25	0.50	0.	0.	0.
11	548R	0.	0.75	1.50	1.50	0.	1.00	1.50
29	257C	Ο.	0.	0.	0.50	0.	0.	0.
50	97BI	0.	0.	<b>Ò.</b>	0.	1.75	Ο.	0.
52	97BP	0.	0.	1.25	0.	0.	1.50	2.25
53	97BR	0.	0.	0.	0.	0.	0.	0.75
90	5532	0.	0.	0.	1.00	0.	1.50	0.
94	5536	0.	0.	0.	0.	0.	0.75	0.
95	553A	0.	0.	0.	0.	1.50	0.	0.
99	TRVL	0.	1.75	1.75	1.50	1.50	1.00	2.75

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3		1010	1011	1012	1013	1014	1015	1016
4 3 5 5 6 18 7 52 8 90 9 95 70 99	22R 45R 68R 97BP 5532 553A TRVL	0. 0. 0. 0. 0. 0.	1.00 2.00 0. 2.50 0. 0. 2.50	1.00 3.50 0.25 2.25 0. 0. 1.00	0. 6.00 0. 0. 0.75 1.25	0. 0. 5.25 1.50 0. 1.25	0. 0. 1.50 1.50 0. 1.00	0. 0. 0. 0. 0. 0.
/' 2114	60685							
		1010	1011	1012	1013	1014	1015	1016
4 5 8 10 11 17 18 50 52 53	45M 45R 248R 548M 548R 68M 68R 97BI 97BP 97BR	0. 3.75 0.50 0. 0. 0. 25 0. 0.75 0.	0.25 0. 0.25 2.50 0. 0. 0.25 0.75 0.	0. 1.75 0. 0. 0. 0. 0. 50 2.00 0.	0.50 0.50 0.50 0.50 0. 1.25 0.25 0.25 0.25	0. 2.25 0. 0. 0. 0. 0. 0. 0. 1.00	0.50 2.25 0. 0. 1.75 0. 0. 0.50 0.	0. 0.50 0. 1.25 0. 0. 0. 2.00
90 94 95 99	5532 5536 553A TRVL	0. 0. 0. 2.75	1.50 0. 0. 2.50	0. 0. 0.75 3.00	0. 0. 1.00 3.25	1.00 1.00 0. 2.75	0. 0. 0. 3.00	0. 0. 0.75 3.50

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3		1010	1011	1012	1013	1014	1015	1016
2 4 5 4 5 4 5 8 9 11 2 4 5 8 9 11 2 4 5 8 9 11 2 4 5 8 9 11 2 5 3 5 5 3 4 5 8 9 11 2 5 5 5 9 11 2 5 5 5 5 5 5 5 5 5 5 5 5 5	22R 45M 45R 248R 548C 548R 12M 52M 97BI 97BI 97BP 97BR 5532 5536 553A TRVL	0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0	0. 0. 1.00 2.00 0. 1.25 0. 0. 0. 1.25 0. 0. 0. 50 0. 0. 50 0. 75 1.25	0. 0. 1.75 0.50 0. 0.50 0.75 0. 2.25 0. 0.25 0. 0.75 1.25	0. 0.50 0. 1.50 1.50 0. 0. 1.50 1.75 0. 0. 0. 0. 1.25	0. 1.00 0.50 2.50 0. 0. 0. 0. 0. 1.50 0. 1.25 0. 1.25	0. 0.75 2.50 0. 1.00 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 75 1.50	1.50 0. 2.50 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.
y 0383	82949							
		1010	1011	1012	1013	1014	1015	1016
4	45M	0.	0.75	2.25	0.	1.00	4.75	0.
5	45R	0.	1.50	Ο.	2.75	0.	0.	1.00
6	248C	0.	0.	2.00	0.	0.	0.	0.
7	248M	0.	0.50	0.	0.	0.	0.	0.
8	248R	0.	0.	0.75	1.00	3.00	0.	0.
9	548C	0.	0.	0.	0.	0.	1.50	0.
11	548R	0.	0.	0.	0.	0.	0.	3.25
14	52M	0.	0.75	0.	0.	0.	0.	0.
16	68E	ο.	0.75	0.50	0.	0.	0.	0.
18	68R	0.	0.50	0.	2.00	0.	0.	0.
50	97BI	0.	0.50	1.50	0.	0.	1.00	0.
52	97BP	0.	1.00	0.	0.50	4.00	0.	1.00
53	97BR	0.	0.	0.	0.	0.	0.	1.00
90	5532	0.	0.25 🗸	0.50	0.	0.	0.	0.
94	5536	0.	1.00	0.75	0.	0.	0.75	0.50
95	553A	0.	0.	0.	1.00	0.	0.	0.
99	TRVL	0.	2.00	1.75	2.75	1.50	1.50	1.25
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2	2915	04628							
3			1010	1011	1012	1013	1014	1015	1016
4	3	22R	0.	0.	0.50	0.	ο.	0.	0.
5	4	45M	ο.	2.00	1.50	0.	0.	0.	0.
6	5	45R	2.75	0.	0.	0.	0.	0.	0.
7	7	248M	0.	0.	2.50	ο.	0.	Ο.	0.
×.	10	548M	Ο.	1.50	ο.	ο.	0.	Ο.	0.
9	11	548R	1.00	0.	0.	ο.	ο.	0.	0.
ío	12	12M	0.	0.	ο.	7.00	0.	0.	0.
11	50	97BI	0.	1.00	0.	ο.	0.	Ο.	0.
12	52	97BP	0.75	0.	1.50	0.75	0.	Ο.	0.
13	90	5532	0.	2.00	0.	ο.	0.	Ο.	0.
14	94	5536	0.50	0.50	0.	0.	0.	0.	0.
13	99	TRVL	3.00	1.00	2.50	2.25	0.	0.	0.

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		1010	1011	1012	1013	1014	1015	1016
3	22R	0.	0.75	0.	1.00	0.75	0.	0.
4	45M	0.	0.	0.	1.50	0.25	0.	1.50
5	45R	0.	3.50	1.25	0.	0.	0.	0.
7	248M	0.	0.50	0.	0.	0.	Ο.	0.
8	248R	ο.	1.75	0.	0.	0.	Ο.	0.
10	548M	0.	Ο.	0.	0.	0.	Ο.	2.00
12	12M	0.	0.	0.25	0.50	0.25	1.50	0.50
13	12R	Ο.	0.	ΰ.	0.50	Ο.	1.00	0.
18	68R	0.	Ο.	0.	Ο.	1.75	1.50	0.
50	97BI	0.	0.75	0.	0.	2.25	0.75	Ο.
52	97BP	0.	0.	3.00	2.75	1.25	0.	Ο.
53	97BR	ο.	0.	0.	ο.	0.	ο.	0.25
90	5532	0.	0.	0.	Ο.	Ο.	1.00	0.
94	5536	0.	0.	2.25	Ο.	0.25	0.75	1.25
95	553A	0.	0.	Ο.	0.75	Ο.	1.00	0.
99	TRVL	0.	0.75	1.25	1.00	1.25	1.00	2.50

