

# BROADCAST Dialogue

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## Corus Quay: Built for growth





# Corus Quay: Built for growth

BY MURRAY JOHNSON  
AND HOWARD CHRISTENSEN



*Above: John Cassaday, President/CEO, Corus Entertainment*

For many people a bottle of wine is just a bottle of wine, a car is just a car, a building is just a building. That only holds true, of course, until someone takes us by the hand and explains the nuances of fine wine, the craftsmanship behind a great automobile or the intricacies of a superb structure.

Such is the case with Corus Quay.

A quick drive-by reveals a mass of glass and concrete. Take a few minutes, however, and a whole other world is revealed.

Corus Entertainment's new headquarters on Toronto's East Bay Front hosts 1,100 employees in almost a half-million square feet of a vibrant and energetic open-concept environment that encompasses eight storeys. The senior team was the first to move in, in mid-May. The rest of the

*Opposite page (left): Prominent in the centrally located atrium is a five-storey bio-filter wall comprised of living tropical plants which filters the internal air and reduces dependence on mechanical heating and cooling systems.*



*Above left: Corus Entertainment's core values*

*Above right: Scott Dyer (brown suit) conducting a tour of the new plant*

staff moved in phases through the spring and early summer. Less than three weeks before the official opening, Corus' Toronto radio stations went to air from Corus Quay, with Q107 leading the way with The Rolling Stones' *Start It Up*.

Company President and Chief Executive Officer John Cassaday says the Corus Quay vision was three-fold—creation of an environmentally excellent building; creation of a highly productive workplace that reflects the Corus core values (initiative, innovation, teamwork, accountability and knowledge); and creating a space positioning Corus as the preferred supplier to its distribution partners.

The building exudes a feeling of fun and creativity. Much of the hallway artwork was created by employees. Bright colours abound and natural light finds its way throughout the workspaces from windows overlooking the waterfront. A live studio performance space opens onto an area

called Sugar Beach where, in the summer, there's sand, Muskoka chairs and umbrellas. The waterfront theme is carried on into the building—extending the environment—by way of an iconographic wave that flows into the terrazzo floor, along the walls and down a twisting slide from the third floor lounge to the atrium.

What, do you suppose, were the architects thinking? A slide?

Brian Curtner of Toronto-based Quadrangle Architects says it was "one of those things that came up late at night in one of the design exercises. This is a fun, energetic group. They wanted fun, they wanted playful, they wanted colourful—that's part of the package."

From the business-of-broadcasting perspective, the challenge was in bringing together the latest technologies, across multiple platforms, and integrating them into a single facility at the same time.

*Below: Topping off the new Corus Quay building on Toronto's waterfront with handprints in cement are John Cassaday, President/CEO, Corus Entertainment; Toronto Mayor David Miller; Don Logie, Acting President/CEO, TEDCO; and J. Lorne Braithwaite, CEO, Build Toronto*



Photo courtesy Build Toronto Inc., photographer: Richard Johnson



Photo courtesy Build Toronto Inc., photographer: Narvali

"It's not so much that the technologies aren't found in other places," said **Scott Dyer**, Corus executive vice-president, shared services and chief technology officer. "What's unique is that we have all of them in one place. We have the best workflow engine, we have the most advanced IT-based playout system and the most advanced broadcast scheduling system in the world that integrates all these different forms of content publishing. Carrier-grade networking connects all of the systems in the building. We know of no one else in the world who has been able to do this."

The building's genesis goes back to 2002. Corus management was looking for a way to bring all of its Toronto operations together under one roof because, at the time, there were 11 separate locations housing the various Corus Entertainment properties. They included radio and specialty television, children's book publishing and animation. The challenge was in amalgamating all of the operations while changing, totally, their work methods.

*Below left: Marcos Gonzalez-Flower, Global Head, Media Consulting for Siemens*

*Below middle: Open concept workstations throughout the building*

*Below right: Brian Curtner, Quadrangle Architects Limited*



# More Corus Quay Facts

- Corus Quay is an approximately 500,000 square foot office building located on 2.5 acres of Toronto's waterfront
- The building includes a 100-person theatre on the eighth floor rooftop
- There is a Corus U technical training facility to support ongoing training
- More than 150 meeting rooms located throughout the facility with more than 250 areas for gathering, conversing and meeting in addition to individual workstations
- A live studio performance space that opens onto Toronto's Sugar Beach
- Twenty percent of all materials come from within 800 km of the building, including hemlock which lines the walls of the atrium. The hemlock was reclaimed from a 1910 ferry terminal wharf in Toronto Harbour
- A technical services room that houses more than 250 racks of equipment
- A virtualized computing environment that has shrunk hardware requirements from 300 computers down to 40.



