

# NETWORKING

## □ D-LINK PROVIDES INFRASTRUCTURE FOR RHODES UNIVERSITY INTELLIGENT NETWORK

### Case summary

In its efforts to maintain its position as a leading provider of value-added services to its student body, Rhodes University has designed and instituted a technology system dubbed ResNet that enables students to gain network and Internet connectivity from their on-campus residential rooms. Students wishing to enrol in the project pay an annual connection fee and have 24-hour Internet access from their own rooms.

Initial student response to a pilot system in one residence was enthusiastic, and the popularity of the ResNet facility rapidly increased. The University therefore quickly realised the need to expand the project to all residences on campus. However, with increased complexity and scale, the institution faced an issue where its existing network infrastructure did not have sufficient management functionality, while the costs of expansion were proving to be excessively costly.

After evaluation and consultation with several technology providers, the University established that network equipment provider D-Link could provide it with a fully manageable, reliable yet highly cost effective network infrastructure solution. Based on the successful establishment of a partnership between Rhodes University and D-Link, implementation of the ResNet project has forged ahead with three quarters of the 40 residences now connected, with plans afoot to connect the balance in the near future.

### Client Background

Celebrating its centenary year in 2004, Rhodes University provides an intimate and internationally recognised education facility, drawing learners from throughout southern Africa and abroad. Unlike many of its local contemporaries, the institution houses around 50% of its student population on campus. This unusually high ratio of residents has led the University to create a reputation not only for its high levels of academic achievement, but also the warmth and friendliness it brings to student life.

### Technical Solution Design

Prior to the implementation of the ResNet project students at Rhodes University were only able to gain network and Internet access at student computer laboratories. In order to maintain control of campus infrastructure, the institution was unable to allow students Internet access within their rooms, or even, for that matter, private telephone lines.

However, with developments in educational and social environments, and its own efforts to constantly and proactively transform itself to meet the needs and desires of the student population, the University realised that it needed to go further than supplying access points at laboratories, particularly since the Internet has become a valuable resource for students to gain knowledge. Hence, it established a project to provide individual access in residential rooms.

After successfully piloting the ambitious project, the University investigated the most effective manner to roll out access to some 2500 residential rooms. While the equipment used in the test site had provided access, the institution felt it did not provide sufficient management functionality to be used throughout the project.



Rhodes University Clock Tower, built by Sir Herbert Baker

Photograph by Obie Oberholzer

John Stevens, facilities and communications manager for the IT division at Rhodes University says that the institution invited technology providers to recommend products which would meet the requirements for testing and evaluation.

D-Link's solution was based on its DES-3226S stackable managed switches, proven in trials to provide extensive manageability at a highly competitive price point. "And as we know, once a person has Internet access, they cannot be without their connection. Reliability was therefore a prerequisite for a successful solution," adds Stevens.

The demonstration of the capabilities of the D-Link DES-3226S switches resulted in the organisation standardising on the product for the full campus rollout.

Stevens explains that the cost implications of the rollout were an important aspect as the project had not been budgeted for and therefore needed to be self-sufficient.

"Incredibly, the D-Link solution is between 2 and 3 times more cost-effective than any of the other products evaluated, yet provides us with all the capabilities we require. The solution offered by the company has therefore allowed us to provide the in-room access to our students at a highly affordable annual cost; in turn, the revenue generated from the system is further funding rollout to the remaining residences," Stevens says.

#### Solution implementation

While project implementation is ongoing, Stevens notes that, to date, progress has been smooth with high levels of commitment from D-Link. Despite the University being situated in the relatively remote area of Grahamstown, the company has ensured that the campus is supplied with the necessary products and technical resources, impressing Rhodes management with its regular communications and support.

"Where other suppliers may have been tempted to become complacent, D-Link has delivered on its commitments. As it turned out, issues that did present themselves were capably handled by the D-Link team, who demonstrated their capability by making these issues easy to deal with," he says.

Because of their manageability and the capacity to prioritise network traffic, the D-Link switches which integrate fully with the University's backbone - allow students to access the Internet, email and the University network without creating a negative impact on critical academic and administrative applications.

As with the student laboratories, all connections go through built-in security measures, including a firewall, and users are required to adhere to University policies in terms of permitted content.

#### Results

Enthusiastic and prolific use of the in-room ResNet system, as well as continued high demand for Internet access in student laboratories, has proven the D-Link system to be highly reliable as well as providing an upgrade path as campus infrastructure is yet to reach saturation levels.

"The real benefit is for the students who are enrolled in the project. Apart from addressing the security concerns of late night strolls to access laboratories, students are now able to access resources in the relative peace and quiet of their own rooms. This has a large impact on their ability to study, research and complete tasks effectively and most importantly, when they want to," says Stevens.

Furthermore, the University says its relationship with D-Link continues to strengthen, with the institution expanding its interest into additional products for different environments including wireless and Voice Over Internet Protocol technologies.