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3		1017	1018	1019	1020	1021	1022	1023
4 4	45M	ο.	0.	0.25	0.	1.50	0.50	0.
55	45R	ο.	ο.	0.	Ο.	0.	0.	1.25
67	248M	0.	Ο.	1.25	· 0.	0.	Ο.	0.
7 8	248R	ο.	0.	1.25	0.	Ο.	1.25	0.
8'9	548C	Ο.	Ο.	Ο.	0.	3.50	ο.	ο.
9 11	548R	0.	0.	0.	0.	0.	ο.	2.50
io 12	12M	0.	0.	Ο.	0.	0.50	ο.	0.
1/ 17	68M	0.	0.	0.50	0.	0.	0.25	0.
12 50	97BI	0.	0.75	0.	0.	0.	ο.	0.
13 52	97BP	0.	3.00	0.50	0.	ο.	3.75	1.25
14 90	5532	0.	Ο.	0.	0.	0.75	0.	0.
15 94	5536	0.	0.75	Ο.	0.	Ο.	0.	0.
1, 95	553A	0.	0.75	1.00	0.	0.	ο.	Ο.
17 99	TRVL	0.	2.75	3.25	0.	1.75	2.25	3.00
ig <b>457</b> 7	07568							
		1017	1018	1019	1020	1021	1022	1023
4	45M	0.	1.00	1.25	2.00	1.00	1.00	0.
5	45R	ο.	0.	2.75	0.	0.	1.00	0.
8	248R	0.	4.50	0.	0.75	0.	0.	0.
9	548C	0.	0.75	2.50	0.	4.00	1.00	0.
10	548M	0.	0.75	0.	0.	0.	0.	0.
16	68E	0.	0.	0.	2.50	0.	0.	0.
18	68R	Ο.	0.	0.	0.50	2.00	0.	0.
39	F257C	Ο.	0.	0.	0.	0.50	0.75	0.
50	97BI	0.	0.	0.50	0.25	0.75	1.50	0.
52	97BP	d.	Ο.	0.	0.	0.	1.25	0.
95	553A	0.	0.50	0.	0.	0.	0.	0.
00	TTD17T.	0	1 00	1 00	2.25	0.75	1.50	0.

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3			1017	0000	0000	0000	0000	0000	0000
4	2618	03461							
			1017	1018	1019	1020	1021	1022	1023
	4	45M	0.	0.50	0.	0.25	0.50	0.	0.
	5	45R	0.	0.	2.25	0.	Ο.	0.75	0.
	9	548C	0.	0.	ο.	0.	0.	0.25	0.
	10	548M	Ο.	0.	ο.	0.25	0.	0.	0.
	11	548R	Ο.	1.75	1.50	Ο.	Ο.	2.00	0.
	16	68E	0.	1.00	0.	0.50	Ο.	ο.	Ο.
	34	F257M	0.	ο.	0.	0.50	0.	Ο.	0.
	50	97BI	0.	0.25	0.	0.75	0.	0.25	0.
	51	97BW	0.	0.	1.25	Ο.	Ο.	0.	0.
	52	97BP	ο.	2.00	0.50	ο.	3.25	2.50	0.
	53	97BR	0.	0.	0.75	0.50	0.	Ο.	0.
	90	5532	ο.	0.	0.75	0.50	0.	ο.	0.
	94	5536	0.	0.50	0.	Ο.	0.50	ο.	0.
	95	553A	0.	0.	0.25	1.75	0.75	0.	0.
	99	TRVL	0.	2.00	1.75	3.00	3.00	2.25	0.

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3		1017	1018	1019	1020	1021	1022	1023
4 3	22R	0.	0.75	0.	0.	0.	0.	ο.
< 4	45M	0.	0.50	1.50	ο.	0.	1.75	0.50
ί 5	45R	0.	0.75	0.50	1.75	2.50	0.50	0.75
7 8	248R	0.	ο.	ο.	0.	2.25	Ο.	0.
√ 9	548C	0.	ο.	1.00	1.00	ο.	ο.	Ο.
° 10	548M	0.	1.00	ο.	0.	0.	Ο.	0.
10 11	548R	0.	ο.	ο.	1.00	1.50	0.	1.25
11 16	68E	0.	0.50	0.	0.	0.	2.25	0.
. 17	68M	0.	0.50	ο.	0.	0.	ο.	0.
18	68R	0.	0.	0.50	0.25	0.	ο.	0.50
	F257R	0.	0.	0.	0.	0.	ο.	0.75
, 39	F257C	0.	0.25	0.	0.	0.	1.00	0.
15	97BI	0.	0.25	0.	0.75	0.	ο.	0.25
/7 52	97BP	0.	0.	2.25	1.00	0.50	1.00	1.75
14 53	97BR	0.	0.	0.25	0.	0.50	0.	0.
.956	98ER	0.	0.75	0.	0.	0.	ο.	0.
λ <b>σ90</b>	5532	0.	0.	0.	0.50	ο.	0.	Ο.
2/94	5536	0.	0.	Ο.	ο.	0.	0.	0.25
2295	553A	0.	1.25	0.50	1.00	0.75	1.50	0.50
2399	TRVL	0.	2.00	2.50	2.25	1.50	1.50	2.50
242651	39991							
							1000	1000
		1017	1018	1019	1020	1021	1022	1023
4	45M	ο.	2.00	2.25	0.50	0.50	0.	0.
9	548C	ο.	1.50	0.	0.	1.00	0.	0.
12	12M	0.	0.	ο.	0.50	0.	0.	0.
18	68R	0.	0.	0.	2.00	0.	0.	0.
50	97BI	0.	2.00	2.00	1.50	1.50	0.	0.
52	97BP	0.	0.	0.	1.00	0.	0.	0.
53	97BR	0.	0.	0.	0.50	0.	0.	0.
95	553A	0.	1.50	1.00	0.	0.	0.	0.
99	TRVL	0.	2.00	2.75	2.00	1.00	0.	0.

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		1017	1018	1019	1020	1021	1022	1023
3	22R	0.	1.25	0.	0.50	ο.	0.	1.75
4	45M	0.	1.50	1.00	1.50	2.50	1.00	0.50
5	45R	0.	0.	0.50	Ο.	0.	0.50	0.75
9	548C	0.	1.50	3.00	ο.	ο.	0.50	Ο.
10	548M	0.	0.50	0.	Ο.	0.	Ο.	0.
11	548R	0.	0.	ο.	1.00	3.00	1.50	Ο.
16	68E	0.	Ο.	0.50	0.50	0.25	Ο.	0.
17	68M	0.	0.	Ο.	1.00	Ο.	0.50	2.25
50	97BI	0.	0.	1.75	Ο.	1.25	0.50	1.25
52	97BP	0.	0.50	1.50	2.25	0.75	1.00	Ο.
53	97BR	0.	ο.	0.	0.50	0.	Ο.	ο.
90	5532	0.	2.25	0.	ο.	ο.	0.50	0.
94	5536	0.	0.	0.	0.	ο.	1.00	0.
95	553A	0.	0.	0.	Ο.	ο.	0.	0.50
99	TRVL	0.	1.50	0.75	1.75	1.25	2.00	1.50

