Recommendation report to the Board of the Allied Ramblers Association

Scope

This document will outline the details of the new IT solution as recommended to the Board.
This report will cover all aspects of the solution as separate entities:

- Servers
- Workstations
- Printers
- Network
- Backup
- Physical Storage
- Broadband connection
- Full quotes

Abstract

It is the recommendation of this report that the board purchase 2 servers, 40 workstations (to allow for 4 shelf spares), 2 HP 3005 laserjet printers, 2 Oki C8800cdtn colour laserjet printers, new active networking equipment and a rack to house this equipment. This will meet and exceed the requirements of the board allowing for a reduced cost in the long term.
It also recommends that broadband services from Vialtus (formerly Pipex) are purchased.
Full technical details will be included in the Appendices.
The full cost of the solution is as follows:

Unit	Cost (ex vat)	Vat	Cost (inc vat)
Servers	£2,549.00	£446.08	£2,995.08
Workstations	£34,400.00	£6,020.00	£40,420.00
Colour Printers	£2,778.00	£486.15	£3,264.15
Black and White Printers	£1,100.00	£192.50	£1,292.50
Network	£417.00	£72.98	£489.98
Backup	£524.00	£91.70	£615.70
Racks	£502.98	£88.02	£591.00
Broadband per annum	£288.00	£50.40	£338.40
Total	£42,558.98	£7,447.82	£50,006.80

Servers

The recommendation is for 2 (two) servers. One will be the primary server, hosting the main data storage and will be responsible for the daily authentication.
The second server will act as a backup to the first with regard to services, but will also be the daily backup solution, having a nightly synchronization run to backup all modified files which will then be made available to the users as read-only files.
Both servers will be rack mountable in order to allow safe and secure storage and will be powered by an uninterruptible power supply.

Each Server will be built with the following specification:

- Intel SR1530HAHALX Xeon 3000 1U chassis – Case, motherboard and CPU
- 2x Mirrored 250GB SATA disks (System drive) hard mounted
- 3x Striped 750GB SATA disks (Data drive) in hot swap caddies
- 4GB 667MHz DDR2 ECC memory

Both servers will be linked to each other by a private network using one of the 2 network connections that are on the board. This is to allow high speed transfer of backup information without having possible disruption from Workstation traffic.

The servers will run the following software and services:

- SuSE Linux – The operating system
- Samba – The service that will run the domain
- LDAP – The service used for authentication
- NFS – The method that can be used by the backup regime
- SSH – The service that will be used by the Systems Administrators
- Cron – The service that will run tasks at certain times
- RSYNC – The service that will be used to backup the data

Due to the specification and the software being run for these servers, the life cycle is expected to be in the region of 5 to 7 years.
Had these servers be using a Microsoft based product, one would expect the life cycle to be greatly reduced due to demand on the hardware and the need to keep updating software to one that is supported.

This will greatly reduce your long term costs.

Workstations

The board has requested a specification for 36 workstations to replace those that are currently in use, however it is the recommendation that 40 systems are purchased in order that 4 shelf spares may be maintained at all times. This reduces the disruption caused by software or hardware failure.

The board also requested that a price be drawn up for parts alone so that the on-site IT support staff might build the systems themselves. The company that has been selected will build all the systems at no extra cost to the board. This will save expense in terms of the local labour time required to build these systems.

The systems recommended are as follows:

- Mini Tower chassis
- Intel DX38BT Core 2 Duo 6550 at 2.33 GHz
- Scythe Fanless CPU Cooler
- 80GB SATA hard disk (System only, no data storage)
- Samsung DVD burner
- 2GB 1066MHz DDR3 non-ECC memory
- Samsung 17" LCD monitor
- Microsoft Keyboard and Mouse
- Microsoft Windows XP Professional (OEM)
- Microsoft Office 2007 Professional
- Norton Ghost 14 (For Systems Administration purposes)
- Norton Antivirus software

The system is somewhat over specified for the initial use that is expected of these machines; however it will allow for easy and rapid expansion of the jobs performed on these machines and increase the life expectancy of these machines as future software puts increased load on the hardware.