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Richard Johnson | Interior Images

## Design and Implementation

The extensive review, design and implementation project was led by Siemens IT Solutions and Services, which drew upon its extensive experience in developing broadcast technology systems for the BBC and other major broadcasters in Europe and the Asia Pacific region.

"The position that Corus is in now is one where it can not only support Canada and its current content partners, but go beyond that and deliver content across the world more effectively," said Marcos Gonzalez-Flower, Global Head, Media Consulting for Siemens. "They had a very clear vision about what they wanted to achieve, a clear understanding of how they fitted into the broadcasting system and how they had to interact with their partners and keep those relationships strong."

Scott Dyer says the move to Corus Quay was an opportunity to make a new start, replacing everything at once in an integrated manner instead of trying to adapt to change over a 10-year replacement cycle. Importantly, it allowed a close look at the workflows around the various broadcast systems.

"Technology is not of itself a change agent," said Dyer. "It creates the ability to change, but left alone it often takes you back to the old workflows. It's like using a complex tool as a hammer. We've changed workflows, we've changed the way we think about broadcast, we've studied everything everyone does here to enable a totally new way of working."

The move meant adopting file-based processing of all creative assets from end to end. Instead of having to keep track of physical media in different formats throughout the production process, everything is ingested from its original form into the inventory when it comes in the door. All content is captured at the highest bit rate they can get it in. Closed captioning and descriptive video are part of the master file format. This way the content is suitable for virtually any use later on.

The ability to do it all at once was key to the transformation of Corus broadcast operations. The broadcast plant is now fully HD, and all program assets are stored on the highest quality available, even if they're destined for a standard definition service. This allows Corus to quickly upgrade services when consumer demand and carriage warrants.

Corus is also able to package and deliver digital assets sufficiently for VOD,

broadband and other non-linear applications. As an example, an HD master for a program or movie can be received via the Internet, rather than tape. After ingest, Corus can reformat it to the format appropriate for linear services and produce versions for VOD, broadband and digital sales. The program is then available to the digital asset management system and can be viewed on any computer within Corus Quay.

Once content is captured and catalogued in the digital domain it can be readily searched, shared and processed as needed at any workstation in the facility. HD video is available by way of a lower resolution proxy.

Corus selected Quantel's eQ editor, compositor, colour grading and special effects system for its post production online facilities. Three eQs handle all promotional, sales and production work for the specialty services; another two eQs handle online and versioning for the Nelvana children's programming stream. These have full integration with their Final Cut Pro offline systems.

"When we connect Final Cut to Quantel's shared world, the Final Cut works on material in the Quantel storage so there's no movement of material between systems," said Mark Northeast of Quantel. Because the system stores each frame of video as a separate entity, the same content can be simultaneously accessed by multiple users.

"Corus wanted their compositing/colour grading world to be uncompressed," he added. "Their software and toolset is similar to that used by James Cameron and others to produce feature films, except that they want to play uncompressed HD in real time."

The intent is for the content to pass through as few

generations as possible to maintain the highest quality upon delivery. This means Corus needs a lot of storage, and they now have over two petabytes of it—on par, it is said, with the U.S. Library of Congress.

There are three levels of storage; online with hot material needed immediately, near-line for material required in the near future and deep-archive for long-term content storage using tape robots. All storage management is done without human intervention.