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3	54	6	6	8	7	8	9	2	

4		1024	1025	1026	1027	1028	1029	1030
5 :	3 22R	0.	1.75	1.75	0.	0.	1.25	ο.
6	45M	0.	0.75	0.50	0.	0.50	Ο.	0.
7 9	5 45R	0.	1.75	0.	0.	1.00	0.	0.
8 0	5 248C	0.	Ο.	0.	0.	1.00	0.	Ο.
9	7 248M	0.	0.25	0.75	1.25	2.50	0.	0.
10 8	3 248R	Ο.	Ο.	0.	0.	1.00	1.00	Ο.
1/ g	548C	0.	1.00	1.50	1.00	0.	0.	0.
12 11	L 548R	0.	0.	0.	0.	0.	2.50	0.
/3 17	7 68M	0.	0.	1.75	0.	0.	0.	0.
14 18	68R	0.	0.	0.50	0.	0.	0.	Ο.
16 30	) 257M	0.	0.	0.	1.00	Ο.	0.	0.
i 50	) 97BI	0.	1.00	1.25	0.	0.50	0.	0.
14 52	2 97BP	0.	1.00	0.50	3.00	0.50	1.25	0.
18 53	97BR	1.50	0.	0.	0.	0.	0.75	0.
1990	) 5532	Ο.	0.	ο.	0.	0.50	0.	0.
2094	5536	0.	ο.	Ο.	0.	Ο.	0.25	0.
: /99	) TRVL	0.	0.50	0.50	1.75	1.50	1.00	0.

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ر		1024	1025	1026	1027	1028	1029	1030
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	22M 22R 45R 248R 548C 68E 68M 68R 97BI 97BP 97BP 97BR 5532 5536 553A TRVL	0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0	2.25 1.25 0. 1.25 0. 0.50 0. 0. 2.75 0. 0. 0. 0. 0. 1.00	0. 0.50 0. 0. 0.75 0. 1.50 1.25 1.00 0.50 0. 1.25 2.25	0. 1.25 0. 2.00 0. 0. 1.50 2.75 0. 1.00 0. 1.75	0. 0. 2.75 0. 0. 0. 75 0.75 1.00 0. 0. 0. 0. 0. 0. 5 3.00	0. 2.00 0. 1.75 0. 0. 1.25 0. 3.00 0. 0. 0. 0. 0. 0. 1.00	0. 0.25 0.50 2.25 0. 0. 0. 0. 0. 0. 0. 2.25 0. 1.75
パ2660 3 5 90	49786 22R 45R 5532	1024 0. 0. 0.	1025 0. 5.50 1.50	1026 1.50 5.00 0.	1027 4.50 2.50 0.	1028 0. 6.50 0.	1029 0. 7.00 0.	1030 0. 0. 0.
99	TRVL	0.	1.00	1.50	1.00	1.50	1.00	0.

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/ OCT4	100	FLORIDA						
2 2667	18142	1024	1025	1026	1027	1028	1029	1030
3 4 5 6 7 8 8 10 16 7 8 8 10 16 7 18 13 15 5 5 6 7 8 8 11 16 7 18 13 15 5 5 6 7 8 8 11 16 7 18 16 17 16 16 17 16 16 17 18 16 17 18 19 15 16 16 17 18 19 15 16 16 17 18 17 18 19 15 16 17 18 19 15 16 17 18 18 17 18 17 18 19 55 3 50 9 9 9 9 9 9 18 18 18 17 18 18 18 17 18 18 17 18 18 18 17 18 18 17 18 18 17 18 18 19 18 18 19 18 19 18 18 19 18 19 18 19 18 18 18 18 18 18 18 18 18 18	45M 45R 248C 248M 248R 548R 68E 68M 68R 257R 97BI 97BP 97BP 97BR 98ER 5532 TRVL	0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0	0.75 3.50 0. 0.75 0. 0.50 0.50 0.50 0. 2.25 0. 2.25 0. 0. 0. 0. 0. 1.50	0. 1.50 0.25 1.50 0.25 0. 0. 0. 0. 0. 75 1.00 0.75 0.	0. 1.00 2.00 0. 0.25 2.75 0.75 0.75 0. 0. 0. 0. 0. 0.50 1.50	0. 0. 0. 0.50 0. 6.25 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 1.00	0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0	0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0
20 <b>2659</b>	21262	1024	1025	1026	1027	1028	1029	1030
3 4 5	22R 45M 45R	1.75 0. 0.	2.25 1.50 0.	1.25 0. 0.75	4.00 0. 0.	2.25 0. 2.50	1.25 0. 1.50	0. 1.00 1.75

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6	248C	0.	0.	0.	Ο.	0.	0.	1.00
. 7	248M	0.75	0.25	0.25	0.75	0.75	Ο.	0.
8	248R	Ο.	0.	0.75	0.	0.	Ο.	0.
10	548 <u>M</u>	0.50	0.25	1.00	0.	0.50	1.50	0.
11	548R	1.00	0.	0.	0.	0.	0.	0.
12	12M	0.	0.75	0.	0.	0.	0.	0.
13	12R	0.	0.75	<b>0.</b> (	0.	0.	0.	Ο.
16	68E	0.	0.	0.	0.	0.	0.	0.75
17	68M	0.	0.75	0.	Ο.	0.	0.	0.
18	68R	0.75	Q.	0.	Ο.	Ο.	1.00	Ο.
50	97BI	Ο.	0.	0.	Ο.	0.	0.	1.25
52	97BP	0.50	1.25	Ο.	1.50	0.75	1.75	0.
56	98ER	Ο.	ο.	1.75	0.	0.	0.	Ο.
90	5532	Ο.	0.	0.	0.	0.75	0.	Ο.
94	5536	0.75	0.	0.50	0.50	0.	0.50	0.50
95	553A	0.	0.	1.50	1.00	0.	0.	0.
99	TRVL	2.00	2.25	2.25	2.25	2.50	2.50	1.75

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2	263941584	261880904	416541535	045408621	090361911	158304082
3	264134167	264271214	266712276	128423222	438700403	175388804
4	211460685	261709853	+038382949	291504628	266271138	266218243
5	457707568	261861671	261803461	265256769	265139991	266196467
6	546687892	266179233	267771491	,266049786	+266718142	265921262

ENTER SSN ENTER -1 TO DO ALL SSN'S IN THIS FILE ENTER 1 TO LIST SSN'S IN THIS FILE ENTER 0 (OR 'ENTER') TO TERMINATE PROGRAM RUN

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Per D&T, the data derived from the ogs are input into Wassp data base processor. INPUT program provides for imput and storage of data by work goup.

INGUT program develops time distribution ratios and other data anleys is for each work group. Wassp distributes the increments of hours reported to each FRC and calculated 2 of time assigned to each FRC.

According to my conversations with Rick King, Steve Venderberg, and Steve Shaw, the profile for each month is a total of 3 months samples(not average). The profile is applied two months later. For example, October profile consists of Aug, Sept and Oct data. This profile is applied to December.

wp no 49-1 is the profile for the month of October, 1993.

No further work done on Data Analysis.

