

The Royal Society for the Prevention of Cruelty to Animals (RSPCA) - deploys data, Voice over IP and videoconferencing services with RADVISION's *viaIP* multi-service conferencing infrastructure

Highlights:

Client:	The Royal Society for the Prevention of Cruelty to Animals - the RSPCA.
Product:	RADVISION <i>viaIP</i> Gateway RADVISION <i>viaIP</i> 400 multipoint conferencing unit
Number of sites:	The RSPCA has total of about 1500 workers and 500 mobile field staff who need to be connected with a modern and effective communications infrastructure.
Application:	Allows data, voice and video collaboration between staff so as to better serve the general public; achieves considerable savings in infrastructure and operating costs; both are very important for the Charity which has an annual budget of over £70 million.

Why the RSPCA Chose RADVISION:

The RSPCA chose RADVISION for two reasons. First, they wanted to upgrade the Cisco voice-over-IP infrastructure to allow multiple parties to join the same audio conference; and, second, to introduce the capability to communicate with video over the RSPCA's own IP network, thereby reducing the need for and cost of travel by management and employees. The RSPCA knew that RADVISION were world leaders in IP network technology and that they worked very closely with Cisco.

Introduction:

The RSPCA is the world's oldest animal welfare charity, founded in 1824. Each year the Charity fields more than 2 million calls on its National Cruelty and Advice Line. That means every 19 seconds the charity receives a call from someone somewhere in England or Wales. Handling such large volumes of work depends on efficient communications across all the charity's sites.

A major task of the communications infrastructure is to ensure that each call is handled speedily and effectively by The RSPCA staff. The charity has ten regional headquarters, 13 animal re-homing centers and 12 animal clinics or hospitals. It also has 189 separately-run franchised branches, which host 40 branch clinics and 47 animal welfare centers. All of these and the mobile staff - 328 uniformed RSPCA inspectors and 146 animal collection officers - need to be reliably connected.



When the RSPCA decided to relocate its 400-strong Headquarters team to new purpose-built offices in Southwater, Horsham, West Sussex, this provided the ideal opportunity to modernize the charity's telecommunications capabilities. The RSPCA's existing infrastructure was out of date; it consisted of conventional analogue phone network, a range of PABXs, paper-based fax machines and a separate data network.

The RSPCA decided that it would evaluate a merged voice and data network with a pilot scheme at its new headquarters consisting of a switched IP-enabled LAN enhanced with IP telephony and wireless options. The new voice over IP (VoIP) strategy uses Cisco IP phones linked directly to the building's LAN. A Cisco Call Manager routes calls to the handsets over the network. The system also incorporated a communication server from TOPCALL that provides a unified messaging interface for voice, email, fax and SMS services. If calls are missed they are re-routed to the TOPCALL server, which records a voicemail and forwards it to the recipient's mailbox in the RSPCA's Novell GroupWise e-mail system. Combining GroupWise and the TOPCALL system added facilities for voicemail, text SMS, and faxing to and from the desktop. As all messages are stored in the groupware product it also ensures that all messages are indexed in a data base including faxes using optical character recognition which can be searched using key words.

Management and staff liked the capabilities of the new IP network and decided that it should be extended to all major sites as phase two of the project. The physical infrastructure for the LAN was provided by Cable & Wireless structured cabling. Frame relay services were installed by Cable & Wireless.

Cisco IP (Internet Protocol) Telephony solution powered by Cisco's AVVID (Architecture for Voice, Video and Integrated Data) technology. Cisco's IP Telephony solution provides a reliable high quality alternative to PBX, while unifying the voice and data environments. 'The new building has allowed us to take a leap in IP strategy and build voice, data and video on a converged network, to capitalize on the benefits of integrated applications,' says Matt Winckless, IT Architecture and standards manager at the RSPCA who was the brainchild behind the design of this pioneering solution. As the system is rolled out across all the RSPCA sites, each desk will be equipped with a Cisco IP Phone, serving as an information portal. 'We chose to put a Cisco IP Phone on every desk because these allow people to access invaluable information, for example, the company directory and the RSPCA intranet, at the touch of a button,' continues Matt Winckless.

The new IP infrastructure delivers significant cost savings for the RSPCA. By carrying voice and data over the same cable infrastructure, it reduces cabling requirements and simplifies network management and maintenance. The new integrated solution has saved the RSPCA £80,000 on cabling costs alone. The total expected savings will be far higher: up to £2 million over three to five years.



Another major saving is in technical support. “Managing and maintaining the vast array of equipment we had in the past was extremely difficult and inefficient,” says Matt Winckless. The other advantage of the new IP network is the range of new applications it enables. Possibilities Include remote video surveillance of animals in it’s homes and it’s buildings using IP-based CCTV, video meetings between sites and stored and live video either from live terrestrial, satellite television or stored pre-recorded training videos for e-learning.

