

# CASE STUDY

## EDUCATION SECTOR

# THE UNIVERSITY OF OXFORD



**The University of Oxford is part of the core network for Janet's Thames Valley Network (TVN) and hosts Janet's TVN point of presence (PoP). In undertaking a pilot project to create a more resilient voice services network it found Redcentric to be the only vendor that was Janet-connected and which didn't require an unnecessarily long lead time or extra-cost network circuits.**

## CHALLENGES

The University of Oxford's voice service is managed by the Oxford University Computing Service (OUCS). It has resilient 10Gbps connections to Janet, the UK's research and education network. In 2005, the voice system consisted predominantly of 15 ISDN30 circuits from one of the UK's leading providers, giving the University 450 channels of capacity to service the inbound and outbound calls for 30,000 DDI numbers. While the core voice network is highly resilient, all the ISDN30 circuit fibres pass through the same very small area of central Oxford.

Alan Hillyer, Head of Telecoms in the Telecoms & Networks Group of OUCS, realised that if any problem occurred with the ISDN30 fibres, the University's 30,000 users would be unable to make or receive any calls.

He decided to research if and how OUCS could send voice traffic from its Cisco IP-PBX infrastructure over its high bandwidth and physically diverse Janet IP network connections. At the same time he wanted to:

- Increase the resilience of the outbound call services
- Reduce the commercial & operational dependency on a single incumbent ISDN30 supplier
- Provide scope for later addition of extra services.

## REALISING THE BENEFITS

Redcentric has provided an enterprise-class solution while meeting a need that some of the bigger carriers are turning their back on.

Alan Hillyer  
Head of Telecoms for OUCS



## HOW REDCENTRIC HELPED

For 18 months or so Alan Hillyer had several meetings with major suppliers but, he says, "We hit brick walls everywhere. The suppliers wouldn't accept any voice traffic via Janet because it is a private network for research and education without QoS (Quality of Service). They wanted to install a 2Mbps pipe to backup our original 6Gbps (now 10Gbps) pipe – basically offering a narrow cycleway to run alongside the route we already had that would carry motorway traffic! They also all wanted a lot of money."

Frustrated by the lack of progress, Alan Hillyer contacted Redcentric. As a Janet-connected provider, Redcentric took a different, uniquely realistic approach. Alan Hillyer says, "I believe that Redcentric were really quite brave and entrepreneurial in recognising that their existing ultra high bandwidth Janet connectivity, our own fat pipe into Janet, and Janet's high capacity meant that the lack of QoS on Janet was irrelevant."

As a result, the pilot project was agreed and Redcentric implemented SIP trunking across the Janet network. It demonstrated its commitment to the partnership and solution by:

- Working alongside OUCS voice experts, Cisco's assigned systems engineer for the University of Oxford and the Cisco Technical Assistance Centre.
- Paying its own costs, while OUCS did the same.
- Not insisting on a minimum contract term or any SIP trunk channel charges during the trial.

## TECHNICAL INFO

- SIP Trunk over Janet
- Use of Redcentric / Janet Interconnection

The solution was extensively tested, the pilot successfully concluded and the service was formally contracted by OUCS in early 2011.

## BENEFITS

Alan Hillyer believes OUCS has seen many benefits and praises Redcentric for providing "an enterprise-class solution while meeting a need that some of the bigger carriers are turning their back on." Benefits include:

### Increased resilience

Alan Hillyer says, "The Janet end is resilient, Redcentric has resilient interconnections with the Janet core network and with the Redcentric circuit in place and the service managed via Redcentric's carrier-grade hosted VoIP & Unified Communications platform, I really feel we are in now in a safe resilient place."

### Reduced supplier dependency

With calls to UK landlines sent via their ISDN30 lines and the Cisco router sending all outgoing calls to UK mobiles via Redcentric over SIP, OUCS has removed its commercial dependency on a single supplier.

### Significant scalability

"If OUCS suddenly need to open up 60 channels," says Alan Hillyer, "we can just make a quick phone call to Redcentric and then do the rest on the keyboard. It's all sorted out in half an hour because it's all software. Previously we had to involve engineers and programmers in order to get more cards in the PBX."

### Reduced call costs

Although cost wasn't one of the drivers behind the initial project, Alan Hillyer realised Redcentric's call tariff, especially to the mobile network, was highly competitive and immediately moved all outgoing mobile calls to Redcentric's SIP trunk. The SIP network will also be used for inbound mobile calls and UK national calls in due course.

### Improved call quality

Alan Hillyer describes the call quality as "fantastic, probably better than standard ISDN30 quality. It's very good, very stable and we're very pleased with it."

### Service growth potential

Alan Hillyer says, "It's good to know that we can add remote access to our VoIP system if we want to, giving our field researchers etc VoIP at home, badged as our service but delivered as an Redcentric-hosted system."

Alan Hillyer is very happy with the partnership with Redcentric and is looking to develop the solution further, configuring other traffic to be routed to Redcentric from their PBX. And as part of his role on the Janet Voice Advisory Service he says "I'm happy to recommend Redcentric to universities, schools, 6th form colleges, etc as a company they can turn to solve SIP and VoIP problems."

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