One would expect the life cycle of these systems to be 5 years in their present form before one would need to upgrade the hardware.

If it was decided that an upgrade would be desirable prior to the 5 year expectation, then it is possible to replace components of these systems at relatively little cost due to the lack of component branding (such as that done by Dell, Sony or HP).

Printing capabilities

The board requested printing capabilities via two black and white printers, one cheap colour printer and one high quality colour printer.
It is the opinion of this report that the best option for the black and white printer solution is an HP P3005DN. This printer is capable of fast, good quality printing with duplex capability and a high yield paper tray.

It is also the recommendation of this report that it look to purchase two Oki C8800cdtn colour laserjet printers. This will increase the initial expenditure; however the lifetime cost of these printers is somewhat less than that of an inferior printer. Both would be capable of fast, high quality A3 printing with duplex capability, however set to print with reduced quality will save running costs even further and the duplication of hardware would afford the board a degree of fault tolerance.

Network

This report has reviewed the requirements, and is of the opinion that a wired network would offer the best possible solution to the board. A wired network would offer better security and deliver it much faster than wireless. The report recommends that the board purchase two Netgear 24 port 10/100/1000 ethernet switches.

Backups

It is the opinion of this report that the board should consider the backup options afforded to it by the purchase of a further Network Attached Storage Unit. This unit would be capable of storing older backups and archive files to increase the fault tolerance of the entire system.
The unit would be an Intel based NAS storage unit with 4 500GB SATA disks. These disks would be configured to allow for a disk failure to occur but still retain the information contained on it (a system known as RAID5).

Physical Storage

This report recommends that a 19" (19 inch) rack is purchased to allow for storage of the servers and network equipment. It offers a limited footprint with regard to floor space, storage for the shelf spare workstations, physical security and ease of management.
Therefore, this report would support the purchase of an Elite 505 cabinet and the fixings to accompany this item (caged nuts).

Broadband supply

This report has investigated a number of broadband (always on) capable suppliers and has concluded that the provider of choice is Vialtus (formerly Pipex). This company has a history of good service and a solid infrastructure. Their support facilities have been proven to be extremely high quality.

As the board do not envisage heavy internet use, this report recommends that they opt for the following service:

- Vialtus Solutions ADSL

This service will offer broadband access at reasonable speed, but offers the flexibility of an upgrade after 90 days should the board wish.

Connection to this service will be best served by a network ready router. This report recommends:

- Netgear DG834GUK ADSL Firewall router and Modem with Wireless

This unit is a concise all in one unit. It also features a wireless network Access Point, which will enable later expansion to wireless devices in the future should expansion be required in the future.

Computer Systems   EC130003D

Full Quotes

Servers

Thank-you. Your quote is stored using the unique reference number below.
We would be pleased to offer any telephone technical advice or give
demonstrations of any of our listed equipment 8.30am-5.30pm Monday-Friday
Orders can be placed by telephone/fax/internet. Delivery 3 days from receipt of order for almost all systems!

60641529593		Quotation		04 March 2008	
Qty	**Item**	**desc**		**Unit**	**Amount**
2	SR1530HAHLX	Intel SR1530HAHALX Single Xeon 1U Server 3 hot swap drive bays		337	674
4	250-SATA	250GB Hard Disk 7200rpm SATA Seagate		36	144
6	750-SATA	750GB 8.5ms Hard Disk 7200rpm SATA Seagate		98	588
2	SM720N	Samsung 17" LCD Monitor 1280x1024		98	196
8	KVR667D2E5/1G	1GB 667MHz DDR2 ECC CL5 DIMM		13	104
2	MS-DT3	Microsoft Wireless Laser Desktop 6000 Black/Silver Keyboard/Mouse		25	50
1	GS105	Netgear GS105 5 x Gigabit 10/100/1000Mbps UTP Compact Switch, External PSU		30	30
1	SURT2000RMXLI	APC SMART-UPS 2000VA		743	743
4	Net-Cab-Long	Network Cable - 5 & 10M		5	20
			Total ex-vat (UKP)		£2,549.00
			VAT - 17.50% (UKP)		£446.08
			Total (UKP)		£2,995.08