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41						Γ		1												1	 1	T		2	10
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				1													 	 	4-+	1	 	-	-		

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OCT 1993 - 3 MONTH AGGREGATE

I&M POTS (4100)

NO. OF EMPLOYEES = 2067 "

NO. IN SAMPLE = 90

	FIELD CODE	TYPE	HOURS	*	PRECISION
2		REG	126.00	3.59%	1.19%
3	22R	REG	109.25	3.118	
4	45M	REG	641.25	18.28%	2.63%
5	45R	REG	367.00	10.46%	•
6	248C	REG	54.00	1.54%	0.59%
7	248M	REG	192.25	5.48%	1.40%
8	248R	REG	121.00	3.45%	
9	548C	REG	158.75	4.52%	1.69%
10	548M	REG	275.50	7.85%	1.66%
11	548R	REG	182.50	5.20%	
12	12M	REG	60.25	1.72%	1.06%
13	12R	REG	13.00	0.37%	
14	52M	REG	11.50	0.33%	0.33%
15	52R	REG	1.25	0.04%	
16	68E	REG	55.75	1.59%	0.75%
17	68M	REG	167.75	4.78%	2.698 ((1-1)
18	68R	REG	95.50	2.72%	
21	68Y	REG	7.50	0.21%	0.42%
29	257C	REG	5.75	0.16%	0.20%
30	257M	REG	1.50	0.04%	0.06%
31	257R	REG	8.00	0.23%	0.18%
32	377M	REG	1.50	0.04%	0.06%
33	377R	REG	2.50	0.07%	0.09%
34	F257M	REG	4.00	0.11%	0.13%
35	F257R	REG	3.25	0.09%	0.12%
39,	F257C	REG	7.00	0.20%	0.20%
50	97BI	DREG	180.75	5.15%	1.05%
51	97BW	DREG	15.75	0.45%	0.30%
52	97BP	DREG	380.25	10.84%	1.86%
53	97BR	DREG	24.00	0.68%	0.34%
54	98EI	DREG	6.75	0.19%	0.18%
55 -	98EW	DREG	2.75	0.08%	0.16%
56	98ER	DREG	12.50	0.36%	0.29%
80	78M	REG	2.25	0.06%	0.13%
90	5532	COMM	79.25	2.26%	0.58%
91	5533	COMM	29.00	0.83%	1.66%
93	5535	COMM	14.25	0.41%	0.47%
94	5536	COMM	94.25	2.69%	0.72%
95	553A	COMM	147.00	4.198	0.85%

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OCT 1993 - 3 MONTH AGGREGATE

I&M POTS (4100)

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NO. OF EMPLOYEES = 2067

NO. IN SAMPLE = 90

	FIELD CODE	TYPE	HOURS	*	PRECISION
	TOTAL	REG	1786.25	50.91%	3.01%
	TOTAL	DREG	622.75	17.75%	1.91%
	TOTAL	COMM	363.75	10.37%	1.97%
	TOTAL	TRVL	736.00	20.98%	1.86%
TOTAL	SAMPLE HOURS	5	3508.75		
ESTIM	ATED TOTAL HO	OURS	****		
ESTIM	ATED MONTHLY	SAMPLE	REQ'D 30		

OCT 1993 - 3 MONTH AGGREGATE

I&M SPECIAL SERVICES (4110)

NO. OF EMPLOYEES = 396

NO. IN SAMPLE = 90

	FIELD CODE	TYPE	HOURS	ક	PRECISION
2	22M	REG	80.00	2.73%	1.62%
3	22R	REG	40.00	1.36%	•
4	45M	REG	327.75	11.17%	2.43%
5	45R	REG	122.50	4.18%	
6	248C	REG	24.50	0.84%	0.63%
7	248M	REG	28.00	0.95%	0.56%
8	248R	REG	17.50	0.60%	
9	548C	REG	13.50	0.46%	0.40%
10	548M	REG	18.75	0.64%	0.40%
11	548R	REG	12.00	0.41%	
12	12M	REG	195.00	6.65%	2.40%
13	12R	REG	60.25	2.05%	
14	52M	REG	49.50	1.69%	0.97%
15	52R	REG	9.00	0.31%	
16	68E	REG	225.25	7.68%	2.02%
17	68M	REG	233.25	7.95%	2.41%
18	68R	REG	107.50	3.66%	
21	68Y	REG	11.00	0.37%	0.36%
29	257C	REG	22.25	0.76%	0.61%
30	257M	REG	25.50	0.87%	0.92%
31	257R	REG	19.00	0.65%	0.65%
34	F257M	REG	15.50	0.53%	0.47%
35	F257R	REG	13.75	0.47%	0.47%
39•	F257C	REG	19.00	0.65%	0.65%
40	378C	REG	83.50	2.85%	1.44%
41	378M	REG	38.75	1.32%	1.01%
42	358NC	DREG	0.50	0.02%	0.03%
44	558C	REG	73.00	2.49%	0.92%
45	558M	REG	123.50	4.21%	1.46%
46	418M	REG	72.00	2.45%	1.74%
47	378X	REG	4.25	0.14%	0.15%
48	558X	REG	16.75	0.57%	0.38%
52	97BP	DREG	7.25	0.25%	0.31%
54	98EI	DREG	125.25	4.27%	1.53%
55	98EW	DREG	18.50	0.63%	0.50%
56	98ER	DREG	50.25	1.71%	0.71%
90	5532	COMM	133.50	4.55%	2.69%
92	5534	COMM	27.75	0.95%	1.65%
93	5535	COMM	5.00	0.17%	0.30%
94	5536	COMM	65.00	2.22*	0.81%
95	553A	COMM	90.00	3.07%	1.08%
98	510C	COMM	82.00	2.79%	3.428
115	F758C	REG	1.50	0.05%	0.10%
193	540M	REG	30.00	1.02%	2.03*

315

OCT 1993 - 3 MONTH AGGREGATE I&M SPECIAL SERVICES (4110) NO. OF EMPLOYEES = 396 NO. IN SAMPLE = 90

FIEL	D CODE	TYPE	HOUT	RS	8	PRECISION
Т	OTAL	REG	1764.7	75	60.15%	4.57%
Т	OTAL	DREG	201.7	75	6.88%	1.91%
Т	OTAL	COMM	403.2	25	13.74%	4.41%
Т	OTAL	TRVL	564.2	25	19.23%	1.97%
TOTAL SAMP	LE HOURS		2934.0	00		
ESTIMATED	TOTAL HO	URS	167824.8	37		
ESTIMATED	MONTHLY	SAMPLE	REQ'D 4	43		

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OCT 1993 - 3 MONTH AGGREGATE

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I&M PUBLIC COMMUNICATIONS (4180)

