CORMANT-CS
Infrastructure Management

Carleton University

A Case Study

About Carleton University

Situated on a beautiful campus bordered by the Rideau River and Rideau Canal, Carleton is just minutes from the heart of Canada's capital. Many of Canada's leading high tech companies surround the campus where cutting-edge research joins with highly innovative teaching to solve real-life problems. Students attend from across Canada and from over 100 countries around the world.

Carleton offers more than 200 programs of study in areas as diverse as public affairs, journalism, film studies, engineering, high technology and international studies. More than 2,000 professors and staff members constitute a diverse and dedicated team serving 25,000 students. Carleton's creative, interdisciplinary and international approach to research has led to many significant discoveries and creative works in science and technology, business, governance, public policy and the arts.

The University

- Founded in 1942
- Located in Ottawa, Ontario, Canada
- Situated on 62 hectares just south of the city center
- Five kilometers of underground tunnels conveniently link the University's buildings

ALUMNI 100,000 +

Faculty and Staff (November 1, 2008)

Full-time and regular part-time employees
Academic staff: 883
Management and support staff: 997

Other part-time employees
Sessional lecturers: 586 Retired Faculty: 62
Graduate teaching assistants: 1,732

Operating Budget 2008-2009 (excluding ancillaries)
$284 million

Students (November 1, 2008)

Full-time undergraduates: 16,696	Full-time graduates: 2,703
Part-time undergraduates: 4,124	Part-time graduates: 772
Total undergraduates: 20,820	Total graduates: 3,475
Total full-time: 19,399	
Total part-time: 4,896	
Total: 24,295	

Carleton University IT and Infrastructure Challenges

In 2005 Carleton University began an ambitious structured cabling upgrade to their main Ottawa Campus. 20 buildings on campus were targeted to be outfitted with Fiber Optic and Cat6 twisted pair cabling with an eye towards future proofing the campus for years to come.

Carleton University recognized the need for an Infrastructure Management Database on campus and specified a CMDB into the renewal project. Com-Net Inc. of Ottawa, Ontario proposed using Cormant-CS (formerly CableSolve) as the CMDB and were awarded the project in 2005.

While Cable Management systems have existed for many years; Marc-Andre Boissonneault VP of Com-Net Inc. notes;

"Industry adoption has been slow and one of the problems with many such systems is that as soon as someone forgets to record a change, the system becomes unreliable and not trusted. Cormant-CS mobile platform eliminates this problem because changes are recorded as they are made"

By cataloguing everything as the network is installed, and by using a system that makes it easy to update changes as they occur, Carleton University and Com-Net Inc. have created a CMDB that will remain up to date and useful.

"It makes it a lot easier to maintain the accuracy of information"

- Marc-Andre Boissonneault
VP – Com-Net Inc.

"Carleton University's infrastructure is akin to a small city and it is important to manage the cable plant, Cormant-CS delivers a physical layer tool to accomplish this."

- Denis Levesque
Assistant Director/Operations and Infrastructure

Further Cormant-CS Expansion

By 2009, Carleton University and Com-Net had completed the original scope of the Campus renewal project and are now looking to expand the documentation scope of the Cormant-CS database.

A project is currently underway to document the Access Control hardware and cabling to all the doors on campus. Bar codes are placed on the frame of every doorway and all the access control hardware and cabling is documented in Cormant-CS. Facilities personnel are now able to scan and display the door's access control hardware and termination records on the hand held devices in the field. They are instantly able to track a defective device from the door, to the closet, to the panel and right down to the specific contacts' hosting the hardware.

CORMANT-CS
Infrastructure Management

Carleton University is currently expanding their Cormant-CS footprint into their data center and to their security system assets and connectivity. Cormant-CS SNMP scripting of environmental data and patching capacity that are included in CS6 were key benefits seen in considering this expansion.

Carleton University plans on retrofitting older buildings into Cormant-CS including administration and residence buildings. The Cormant-CS handheld makes recording the existing infrastructure quick and simple.

Pre-Cormant-CS Problems Experienced

Carleton University had a cable infrastructure between its buildings and within its buildings that was proving to be inadequate for the Campus Network Upgrade. The pre-Cormant-CS cable infrastructure situation can be summarized as follows:

- The cabling infrastructure was a mix of various types and standards of cabling that was installed over the past 20 years to meet a series of point requirements.
- Very little of the installed cabling was labelled.
- The cable tray infrastructure was overloaded in some areas.
- New cables were being run for each additional requirement.
- Multiple vendors pulling cables as well as in house resources.
- Moves, adds and changes were taking too long resulting in poor customer service.
- All moves, adds and changes required site visits.

Carleton University Requirements

The campus network upgrade program was adding future capacity at significant cost and this capacity needed to be tracked to ensure it was used correctly. To fully maintain the new infrastructure the upgrade program identified the need to implement standards and procedures. A requirement to consolidate multiple existing information sources into one central database was also identified.

The Chosen Solution

Cormant-CS was chosen because Carleton University saw great value in:

- Mobile access to data without the need for Wi-Fi.
- Ability to represent any infrastructure, new and existing.
- Design and layout of the GUI. Easy to learn and user friendly.
- Bar-coded infrastructure resolved labeling issues
- A read/write API for systems integration.
- Close involvement and leadership from the manufacturer.
- Full support of Cormant-CS from Com-Net, the local solutions implementer.

Key Benefits After the Cormant-CS Deployment

- Consolidation of multiple existing data sources into a single, central, database for change, administration, reporting and planning.
- Visibility of capacity for conduits, capacity for switching and patching.
- Standardization of records and labelling.
- Improved Move, Add, Change turnaround with more improvement expected once Service Desk integration is implemented.
- Complete Physical layer visibility of the new campus infrastructure.

Infrastructure in Cormant-CS

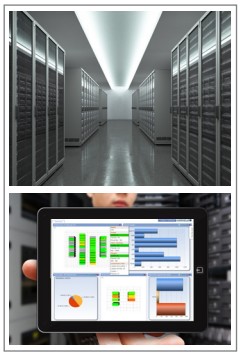
Buildings in CS:	24
Floors in CS:	117
Fiber POP rooms:	4
Comms Rooms:	123
PatchPanels:	225 Copper Visipatch Panels, 885 Fiber PP SM and MM
Cisco Switches:	667
Cables	
Horizontal Copper:	over 15,000
Copper Patches:	over 11,000
Fibers:	3500 strands SM and MM

Carleton University Infrastructure

With the implementation of the new fiber optic and Cat 6 connectivity infrastructure, the university is well positioned to achieve their goal of a unified physical infrastructure, that will include:

- Fire and Security Projects
- VOIP
- Wireless Application
- Environmental Management
- Building Automation
- Access Control
- Video

With all of the equipment and connectivity documented in their Cormant-CS system.



The Future

Cormant-CS will be included in the construction of 2 new buildings planned in 2011. AutoCAD drawings will be implemented as well as integration with HP Service Desk.

Cormant-CS asset management to be deployed to the Data Center and potentially to retrofit other buildings as well.

CORMANT™
DCIM And Beyond

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