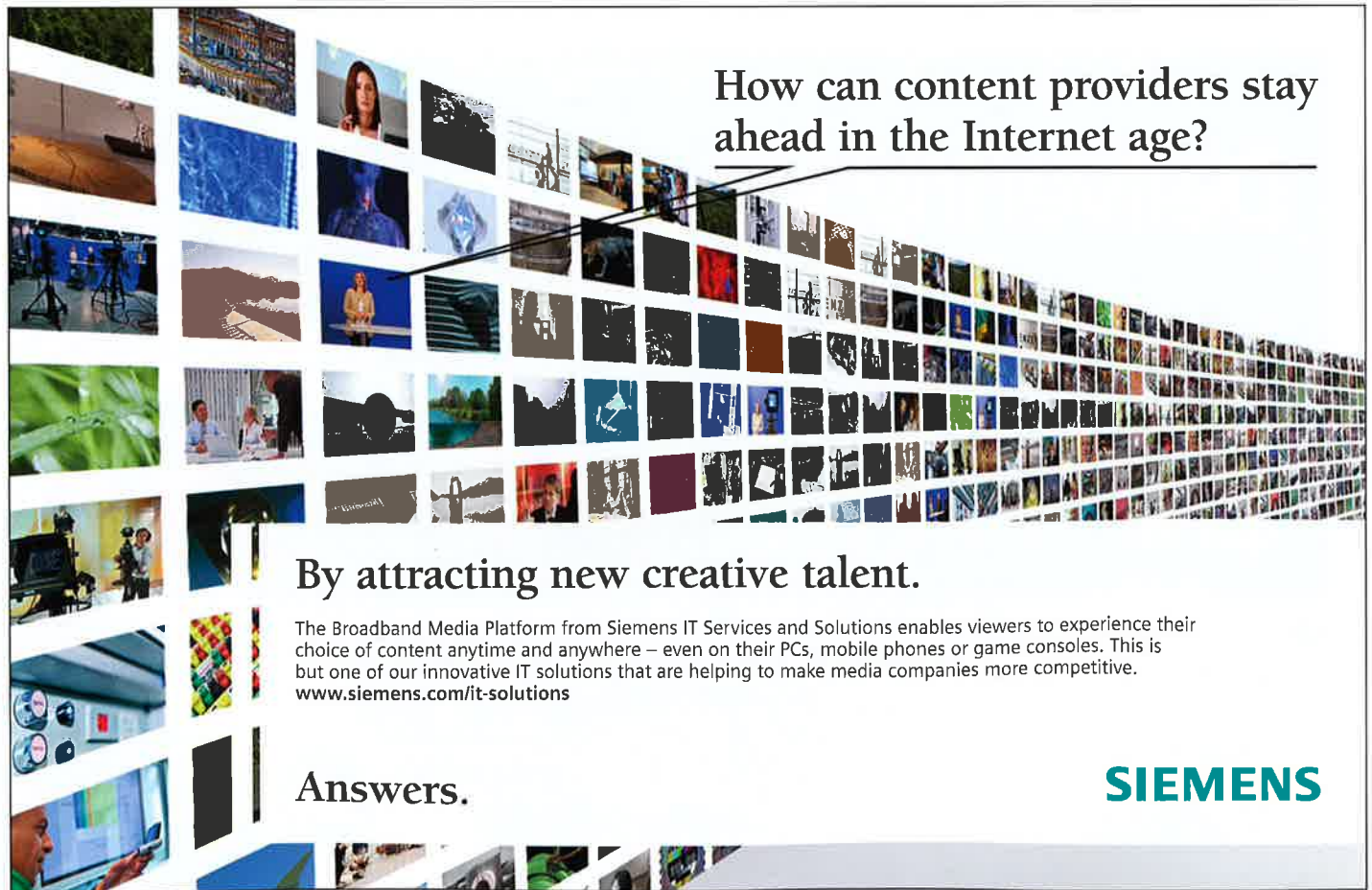
"Our systems are designed to broadcast in HD," said Dyer. "Content that is not in HD is up-converted. But those channels that need SD are simply down-converted. So we have seamless up- and down-conversion as needed at the time of broadcast."

This allows Corus to easily provide HD channels to BDUs as they are able to support them. "The entire infrastructure was built believing that it's going to go to HD at some point, so it's really a matter of what content is available in HD rather than do we have the technology to do that."

### Available Options Carefully Considered

The beauty of starting over is that those involved had the time to carefully consider the available options and then rebuild facilities with compatible systems.

On the production side, HDC-1500R and BRC-H700 HD cameras were purchased from Sony. Grass Valley Dyno replay servers and VizRT high end graphics and branding were provided by Applied Electronics. Broadcast infrastructure solutions were also supplied by Applied, including Isilon nearline servers, Front Porch Digital DIVA media archive management, Signiant content supply chain management, Telestream file transcoders



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and Omnibus iTx automation with AJA video and capture cards for playout. In each case the systems group investigated the products to make sure it was a good fit.

On the production side, Canon DigiSuper 22 compact studio lenses and HJ22eX7.6, HJ17eX7.6, HJ14eX4.3—all with full servo controls and optical encoders.