NO. OF EMPLOYEES = 107

NO. IN SAMPLE = 197

	FIELD CODE	TYPE	HOURS	\$	PRECISION
2	22M	REG	53.75	0.77%	0.25%
3	22R	REG	40.50	0.58%	
4	45M	REG	167.25	2.39%	0.59%
5	45R	REG	116.00	1.66%	
6	248C	REG	30.00	0.43%	0.22%
7	248M	REG	60.00	0.86%	0.30%
8	248R	REG	46.00	0.66%	
9	548C	REG	14.25	0.20%	0.10%
10	548M	REG	87.25	1.25%	0.45%
11	548R	REG	78.50	1.12%	
12	12M	REG	5.25	0.07%	0.09%
13	12R	REG	2.75	0.04%	
14	52M	REG	5.75	0.08%	0.09%
15	52R	REG	3.75	0.05%	
16	68E	REG	1.50	0.02%	0.04%
22	89E	REG	3.75	0.05%	0.06%
23	89M	REG	0.75	0.01%	0.02%
24	89Y	REG	1.25	0.02%	0.03%
25	189E	REG	84.50	1.21%	0.51%
26	189M	REG	91.50	1.31%	0.38%
27	189Y	REG	12.00	0.17%	0.09%
31.	257R	REG	6.50	0.09%	0.07%
32	377M	REG	7.00	0.10%	0.18%
34	F257M	REG	3.25	0.05%	0.06%
35	F257R	REG	2.25	0.03%	0.04%
39	F257C	REG	5.50	0.08%	0.09%
54	98EI	DREG	1.25	0.02%	0.03%
56	98ER	DREG	2.50	0.04%	0.04%
57	968NC	DREG	57.50	0.82%	0.96%
58	968NM	DREG	31.50	0.45%	0.44%
59	968NX	DREG	2.00	0.03%	0.05%
71	88M	REG	49.25	0.70%	0.64%
72	88Y	REG	1.25	0.02%	0.02%
73	188E	REG	241.50	3.45%	0.98%
74	188M	REG	2136.25	30.49%	2.14%
75	188Y	REG	168.75	2.41%	1.07%
76	288E	REG	38.00	0.54%	0.36%
77	288M	REG	129.00	1.84%	0.79%
78	288Y	REG	2.00	0.038	0.04%
82	988E	RÉG	1.00	0.01%	0.028
83	988M	REG	11.00	0.16%	0.10%
84	988Y	REG	1.00	0.01%	0.02%

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85	989E	REG	2.00	0.03%	0.04%
86	989M	REG	3.00	0.04%	0.05%
87	989Y	REG	1.00	0.01%	0.03%
88	2600 .	REG	436.25	6.23%	1.98%
			FLORIDA		

OCT 1993 - 3 MONTH AGGREGATE I&M PUBLIC COMMUNICATIONS (4180) NO. OF EMPLOYEES = 107 NO. IN SAMPLE = 197

	FIELD CODE	TYPE	HOURS	*	PRECISION
90	5532	COMM	226.50	3.23%	0.95%
91	5533	COMM	2.00	0.03%	0.04%
93	5535	COMM	14.50	0.21%	0.25%
94	5536	COMM	85.00	1.21%	0.33%
95	553A	COMM	312.25	4.46%	0.74%
98	510C	COMM	184.75	2.64%	0.90%
	TOTAL	REG	3864,50	55.15%	2.09%
	TOTAL	DREG	94.75	1.35%	1.08%
	TOTAL	COMM	825.00	11.77%	1.53%
	TOTAL	TRVL	2223.25	31.73%	1.46%
TOTAI	L SAMPLE HOURS	5	7007.50		
ESTI	MATED TOTAL HO	OURS	49479.37		
ESTI	MATED MONTHLY	SAMPLE	REO'D 37		

OCT 1993 - 3 MONTH AGGREGATE

I&M CORPORATE COMMUNICATIONS (4120)