Registered in England: No. 2888152 VAT No. 479 8742 72
Next day delivery to Mainland UK £10 per box. E&OE
All goods are supplied subject to our standard terms and conditions, a copy of which is available on request
We will make all efforts to hold quotes for 30 days from the above date, but this cannot be guaranteed

Computer Systems   EC130003D

Workstations

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60641540109		Quotation		04 March 2008
Qty	**Item**	**desc**	**Unit**	**Amount**
40	DX38-6550	Intel DX38BT Core 2 Duo 6550 2.33GHz 4MB cache	222	8880
40	Min-ATXB	Mini Tower ATX Case Ultra-quiet 350W PSU	45	1800
40	Ninja-plus	Scythe Fanless CPU Cooler	23	920
40	80-SATA	80GB 9.45ms Hard Disk 7200rpm SATA Seagate	24	960
40	TS-H552B-BL	Samsung DVD RW (+/-) OEM Dual Layer/16xDVD+R,4xDVD+RW,12xDVD-R	17	680
80	KVR1066D3N7/1G	1GB 1066MHz DDR3 Non-ECC CL7 DIMM	58	4640
40	SM720N	Samsung 17" LCD Monitor 1280x1024	98	3920
40	IntellimouseExp	Microsoft Intellimouse Explorer	11	440
40	K/B-MM	Microsoft Multimedia Keyboard	11	440
40	WinXP-Pro	Windows XP Pro CD-ROM - OEM	82	3280
40	Off2007-Pro	Office 2007 PRO - Word,Excel,PowerPoint, Access & Outlook/Contact Manager - OEM	167	6680
40	Ghost	Norton Ghost 14	32	1280
40	Norton	Norton Anti-Virus 2008- Non retail	10	400
40	Net-Cab-Short	Network Cable - 1 & 2M	2	80
			Total ex-vat (UKP)	£34,400.00
			VAT - 17.50% (UKP)	£6,020.00
			Total (UKP)	£40,420.00

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Printers

» Oki C8800cdtn

Price : £2778.00
 Excl. Vat

Stock Level : In Stock

Quantity : [2]

[Add To Cart]

Description
The C8800cdtn offers all the same great features of the C8800dn, with the added benefits of an extra paper tray and cabinet!!

C8800n at a glance *No other product offers quality A3 colour printing in such an affordable and compact design*

- Colour A4 and A3 compatible
- Revolutionary small footprint
- 26ppm colour, 32ppm monochrome A4
- Under 6p colour A4 page (5% coverage RRP)
- Standard network and high speed USB
- 300 sheet paper tray + multi-purpose feeder
- 1200 x 600 DPI with ProQ multi-level technology
- 128 Mb memory
- **3 Year Warranty as Standard**

Customer			**QUOTATION**	
Contact Name	Cormac O'Connell	**Quote Number**		
Email		**Date**	03/03/2008	
Account Manager	Sara Roberts	**Valid for**	30 days	
Email	sara.roberts@ccsmedia.com	**Telephone**	01274379891	
		Fax	01274379881	

Qty	Part Number	Description	Unit Price (ex VAT) £	Total £
1	Q7815A	HP LASERJET P3005DN 33PPM USB/ENET 8	£450.00	£900.00
1	U3791E	HP CARE E-PACK ND OS LJ 2300 / 2420	£100.00	£200.00

Sub Total Ex VAT	£1100.00
Carriage Total	£0.00
VAT @ 17.5%	£192.50
Total	£1292.50

Computer Systems   EC130003D

Network

Thank-you. Your quote is stored using the unique reference number below.
We would be pleased to offer any telephone technical advice or give
demonstrations of any of our listed equipment 8.30am-5.30pm Monday-Friday
Orders can be placed by telephone/fax/internet. Delivery 3 days from receipt of order for almost all systems!