According to Dyer, the early adoption of Omnibus iTx for playout was a bit of a technology risk.

"iTx is not used widely for what we're using it for here," he explained. "We think it represents what broadcast will be in the future. It's totally on an IT platform, entirely file based. We know it's where the industry is going as it's really commoditizing broadcast in the same way that great IT hardware commoditized corporate IT—we're certainly on the leading edge."

The fully live new presentation system supports 23 TV channels but will have the capability of handling up to 60. With an eye to expansion of content delivery around the globe, the new infrastructure is readily adaptable to meet the anticipated growth.

Of course, broadcast is not the only delivery platform. Material is also transcoded down to iPhone or iPad formats.

"A fundamental design principle in this building was to be prepared to service our customers who need more non-linear content (Video on Demand)," said Dyer. "If you looked at where Corus was a few years ago, we were providing that content but it didn't fit the business model very well and didn't fit the technical plant very well. We had a separate group requesting the content, transcoding it by hand, building the schedules and packaging by hand."

Because these were all manual processes, it was an expensive activity. At the new plant, people at the scheduling level respond

to requests and provide VOD in whatever format the BDUs want. Dyer says the process has been automated so that VOD, broadband, download-to-own, and any other format necessary to address a non-linear need can be done easily, quickly and efficiently, something that could not previously be done.

"In less than 18 months," said Holger Kormann, the vice president at Siemens IT Solutions and Services, "Corus is ready to run one of the most highly integrated digital operations of its kind, enabling the seamless collection, transfer and distribution of content to multiple platforms including Video on Demand, broadband, broadcast and download to own."

Integration and content management allows Corus to be efficient in producing and delivering programming. It also allows other benefits in terms of support costs. Working so closely together, the lines between established departments become blurred. For example, formerly separate IT and broadcast engineering departments have been combined into a single unit to address the infrastructure needs for the whole facility. This provides economies of scale while keeping everyone focused on the same goal.

"Instead of building two competitive structures (which happens) we now have a single structure that addresses all of our needs," said Dyer. "For everything we buy we think—does it work for TV, Radio, IT, Corporate?"

With the previous situation of Corus Entertainment having had 11 separate facilities, there was little in the way of cross-pollination. For example, noted Dyer, he'd never run into radio people in the hallways. At Corus Quay he runs into them every day and that, he says, opens a world of new possibilities.

"We're beginning to see the beginnings of some integration



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between television and radio interactive—their ability to serve their customers by reaching out, they're looking at doing that together. We're seeing more sales synergy between radio and television. We're all at the same table. From a technology point of view, radio is part of our converged network, so we're supporting them within the greater context of the infrastructure of the whole building. That would be the level of the integration today but we think there's an opportunity for much more in the future."

Open concept work stations are in place throughout the building, including for senior team members. Work station walls are typically 42 inches high, providing clear views across the space and sharing the view of the city and waterfront with everyone. Meeting rooms are mostly glass. Casual open spaces are found throughout the building. Most notably are the studio-top lounge and the main floor atrium, both of which are connected by the three-storey slide.

Corus Radio Toronto's new infrastructure, provided by Wheatstone, is the first to integrate E-series control surfaces into a TDM platform. Altogether there are ten control surfaces, nine virtual mixer interfaces and 12 software-based remote control surfaces. A redundant pair of 48-port Wheatnet 4864 TDM switchers form the core, along with six 22-position Bridge I/O frames and twenty 10-position Bridge Satellite I/O frames to service the cluster of the three Toronto stations: Q107, 102.1 The Edge and 640 AM. The TDM solution offers automatic failover, something that isn't available on common AOIP hardware.

Corus is counting on scalability at low cost as a way of competing on the global scale. Integrating creative and support processes is an efficient way to accommodate the anticipated growth. With a converged plant, a single person with responsibility for a brand can easily oversee all of the processes needed to deliver content right from their desktop. Corus believes that the ability to readily coordinate multiple delivery platforms enables strategies to be deployed that actually increase audience size, as opposed to cannibalization of the main channels by broadband or VOD delivery. According to Dyer, having that level of control is the key; the pieces can fit together seamlessly.

Having taken advantage of their unique opportunity to rebuild in a new facility using powerful new technologies has put Corus in good position for the future. Compared with the early design expectations, Dyer said, Corus is "significantly below the network loading, the power requirements and, frankly, even significantly below

the cost" originally estimated due to the changes in technology that have occurred over the five-year design process.