NO. OF EMPLOYEES = 66

NO. IN SAMPLE = 209

2       22M       REG       9.25       0.13%       0.         3       22R       REG       7.25       0.10%       0.         4       45M       REG       25.25       0.34%       0.         5       45R       REG       14.50       0.20%       0.         7       248M       REG       2.00       0.03%       0.         8       248R       REG       2.00       0.03%       0.         12       12M       REG       50.00       0.68%       0.         13       12R       REG       27.50       0.37%       0.         14       52M       REG       29.75       0.40%       0.         15       52R       REG       71.00       0.96%       0.         16       68E       REG       71.00       0.96%       0.         17       68M       REG       58.75       0.79%       0.         18       68R       REG       6.50       0.09%       0.         30       257M       REG       1.50       0.02%       0.         36       758M       REG       135.00       1.83%       0.         <	STON
3       22R       REG       7.25       0.10%         4       45M       REG       25.25       0.34%       0.         5       45R       REG       14.50       0.20%       0.         7       248M       REG       2.00       0.03%       0.         8       248R       REG       2.00       0.03%       0.         12       12M       REG       50.00       0.68%       0.         13       12R       REG       27.50       0.37%       0.         14       52M       REG       29.75       0.40%       0.         15       52R       REG       71.00       0.96%       0.         16       68E       REG       71.00       0.96%       0.         17       68M       REG       6.75       0.09%       0.         18       68R       REG       1.50       0.02%       0.         30       257M       REG       1.50       0.02%       0.         36       758M       REG       135.00       1.83%       0.         41       378M       REG       32.50       0.47%       0.         44	15%
4       45M       REG       25.25       0.34%       0.         5       45R       REG       14.50       0.20%       0.         7       248M       REG       2.00       0.03%       0.         8       248R       REG       2.00       0.03%       0.         12       12M       REG       50.00       0.68%       0.         13       12R       REG       27.50       0.37%       0.         14       52M       REG       29.75       0.40%       0.         15       52R       REG       29.75       0.40%       0.         16       68E       REG       71.00       0.96%       0.         17       68M       REG       6.75       0.09%       0.         18       68R       REG       6.50       0.09%       0.         30       257M       REG       1.50       0.02%       0.         36       758M       REG       0.25       0.00%       0.         40       378C       REG       135.00       1.83%       0.         41       378M       REG       34.50       0.47%       0.	
5       45R       REG       14.50       0.20%         7       248M       REG       2.00       0.03%       0.         8       248R       REG       2.00       0.03%       0.         12       12M       REG       50.00       0.68%       0.         13       12R       REG       27.50       0.37%       0.         14       52M       REG       29.75       0.40%       0.         15       52R       REG       29.75       0.40%       0.         16       68E       REG       58.75       0.79%       0.         17       68M       REG       58.75       0.09%       0.         18       68R       REG       6.50       0.09%       0.         30       257M       REG       1.50       0.02%       0.         36       758M       REG       0.25       0.00%       0.         40       378C       REG       135.00       1.83%       0.         41       378M       REG       34.50       0.47%       0.         44       558K       REG       35.00       0.47%       0.         45'	24%
7       248M       REG       2.00       0.03%       0.         8       248R       REG       2.00       0.03%       1         12       12M       REG       50.00       0.68%       0.         13       12R       REG       27.50       0.37%       14         52M       REG       29.75       0.40%       0.         15       52R       REG       29.75       0.40%       0.         16       68E       REG       71.00       0.96%       0.         17       68M       REG       58.75       0.79%       0.         18       68R       REG       6.75       0.09%       0.         30       257M       REG       1.50       0.02%       0.         36       758M       REG       0.25       0.00%       0.         40       378C       REG       135.00       1.83%       0.         41       378M       REG       34.50       0.47%       0.         44       558C       REG       82.25       1.11%       0.         45'       558M       REG       35.00       0.47%       0.	
8       248R       REG       2.00       0.03%         12       12M       REG       50.00       0.68%       0.         13       12R       REG       27.50       0.37%       0.         14       52M       REG       55.75       0.75%       0.         15       52R       REG       29.75       0.40%       0.         16       68E       REG       71.00       0.96%       0.         17       68M       REG       58.75       0.79%       0.         18       68R       REG       6.75       0.09%       0.         30       257M       REG       1.50       0.02%       0.         36       758M       REG       0.25       0.00%       0.         40       378C       REG       135.00       1.83%       0.         41       378M       REG       34.50       0.47%       0.         44       558C       REG       82.25       1.11%       0.         45'       558M       REG       35.00       0.47%       0.	05%
12       12M       REG       50.00       0.68%       0.         13       12R       REG       27.50       0.37%       0.         14       52M       REG       55.75       0.75%       0.         15       52R       REG       29.75       0.40%       0.         16       68E       REG       71.00       0.96%       0.         17       68M       REG       58.75       0.79%       0.         18       68R       REG       6.75       0.09%       0.         30       257M       REG       1.50       0.02%       0.         36       758M       REG       0.25       0.00%       0.         40       378C       REG       135.00       1.83%       0.         41       378M       REG       34.50       0.47%       0.         44       558C       REG       82.25       1.11%       0.         45'       558M       REG       35.00       0.47%       0.	
13       12R       REG       27.50       0.37%         14       52M       REG       55.75       0.75%       0.         15       52R       REG       29.75       0.40%       0.         16       68E       REG       71.00       0.96%       0.         17       68M       REG       58.75       0.79%       0.         18       68R       REG       6.75       0.09%       0.         18       68R       REG       6.50       0.09%       0.         30       257M       REG       1.50       0.02%       0.         36       758M       REG       0.25       0.00%       0.         40       378C       REG       135.00       1.83%       0.         41       378M       REG       34.50       0.47%       0.         44       558C       REG       82.25       1.11%       0.         45'       558M       REG       35.00       0.47%       0.	328
14       52M       REG       55.75       0.75%       0.         15       52R       REG       29.75       0.40%       0.         16       68E       REG       71.00       0.96%       0.         17       68M       REG       58.75       0.79%       0.         18       68R       REG       6.75       0.09%       0.         21       68Y       REG       6.50       0.09%       0.         30       257M       REG       1.50       0.02%       0.         36       758M       REG       0.25       0.00%       0.         40       378C       REG       135.00       1.83%       0.         41       378M       REG       34.50       0.47%       0.         44       558C       REG       82.25       1.11%       0.         45'       558M       REG       35.00       0.47%       0.	
1552RREG29.750.40%1668EREG71.000.96%0.1768MREG58.750.79%0.1868RREG6.750.09%0.2168YREG6.500.09%0.30257MREG1.500.02%0.36758MREG0.250.00%0.40378CREG135.001.83%0.41378MREG34.500.47%0.44558CREG82.251.11%0.45'558MREG35.000.47%0.	498
16       68E       REG       71.00       0.96%       0.         17       68M       REG       58.75       0.79%       0.         18       68R       REG       6.75       0.09%       0.         21       68Y       REG       6.50       0.09%       0.         30       257M       REG       1.50       0.02%       0.         36       758M       REG       0.25       0.00%       0.         40       378C       REG       135.00       1.83%       0.         41       378M       REG       34.50       0.47%       0.         44       558C       REG       82.25       1.11%       0.         45'       558M       REG       35.00       0.47%       0.	
17       68M       REG       58.75       0.79%       0.         18       68R       REG       6.75       0.09%       0.         21       68Y       REG       6.50       0.09%       0.         30       257M       REG       1.50       0.02%       0.         36       758M       REG       0.25       0.00%       0.         40       378C       REG       135.00       1.83%       0.         41       378M       REG       34.50       0.47%       0.         44       558C       REG       82.25       1.11%       0.         45'       558M       REG       35.00       0.47%       0.	51%
18       68R       REG       6.75       0.09%         21       68Y       REG       6.50       0.09%       0.         30       257M       REG       1.50       0.02%       0.         36       758M       REG       0.25       0.00%       0.         40       378C       REG       135.00       1.83%       0.         41       378M       REG       34.50       0.47%       0.         44       558C       REG       82.25       1.11%       0.         45'       558M       REG       35.00       0.47%       0.	B98
2168YREG6.500.09%0.30257MREG1.500.02%0.36758MREG0.250.00%0.40378CREG135.001.83%0.41378MREG34.500.47%0.44558CREG82.251.11%0.45'558MREG35.000.47%0.	
30       257M       REG       1.50       0.02%       0.         36       758M       REG       0.25       0.00%       0.         40       378C       REG       135.00       1.83%       0.         41       378M       REG       34.50       0.47%       0.         44       558C       REG       82.25       1.11%       0.         45'       558M       REG       35.00       0.47%       0.	15%
36       758M       REG       0.25       0.00%       0.         40       378C       REG       135.00       1.83%       0.         41       378M       REG       34.50       0.47%       0.         44       558C       REG       82.25       1.11%       0.         45'       558M       REG       35.00       0.47%       0.	04%
40       378C       REG       135.00       1.83%       0.         41       378M       REG       34.50       0.47%       0.         44       558C       REG       82.25       1.11%       0.         45'       558M       REG       35.00       0.47%       0.         48       558X       PEC       3.25       0.04%       0	01%
41       378M       REG       34.50       0.47%       0.         44       558C       REG       82.25       1.11%       0.         45'       558M       REG       35.00       0.47%       0.         48       558X       PEG       3.25       0.04%       0	96%
44         558C         REG         82.25         1.11%         0.           45'         558M         REG         35.00         0.47%         0.           48         558Y         PEC         3.25         0.04%         0.	28%
45' 558M REG 35.00 0.47% 0.	76%
	248
	06%
60 728C REG 111.00 1.50% 0.	938
61 658M REG 1007.25 13.63% 2.	20%
62 658C REG 404.75 5.48% 1.	888
63 628C REG 90.25 1.22% 1.	01%
64 730C REG 1035.75 14.01% 2.	70%
65 630M REG 2443.75 33.06% 3.	48%
66 728X REG 9.50 0.13% 0.	09%
67 658X REG 70.00 0.95% 0.	65%
68 628X REG 5.00 0.07% 0.	10%
69 730X REG 124.00 1.68% 0.	57%
90 5532 COMM 87.00 1.18% 0.	34%
91 5533 COMM 1.50 0.02% 0.	04%
92 5534 COMM 46.00 0.62% 0.	62*
93 5535 COMM 93.50 1.27% 0.	938
94 5536 COMM 22.25 0.30% 0.	218
95 553A COMM 17.50 0.24% 0.	14*
96 5539 COMM 6.50 0.09% 0.	124
98 510C COMM 121.25 1.64% 0.	1/8
166 158M REG 20.75 $0.28$ (7) 0.	498