Challenge:

Once the RSPCA Headquarters, its 10 regional offices, 13 animal centres and medical centres and 12 animal clinics or hospitals were linked on the wide area IP network, new opportunities arose. The Charity saw that instead of attending meetings in person, involving considerable time-wasting travel and cost, they could convene a multipoint audio conference using their Cisco IP phones. The first challenge was to build in an audio conferencing bridge that would perform these functions and allow individual users to dial up their own meeting without technical support.

The Charity had a limited experience of using video conferencing but was deterred from using it frequently in the past by the high cost of using ISDN to convene such video meetings. Now that the Charity owns its IP network for voice and data communications, the use of videoconferencing over the same IP network would be free of telephone charges. The challenge was to install the multipoint conferencing unit that would facilitate both one-to-one video meetings and video meetings involving several sites. The videoconferencing bridge had to work over the IP network and it had to transport video in a manner which did not interfere with voice and data traffic.

The RSPCA recognised that in the past videoconferencing systems had been complex and required considerable technical support. A major challenge was to find a MCU and Gateway that once installed would allow managers and staff to set up and run video meeting themselves, without technical support needing to be available as a back up service. To discuss their needs and recommend a solution, The RSPCA turned to systems integrator Videocentric Ltd. in Wokingham, IP videoconferencing specialists and suppliers of RADVISION equipment.



Results:

To handle multipoint video, Videocentric installed a RADVISION *viaIP* 401 Multipoint Conferencing Unit, a *viaIP* ISDN Gateway and a VPS -Video Processing Server- to match different speeds of transmission in a multipoint call. Video is one of the features of Microsoft NetMeeting that is enabled on the 600 desktop PCs used by the RSPCA. Each PC is equipped with a Logitech web cam of 1.3 megapixels resolution. The PCs use Windows 2000 and have such a powerful MCU – typically 1.0 to 1.4 GHz - that the video quality is very good. “Video displayed at 640 x 480 pixels at 30 frames per second is attractive on a PC monitor; we found the video as good as on the endpoints we could buy and on a PC monitor we get higher resolution than on a TV monitor.” said Matt.

The RADVISION MCU can handle multipoint video calls of up to 24 participants, or even more. NetMeeting only provides for a video meeting from one PC to another PC. The *viaIP* Gateway provide users with connectivity to some of the RSPCA’s branches that can only use ISDN and to outside organisations with whom the RSPCA would like to video meet using ISDN-based videoconferencing. RADVISION was chosen because the company is a partner of Cisco and has worked closely with Cisco to ensure that video can be transmitted smoothly across Cisco-enabled networks. The RSPCA’s Cisco AVVID network ensures that Quality of Service is maintained for voice and video calls.

viaIP Multipoint Conferencing Unit - Renown for its high-density, unlimited scalability, and its proven performance, the *viaIP* MCU bridges conferences for voice, video and data between three or more endpoints.

viaIP Gateway –The RADVISION *viaIP* Gateway provides connectivity between IP and ISDN networks. The Gateway allows organizations with legacy ISDN-based videoconferencing systems to communicate with IP-based systems for voice, video or data communications.

The Cisco solution for the RSPCA is based on a high-speed core network of Catalyst 6500 switches with VoIP gateway interfaces and Catalyst 3500 edge switches. These also provide in-line power to the hundreds of Cisco 7960 IP phones. A cluster of two resilient Cisco MSC 7835 Call Managers control the IP telephony network and a third Call Manager has been deployed for developing new services. Cisco 3600 and 1700 routers and PIX firewalls provide secure connection to the Internet and other RSPCA sites.

Matt told us that “Once the IP network was up and running, the biggest challenge was to persuade staff to change the way they work. We have an internal IT Trainer and we offer a course on Conferencing and Collaboration. Our new Director General has taken this course recently and is keen to make greater use of the technology available.”



About RADVISION:

RADVISION (Nasdaq: RVSN) is the industry's leading provider of high quality, scalable and easy-to-use products and technologies for videoconferencing, video telephony, and the development of converged voice, video and data over IP and 3G networks. RADVISION has two distinct business units. RADVISION's Networking Business Unit (NBU) offers one of the broadest and most complete set of videoconferencing network solutions for IP- and ISDN-based networks, supporting all end points in the industry.

The company also provides businesses and service providers with integrated solutions that deliver converged IP-based video telephony applications to employee computer desktops and residential broadband homes worldwide. The Company's Technology Business Unit (TBU) provides protocol development tools and platforms, enabling equipment vendors and service providers to develop and deploy new converged networks, services, and technologies. For more information please visit our website at www.radvision.com.

For more information about the RSPCA: www.rspca.co.uk