It's happened that fast.

### Leadership in Energy and Environmental Design—Or Taking the LEED

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LEED is a third-party certification program and an internationally accepted benchmark for the design, construction and operation of high performance green buildings. It provides building owners and operators the tools they need to have an immediate and measurable impact on their buildings' performance.

LEED promotes a whole-building approach to sustainability by recognizing performance in five key areas of human and environmental health: sustainable site development; water efficiency; energy efficiency; materials selection; and indoor environmental quality.

Certification is based on a total point score, following an independent review and an audit of selected credits.

Corus Quay is arguably the most advanced broadcast facility in the world from both a production technology point of view and from a building systems perspective. Designed to Leadership in Energy and Environmental Design (LEED) Gold standards, it is predicted that the facility will use 64% less water and 33% less energy when compared to conventional buildings. It employs green roofs, certified wood, low emissions materials, light pollution reduction and gray water recycling. Prominent in the centrally located atrium is a five-storey bio-filter wall comprised of living tropical plants which filters the internal air and reduces dependence on mechanical heating and cooling systems.

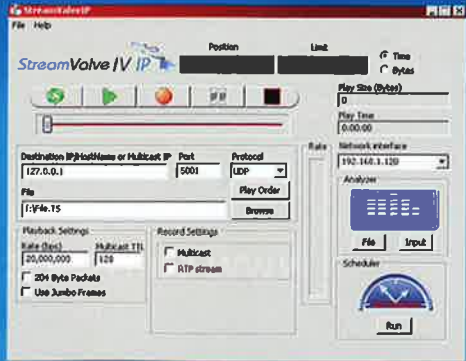
The Corus green roof, the well water and electrical usage and the sustainable materials used in the interior furnishings all contribute to the environmental story.




Midday announcer Joanne Wilder in the Q107 control room

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Full automation to orchestrate all mechanical and electrical systems includes an innovative lighting system that provides individual computer control of all 4,500 lights and fixtures spread throughout the building.

Glen Pollock, director of operations, TV, referred to a locked storage facility that accommodates 70 bicycles. It's to encourage employees to use non-carbon-generating forms of transportation. A further encouragement is adjacent showers. While public transit does not serve Corus Quay well, employees do have a Corus shuttle bus that runs back and forth from downtown Union Station between the hours of 6 a.m. to 11 a.m. and from 2:30 p.m. to 8 p.m.

Corus Quay's East Bay Front neighbourhood has achieved Stage One LEED Gold.

"We're hopeful that this building will achieve a Gold LEED status which was important to the city of Toronto, the landlord of this building and to the employees of Corus who moved into it," said Cassaday.

### The Business of Doing Business

John Cassaday says "Corus Quay gave us the opportunity to transform the operational and technological processes that underpin our business. Our fully-integrated digital infrastructure provides Corus with the agility to respond to our customers needs in a changing marketplace; to be able to aggregate content and distribute it to our customers on whatever platform they want, whenever they want it and in whatever language they want it in, virtually seamlessly.

"We have the ability to aggregate and distribute content to our partners in a way that is unmatched by anyone else in North America but certainly it puts us in a significant competitive advantage here in Canada.

"We think we have created a building that will create the kind of collaborative work environment that is going to be essential to ensure that we succeed in the future. Also, we've been very mindful of creating an environment where employees can enjoy coming to work every day. It's a totally open environment, no floor-to-ceiling walls in terms of offices, complete democracy of light and access to the lake, a real inspiring workplace."

Those Corus core values mentioned earlier—initiative, innovation, teamwork, accountability and knowledge—are, says Cassaday, a big part of the Corus culture.

"We do an employee survey every year and we continue to be astounded how important the core values are with our employees. When we built this place, it was with an eye to really focusing on the core values. For example team work: All the collaborative spaces here, the atrium is designed to just get people sitting around the picnic tables talking. All the common lunch areas, again designed to collaborate. No offices, nobody can go into his or her cave. Even the work stations, which are fairly common, are low and designed to see colleagues so that one can say to another, 'Can I come down to you to talk to you for a second?'"

One other thing: the company has committed a significant amount of space for Corus University. The curriculum, says Cassaday, is second to none in broadcasting. It's designed to continue to build the knowledge of all of employees because, reasonably, with all the new technology in this building the focus is going to have to be on helping people understand it. People need to know how to maximize it.

The bottom line, which Cassaday makes no bones about: "This building is critical to our future."



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