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#### ( FLORIDA

OCT 1993 - 3 MONTH AGGREGATE I&M CORPORATE COMMUNICATIONS (4120) NO. OF EMPLOYEES = 66

NO. IN SAMPLE = 209

	FIELD CODE	TYPE	HOURS	÷	PRECISION
	TOTAL	REG	5891.25	79.71%	1.57%
	TOTAL	DREG	0.00	0.00%	0.00%
	TOTAL	TRVL	395.50 1104.25	5.35%	1.39% 0.93%
TOTAL	SAMPLE HOUR	s	7391.00		
ESTIM	ATED TOTAL H	OURS	30342.01		
ESTIM	ATED MONTHLY	SAMPLE R	EQ'D 66		

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OCT 1993 - 3 MONTH AGGREGATE

CABLE/FACILITIES MAINTENANCE (4250)

NO. OF EMPLOYEES = 132

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NO. IN SAMPLE = 371

	FIELD CODE	TYPE	HOURS	*	PRECISION
2	22M	REG	577.00	8.16%	1.70%
3	22R	REG	542.75	7.67%	
4	45M	REG	3173.75	44.86%	4.15%
5	45R	REG	2996.50	42.36%	
6	248C	REG	6.00	0.08%	0.15%
7	248M	REG	- 33.00	0.47%	0.33%
8	248R	REG	30.25	0.43%	
9	548C	REG	0.75	0.01%	0.02%
10	548M	REG	163.00	2.30%	0.748
11	548R	REG	154.00	2.18%	
12	12M	REG	41.75	0.59%	0.33%
13	12R	REG	9.00	0.13%	
14	52M	REG	29.50	0.42%	0.35%
15	52R	REG	10.50	0.15%	
16	68E	REG	36.00	0.51%	0.31%
17	68M	REG	1.00	0.01%	0.03%
18	68R	REG	1.00	0.01%	
19•	5M	REG	469.50	6.64%	2.57%
20	5R	REG	289.50	4.09%	
21	68Y	REG	2.00	0.03%	0.05%
29	257C	REG	24.75	0.35%	0.40%
30	257M	REG	70.50	1.00%	0.57%
31	257R	REG	56.75	0.80%	0.60%
32	377M	REG	3.00	0.04%	0.08%
34	F257M	REG	310.00	4.38%	1.71%
35	F257R	REG	63.75	0.90%	0.44%
39	F257C	REG	63.50	0.90%	0.76%
40	378C	REG	107.25	1.52%	0.70%
41	378M	REG	191.25	2.70%	1.24%
44	558C	REG	7.00	0.10%	0.18%
47	378X	REG	2.25	0.03%	0.04%
50	97BI	DREG	2.50	0.04%	0.06%
54	98EI	DREG	4.75	0.078	0.12%
90	5532	COMM	161.25	2.28%	0.52%
91	5533	COMM	8.00	0.11%	0.14%
92	5534	COMM	23.50	0.33%	0.44%
93	5535	COMM	23.25	0.33%	0.30%
94	5536	COMM	82.25	1.16%	0.388 32/

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95	553A	COMM	15.00	0.21%	0.16%
98	510C	COMM	34.75	0.49%	0.47%
115	F758C	REG	2.50	0.04%	0.06%
116	F758M .	REG	3.50	0.05%	0.07%
181	357M	REG	113.75	1.61%	0.86%
208	758C	REG	3.50	0.05%	0.09%
216	D257M	REG	i <b>3.00</b>	0.04%	0.07%

OCT 1993 - 3 MONTH AGGREGATE CABLE/FACILITIES MAINTENANCE (4250)

NO. OF EMPLOYEES = 132

NO. IN SAMPLE = 371

	FIELD CODE	TYPE	HOURS	\$	PRECISION
	TOTAL	REG	5559.50	78.59%	1.40%
	TOTAL	DREG	7.25	0.10%	0.13%
	TOTAL	COMM	348.00	4.92%	1.02%
	TOTAL	TRVL	1159.25	16.39%	0.89%
TOTAL	SAMPLE HOURS	5	7074.01		
ESTIM	ATED TOTAL HO	OURS	32719.66		
ESTIM	ATED MONTHLY	SAMPLE R	EQ'D 132		

322

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#### AUDIT DISCLOSURE

#### SUBJECT: COSTS SAVINGS ASSOCIATED WITH THE IMPLEMENTATION OF WORK ACTIVITY STATISTICAL SAMPLING PROCESS (WASSP)

#### STATEMENT OF FACTS:

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Acccording to the answer to FPSC Staff's 36th Interrogatories, Item 712, "The estimated annual Florida total cost savings (net of annual cost of implementation) is \$,675,000. The Florida intrastate annual net cost savings is estimated at \$3,454,000.

 $S_{0}^{-1}$  (According to a Deloitte & Touche schedule (prepared for the March 5, 1993 report to BST) the Estimated Annual Gross Cost Savings for the entire company is  $S_{0}^{-1}$  (According to a Deloitte & Touche schedule (prepared for the March 5, 1993 report to BST) the Estimated Annual Gross Cost Savings for the entire company is Saved Per day, the estimated number of employees not reporting under WASSP, and Average Technician Hourly Cost. See Schedule following this Disclosure.

PSC staff inquired about how BST came up with 15 minutes savings per day. In our interview with Rick King, Steve Vanderberg, they stated the 15 minutes was arrived at through observations and conversations. There were no formal studies performed nor formal documentation of their observations and conversations.

#### OPINION:

One part of the assumptions to calculate the Cost Savings is not based on a formal documented study.

#### RECOMMENDATION:

In order to determine the Cost Savings to apply to this rate case, a study should be performed to determine on a more formal bases how many minutes are saved per day by using WASSP. Stored the connecsion decide that the WASSP powers should be instituted this documentation could be done on a sample books W/PTR with the continue of paulled testing.

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Southern Bell Tel. & Tel. Co. FPSC Docket No. 920260-TL FPSC Staff's 36th Interrogatories September 17, 1993 Item No. 712 Page 1 of 1

What are the annual Florida cost savings associated REQUEST: with the implementation of the Work Activity Statistical Sampling Process (WASSP) on a total company and intrastate basis?

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RESPONSE. The estimated annual Florida total cost savings (net of annual cost of implementation) is  $\frac{4,675,000}{100}$ . The Florida intrastate annual net cost savings is estimated at  $\frac{33,454,000}{100}$ .

INFORMATION PROVIDED BY:

H. A. Paisant Operations Manager 675 W. Peachtree Street Atlanta, Georgia 30375

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SCHEDULE A

# BELLSOUTH TELECOMMUNICATIONS, INC.

WORK ACTIVITY STATISTICAL SAMPLING PROCESS SCHEDULE OF ESTIMATED ANNUAL NET COST SAVINGS

	(000's)
ESTIMATED ANNUAL GROSS COST SAVINGS (Schedule B)	\$24,618
ESTIMATED ANNUAL COST OF IMPLEMENTATION (Schedule C)	(1,782)
ESTIMATED ANNUAL NET COST SAVINGS	\$22,836

- 36 -

Capital 1 2/fr. u.sc.

22,836 <u>× .79</u> Expense ZO,324 <u>× 238</u> FL 4,675 X. 7434 TOE less defir per 193 budget } ×.7833 3,454

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Southern Bell Tel. & Tel. Co. FPSC Docket No. 920260-TL FPSC Staff's 36th Interrogatories September 17, 1993 Item No. 713 Page 1 of 1

On an annual revenue requirements total company and REQUEST: intrastate basis, what does the WASSP study performed by Deloitte and Touche indicate for Florida?

