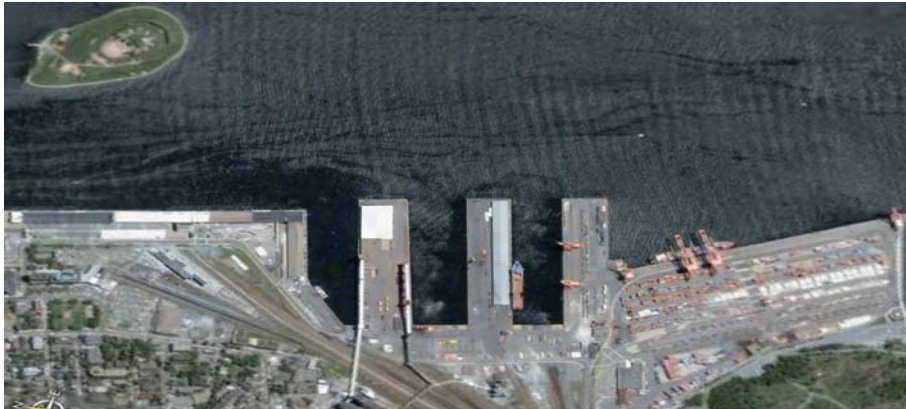


ARCOM is an industry leader in the installation and configuration of highly scalable high performance “Wide Area Wireless” systems. Our complete portfolio of products and services will uniquely enable a network operator to maximize cost/performance over the broad range of environments and applications encountered throughout its coverage areas. ARCOM and its product partner BelAir recently provided the Halifax Port Authority a complete solution for its security network needs.

BelAir’s mesh products are optimized for high capacity data, voice over IP, video and T1 transport applications enabling our customers to deliver a wireless triple play as well as wide scale Wi-Fi, UMA and IMS services.

Customer - The Halifax Port Authority



The Halifax Port Authority (HPA) is a federal corporation that was established under the parameters of the Canada Marine Act (CMA). It administers federal lands that include all terminals within the Port of Halifax.

The Port of Halifax handles approximately 2,000 vessels per year and welcomes cruise ships and passengers from all over the world. Halifax's strategic location, efficient infrastructure and service have made it the preferred connection to Europe, the Mediterranean, the Middle East and Southeast Asia. The growing popularity of the Halifax Port and the mandates set out by the International Ship & Port Facility Security Code (ISPS), and Transport Canada Acts and Regulations, have brought security system requirements to the forefront in recent years.

Consequently the HPA have commenced a comprehensive effort to augment existing security infrastructures in order to meet these requirements; encompassing several projects designed to enhance marine security within its area of jurisdiction for the Port of Halifax.

As part of this initiative it was deemed necessary to provide connectivity between various IP devices spread over multiple terminal locations (HPA’s South End Container Terminal (SECT) and Ocean Terminals (OT) properties) with a high-speed fiber optic security network (SECNET). This resulted in a tender issued for ‘The HPA Wireless Network Infrastructure Project’ (HPAWNI) to address the design, procurement, installation, testing, and documentation

of a complete turn-key wireless network infrastructure with emphasis placed on wireless security and reliability of service. ARCOM was awarded and completed phase 1 of this contract in 2007.

Our Solution Partner – BelAir Networks

BelAir has a proven track record with deployment of over 200 networks worldwide, in the US, Canada, Caribbean and Latin America, Europe and Asia Pacific.

BelAir's deployed networks deliver many broadband multi-media services, ranging from cellular base station backhaul, to video surveillance to point of sale applications. These networks are designed to be compatible with readily-available, low-cost, standard commercial Wi-Fi user devices (laptops, PDA, phones, etc.) and provide access to the huge array of standard IP-based applications and services.

BelAir's broad product portfolio has many significant advantages over its competitors. Their portfolio is unique in the industry, allowing deployments that scale from lowest cost to cover (BelAir50c), to highest capacity voice and multi-media (QoS enabled BelAir200 and BelAir100 networks). Some of the key differentiating product attributes of the BelAir line include:

- Fully integrated, compact, unobtrusive, all outdoor packaging which deploys in under one hour in a wide variety of locations (Poles, rooftops, walls, cable strands and towers)
- Lowest mesh network latency (1 to 3 ms per hop under load)
 - Fully QoS-enabled mesh network for mixed voice, TDM and data networks
- Highest mesh network capacity - 75 Mbps per node enables delivery of multimedia (video, multicast, etc.) applications using the multi-radio architecture, with evolution to 200 Mbps
- Full high-speed carrier-grade mobility solution for voice and data which scales to 16,000+ nodes and 250,000+ subscribers
- Evolution to integrated cellular and UMTS on-ramps (UMA and IMS integration)
- T1 transport over IP
 - Full clock recovery for BTS backhaul
 - First GSM voice call over mesh
- Modular nodes offer future proof networks
 - 802.16e WiMAX
 - 802.11n ultra-broadband Wi-Fi
 - 802.11s mesh networking
- True multi-radio performance with integrated antennas. BelAir is the only supplier in the industry to solve the multi-radio problem without requiring physically separated antennas.
- Industry Leading 3 year Product Warranty
- BelAir radio solutions have the patented ability to create high bandwidth, scalable switched meshes

BelAir's mesh networks can be built out from an existing network infrastructure on an as needed basis, allowing an operator to deploy infrastructure only when and where subscriber demand exists. With a BelAir based solution, a wide area coverage network can be cost-effectively

deployed throughout any city. As needed, additional nodes can be easily added to the mesh to target specific areas or buildings adding capacity as required within these areas.

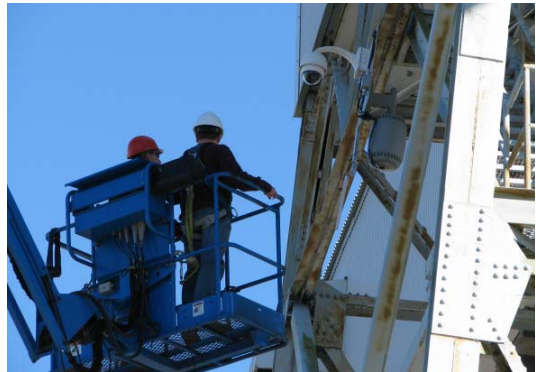
In addition to these other benefits and key to the Port application, BelAir equipment is rugged, secure and has been deployed in marine environments with the US navy with excellent results. The products have been stress tested under extreme temperatures; at -62°C the radios will start and operate and continue to operate up to 86°C. BelAir's patented technology utilizes a 6cm wave length which is much larger than water droplets that occur in rain mist or fog and thus has no effect on data transmission.

Deployment Details

ARCOM and BelAir proposed a unique meshed wireless system that will allow for secure, uncompromised bandwidth with seamless failover in the event of disruption for continuous access to security and surveillance devices.

ARCOM was responsible to the Halifax Port Authority for:

- The overall project scope and management
- Site and Implementation management, including management of sub-trades
 - System Design and Integration
 - Equipment Procurement and Supply
 - Power installation and Build out
 - Camera and Node physical installation
- Field Test and Sign off



Arcom provisioned power and installed surveillance and security devices throughout the various terminals at the Port of Halifax. During the installation Arcom achieved zero interruption to normal daily operations of the port.

Custom equipment mounting plates and brackets were engineered and manufactured as required to ensure proper placement and orientation of the cameras and wireless nodes.



Results:

- **99.999 availability**
- **Zero down time to business operations**
- **Highest level of Security**
- **Customer Satisfaction**

Call ARCOM Telecom Ltd at (902) 468-8000 for more information on this case study or for a consultation for your wireless design, equipment and implementation needs.