

Wi-Fi Independent Tests & Case Studies Speak Volumes

E-Learning is growing in momentum in Africa, especially South Africa. Universities, colleges and schools, are realising that the inevitable onset of technology is arriving like a tide slowly rolling in, as evidenced by the many solutions locally represented at the EduWeek exhibition this month. Tablets & laptops are at the heart of whatever e-learning solution is considered, which means one thing – Wi-Fi has become critical as the hub of e-learning. As such institutions rolling out e-learning should be laying a solid foundation, realising the risks of not doing so could be as perilous as cutting corners on the foundation of a high rise building. In the same way “vanilla Wi-Fi” just won’t cut it as your Wi-Fi Solution on which you build your e-learning environment, irrespective of the types of tablets and laptops and no matter which e-learning providers are chosen.

Fact remains “Smart Wi-Fi is THE First Critical Step to e-learning!”

BUT this begs the question: “WHICH Wi-Fi?” As with anything, learning from others’ mistakes is vital, not to mention learning from the

success of others too. The range of international independent surveys and test results speaks volumes. Many large universities having to spend millions on Wi-Fi to support thousands of users have already taken the time to conduct these surveys at great expense of time and money. So what can we learn from these?

- ANY e-learning solution (from a class of 20 students to a university of many 1000’s) is a HIGH DENSITY application and requires an enterprise-grade, proven solution;
- Self interference from the solution is a crippling problem that only one solution has proven patents to mitigate against;
- Maximising gain and signal strength is vital to ensuring the highest speed of Wi-Fi which only one solution has patents to provide;
- Scalability, expandability, cost effectiveness, relative performance and many other benefits can be derived from the RIGHT SOLUTION.

SO WHAT IS THE RIGHT SOLUTION???

The List of South Africa Implementations which have proven that international findings apply equally as well in local e-learning environments. UC-Wireless has deployed Ruckus Wireless into sites ranging from 500 – 1800 users.

Sunward Park High School’s Enoch Thango, deputy principal has nothing but praise for UC-Wireless and Ruckus Wireless.

“They put in 25 APs that cover the whole school in 24 hours” he says. The school has 1300 network users. Other schools deployed include Brackenhurst Primary – 1200 users; Springs Boys High – 1000 users; Prestige College – 1400 users. UC-Wireless deploys Ruckus in sites across Africa, often working with local network companies.



One of the largest school districts in Colorado.

- 26,000+ students and 4000 staff
- 10,000 networked devices & 3500 laptops
- 13 communities
- 45 schools (elementary, middle & high schools)
- One of the largest most advanced Wi-Fi deployments in the USA
- 411 square miles incl 51 buildings (3.8 million square feet)
- Needed Strong/stable client connectivity
- Support for wide range of MAC, PC, thin clients, iPads, iPhones, etc.
- High-capacity support for large numbers of concurrent clients
- Uninterrupted roaming; Seamless integration with existing backend authentication servers
- Wi-Fi applications including Google apps, student information systems (Infinite Campus), learning management (Moodle), guest access, and in the future, IP video streaming & VoIP.
- St Vrain tested all main-stream enterprise brands of Wi-Fi. Entry level brands could not even be considered. Testing on a single AP was done first.

“Our biggest concern was the connection to the client,” said Eric Merrill, network technician at St. Vrain. **“New smart handheld devices are not like laptops. These devices often have weak Wi-Fi implementations. So when the orientation of the devices changes, the users experiences wild swings in performance. We wanted Wi-Fi technology that could adapt to such changes.”**

After an exhaustive evaluation, St. Vrain began testing the Ruckus ZoneFlex system. “Our main objective was to break the product and see where and when those breaks occurred,” said McBreen. “But we had some problems.” After testing 30 laptops each with 1-2 Mbps video they were unable to bring the dual-band AP down, St. Vrain network technicians turned 30 more Dell laptops on and began pulling video streams. “We had 60 concurrent devices streaming video from two classrooms and couldn’t break this thing so we began pulling out iPhones, iPads... anything we could get a hold of to make it fail,” said McBreen.

“Ultimately we had 78 devices pulling traffic off a single AP, and it wouldn’t fail. That’s when we knew we’d made the right decision.”





A private University in Madison New Jersey 30 Miles west of Manhattan was running 90 Cisco 1200 series APs.

They found migrating to Ruckus was cheaper and easier!

- 2,500+ students and 200 staff
- 187 acres & 35+ buildings
- Needed expanded indoor and outdoor coverage
- Wanted higher speed 802.11n Wi-Fi
- Lower total cost of ownership

DREW UNIVERSITY

A Liberal Arts College
Established in 1867

What they had to say after researching solutions from Colubris, Aruba, Cisco and Ruckus Wireless: "With Ruckus Wireless, we were able to deploy a very sophisticated, campus-wide 802.11n network that is much **easier to deploy and manage**, at 802.11g prices. **No other vendor we found delivered such value**".

After installing the initial APs, Drew found that the Zone Flex system provided better coverage, more adaptive and automatic control over the RF domain.



A 17-story building in the centre of Manhattan, one of the densest urban environments with extraordinary inter-ference from surrounding Wi-Fi networks

- 17,000 students
- 180 smart classrooms
- Theatres, conference and event facilities
- 1.5 Million square feet spanning 5 city blocks

Baruch COLLEGE

A Senior college of New York (CUNY) in Manhattan

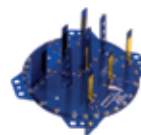
Baruch saw an explosion of Wi-Fi devices. Almost every student has a smart handheld device that they want to use.

"Our students were becoming frustrated," said Arthur Downing, Chief Information Officer at Baruch College.

"When we started to see up to 30 people any AP with our previous system, would literally die," said Martin Fries, manager of Network Services at Baruch. They began a rigorous eight month evaluation process of all the leading wireless LAN systems - bringing in vendors including Cisco, Aruba, Xirrus, Meru, Motorola, Meraki, Trapeze, and others in for a 2-week period to prove the technologies. **After the exhaustive, on-campus testing, Baruch selected the Ruckus ZoneFlex system. "During our roll-out we experienced a 10x speed improvement"** said Downing.

Considering e-Learning ? Smart Wi-Fi The first critical step to any e-Learning solution

- Enterprise-Grade High Density Wi-Fi
- 100% reliable for multiple concurrent connections
- Tried and tested for education globally
- B.Y.O.D. fully supported and compatible with any e-Learning solution
- Professional, prompt and efficient installation
- Support & training provided for simple, seamless configuration



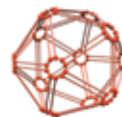
DYNAMIC BEAM FORMING

Adaptive Intelligent Beam-Steering
Interference Rejecting Smart Antenna



QUALITY OF SERVICE

Precision Per-User Video/Data
quality of service.



MESHING

Self-provisioning, self-optimizing
high speed Wireless Backbone.



SECURITY

Patented Advanced Per-User Security

Contact Michael or Quentin
Mobile: +27 83 395 6080
Jhb Office: +27 11 452 6633
CT Office: +27 21 939 1542
Email: education@uc-wireless.com
Website: www.uc-wireless.com