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RESPONSE: The annual reduced revenue requirements impact of the net savings is estimated to be \$4,821,000 for Florida combined, and \$3,562,000 for Florida intrastate. In addition to the net savings, there may be a small shift of costs between regulated and nonregulated operations, but the impact of this shift should be immaterial.

INFORMATION PROVIDED BY:

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H. A. Paisant **Operations Manager** 675 W. Peachtree Street Atlanta, Georgia 30375

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Southern Bell Tel. & Tel. Co. FPSC Docket No. 920260-TL FPSC Staff's 36th Interrogatories September 17, 1993 Item No. 713 Page 1 of 1

FL. Total

328

REQUEST: On an annual revenue requirements total company and intrastate basis, what does the WASSP study performed by Deloitte and Touche indicate for Florida?

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 RESPONSE:
 FL Distributate
 3,454,000
 1,675,650

 (38.515%)Tat
 1,332,321
 1,603,321

 Not of Tat
 2,121,619
 2.871,69

 Revenue Rog.
 - 5956623
 - 5956623

 Rounded
 3,561,782
 4,821,535

INFORMATION PROVIDED BY:

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H. A. Paisant Operations Manager 675 W. Peachtree Street Atlanta, Georgia 30375

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BST WASSP- Cat Som

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### BELLSOUTH TELECOMMUNICATIONS, INC.

#### WORK ACTIVITY STATISTICAL SAMPLING PROCESS SCHEDULE OF ESTIMATED ANNUAL GROSS COST SAVINGS

Job Function Code	() Number of Technicians	Estimated Hours Saved Per Day	Estimated % of Employees Not Reporting Under WASSP	Estimated Hours Saved Per Year	Average Technician Hourly Cost	(\$000) Estimated Annual Gross Cost Savings
4150 I&M POTS	7,422	0.25	90%	400,788	<b>\$</b> 39.59	<b>\$</b> 15,867
4130 I&M Corporate	292	0.25	75%	13,140	39.59	520
4180 I&M Public	440	0.25	75%	19,800	39.59	784
4190 I&M Special Services	1,144	0.25	85%	58,344	39.59	2,310
42XX 1&M Cable Repair	2,584	0.25	80%	124,032	41.42	5,137

Total Estimated Annual Gross Cost Savings

\$24,618 50-1 00

Source: Do T report datal March 1993

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1) = Unanihted by P.S.C.

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# BELLSOUTH TELECOMMUNICATIONS, INC.

### WORK ACTIVITY STATISTICAL SAMPLING PROCESS SCHEDULE OF ESTIMATED ANNUAL COST OF IMPLEMENTATION

	(000's)	
Estimated Cost of Payroll at Full Implementation	\$1,133	
Estimated Data Processing Cost	100	
Equipment Cost: PCs Fax Machines	100 <u>20</u>	
Total Estimated Equipment Cost	120	
Estimated Annual Depreciation of Equipment	24	
Estimated Telecommunications Cost	25	
Estimated Travel and Training Cost	500	
Total Estimated Annual Cost of Implementation	<u>\$1,782</u>	

Source: Ot & report duted March 1993

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EXHIBIT D

March 5, 1993

BellSouth Corporation 1155 Peachtree Street, N.E. Atlanta, Georgia 30367

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Dear Sirs:

We have performed the procedures requested by you, as described below, to the accompanying Schedule of Estimated Annual Net Cost Savings and associated supporting schedules of Estimated Annual Gross Cost Savings and Estimated Annual Cost of Implementation of the BellSouth Telecommunications, Inc. Work Activity Statistical Sampling Process. This report is solely for your information and is not to be referred to or distributed to anyone who is not a member of BellSouth management or the Federal Communications Commission for any purpose. Our procedures performed and our findings are as follows.

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- A. Schedule A Schedule of Estimated Annual Net Cost Savings
  - 1. We compared the "Estimated Annual Gross Cost Savings" amount to Schedule B and found them to be in agreement.
  - 2. We compared the "Estimated Annual Cost of Implementation" amount to Schedule C and found them to be in agreement.
  - 3. We determined that Schedule A was mathematically accurate.
- B. Schedule B Schedule of Estimated Annual Gross Cost Savings
  - 1. We compared the "Number of Technicians" to the BSCMS report "BellSouth Region Forces as of March 1, 1993" and found them to be in agreement.
  - We compared the "Estimated Hours Saved Per Day" to a BellSouth prepared analysis and found them to be in agreement. BellSouth management assumes that technicians will save fifteen minutes daily completing Logs compared to the existing Mechanized Time Reporting ("MTR") Term.
  - 3. We compared the "Estimated % of Employees Not Reporting Under WASSP" to a BellSouth prepared analysis and found them to be in agreement.

Some: Do Treport datel March 183

- 4. We recalculated the "Estimated Hours Saved Per Year" by multiplying the "Number of Technicians" by the "Estimated Hours Saved Per Day" by the "Estimated % of Employees Not Reporting Under WASSP" by 20 workdays per month by 12 months per year and found the amounts to be in agreement. Management has made the assumption that technicians will work an average of 20 workdays per month during the year.
- 5. We compared the "Average Technician Hourly Cost" to the management report named "Analysis of Direct Labor and Related Costs-Craft Forces" for the period ending December 1992 and found such amounts to be in agreement. The Average Technician Pay Rate includes benefits.
- 6. We recalculated the "Estimated Annual Gross Cost Savings" by multiplying the "Estimated Hours Saved Per Year" by the "Average Technician Hourly Cost" and found such amounts to be in agreement.
- 7. We compared the "Total Estimated Annual Gross Cost Savings" to the sum the estimated annual gross cost savings for each job function code and found them to be in agreement.
- C. Schedule C Schedule of Estimated Annual Cost of Implementation
  - 1. We recalculated the "Estimated Cost of Payroll at Full Implementation" by multiplying the number of employees which WASSP management has represented it is approved to hire by an estimated average salary per employee provided to us by BellSouth and found the amounts to be in agreement.
  - 2. We agreed the "Estimated Data Processing Cost," "Estimated Equipment Cost," and "Estimated Telecommunications Cost" to BellSouth prepared analyses and found them to be in agreement.
  - 3. We recalculated the "Annual Depreciation of Equipment" assuming a 5-year life and straight-line depreciation.
  - 4. We recalculated the "Estimated Travel and Training Cost" by multiplying BellSouth estimates of ten training personnel by \$2,000 in cost per week by 25 weeks per year.
  - 5. We determined that Schedule C was mathematically accurate.

Because the procedures we performed were not sufficient to constitute an audit in accordance with generally accepted auditing standards, we do not express an opinion on the accompanying Schedules referred to above. In performing these procedures, however, no matters came to our attention that caused us to believe that such schedules should be adjusted. Had we performed additional procedures, matters might have come to our attention that would have been reported to you. This report relates only to the items specified above, and does not extend to BellSouth Corporation's financial statements taken as a whole for any date or period.

Yours truly.

Source PST report dated March 1993