60670953828		Quotation		07 March 2008	
Qty	**Item**	**desc**	**Unit**	**Amount**
2	JGS524UK	Netgear 24 Port 10/100/1000 Ethernet Switch	183	366
1	DG834G Bundle	Netgear DG834GUK 54Mbps Wireless ADSL Firewall Router + WG111 USB Adapter	51	51
			Total ex-vat (UKP)	£417.00
			VAT - 17.50% (UKP)	£72.98
			Total (UKP)	£489.98

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Backup

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demonstrations of any of our listed equipment 8.30am-5.30pm Monday-Friday
Orders can be placed by telephone/fax/internet. Delivery 3 days from receipt of order for almost all systems!

60651459312	Quotation		05 March 2008	
Qty	Item	desc	Unit	Amount
1	SS4000-E	Intel Storage System NAS Box takes 4 SATA drives up to 2TB	260	260
4	500-SATA	500GB 8.5ms Hard Disk 7200rpm SATA Seagate	66	264
			Total ex-vat (UKP)	£524.00
			VAT - 17.50% (UKP)	£91.70
			Total (UKP)	£615.70

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Physical Storage

Rem.	Product	Mfr Part #	Stock Status	Qty.	Unit Price	Total Price
⊗	Videk - Rack screws and nuts (pack of 50) (VI2918)	2918	15 In Stock.	1	£14.99	£14.99
⊗	Dataracks Elite 505 Standard - Rack - 42U - 19" (VDKNN3365)	3365-42	Ordered upon request.	1	£487.99	£487.99
🛒				Update Qty.	Order subtotal:	£502.98

Approximate Shipping Costs

Next Business Day	£10.99
Highlands and Offshore 2 Day	£24.95
Northern Ireland / Isle of Man	£10.99
Northern Ireland / Isle of Man 2 Day	£19.99
Eire 2 Day	£10.99
Eire Express	£24.95
Channel Isles 2 Day	£24.95
Next Business Day Before 12:00pm	£14.99
Saturday Delivery	£25.99

Actual shipping values will be based on your shipping destination.

Continue Shopping   Lease   Save as Quote   Checkout

Broadband

Vialtus DSL and Vialtus DSL Premium

Benefits of Vialtus Solutions ADSL

- Up to 8Mbps Broadband delivered as standard
- 90-day contract - no long term commitments
- Enhanced Care Option
- Suitable for businesses
- 24x7 access to our Technical Support line
- Dedicated account management - your personal Vialtus Solutions contact.

Options Available

All Vialtus ADSL services offer download speeds of up to 8Mbps and are available in three options;

- **Vialtus Solutions ADSL**
  Vialtus Solutions ADSL is not restrictive on the amount of bandwidth you can use per month, this service offers you a fixed monthly fee that is real value for money.
- **Vialtus Solutions ADSL Premium**
  With Business ADSL Premium, the network is managed so that the average user throughput, in both upstream and downstream directions, is higher than the standard Business service. Vialtus Solutions ADSL Premium provides a professional service and consistent level of performance.

All the Vialtus DSL services are extremely flexible with a minimum contract period of just 90-days.

	Vialtus Solutions ADSL	**Vialtus Solutions ADSL Premium**
Download	Up to 8Mbps*	Up to 8Mbps*
Upload	Up to 448Kbps	Up to 448Kbps
Data Transfer	unlimited**	unlimited**
Static IP	Yes	Yes
Migration	Free	Free
Contract	90 Days	90 Days
Monthly Price	£24.00	£60.00

*8Mbps services delivered subject to availability on a 'best speed available' basis depending on local line conditions.
All services supported 24x7
All services have a minimum 90 day contract period
** Fair usage policy applies