

ARE WE THERE YET?



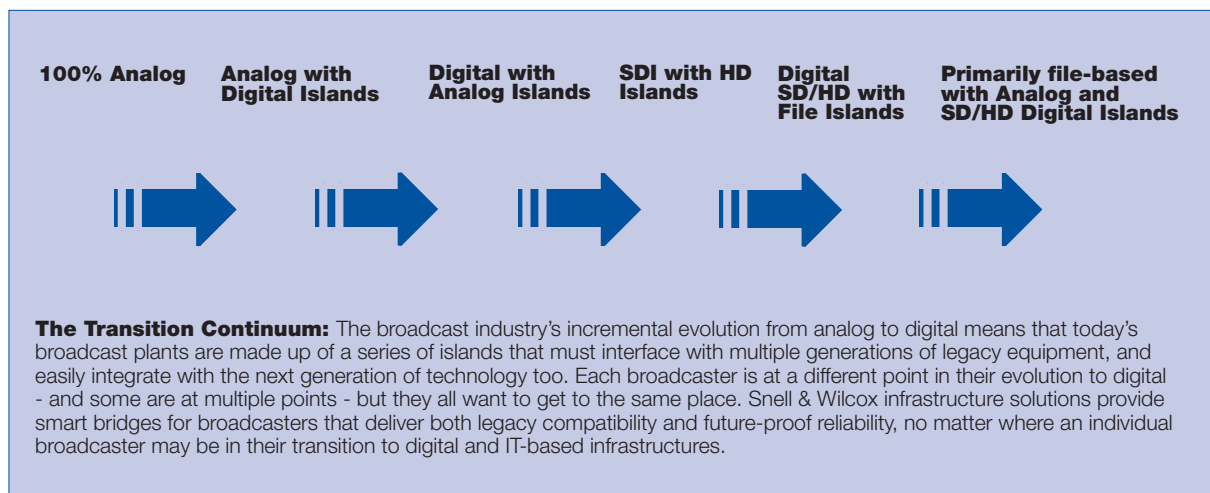
How the “DTV transition” turned into an endless journey for broadcasters, and why infrastructure suddenly matters so much...

Whoever coined the term “DTV transition” must surely have thought it would be over by now. A decade ago, when the broadcast industry began the move away from traditional analog television facilities, no one could have predicted the many twists and turns this journey would take. Just as broadcast engineers encountered SDI, HDTV, multiple channels, surround sound, advanced compression and the 16:9 aspect ratio, the world is now changing again with the increasing adoption of file-based IT infrastructures and open standards asset management. It’s beginning to look as if the “transition” to digital broadcasting will extend far, far beyond that early goal.

Unless fortunate enough to build an entirely new plant deployed with the latest technology, most broadcasters will upgrade their facilities incrementally. This usually means that the new gear they purchase must coexist with the old in clustered “islands.” The size of these islands might change depending on the expansion schedule of the broadcaster, but—due to rapid change in both technology and business models—it has become clear that multiple generations of broadcast gear will have to work together for many, many years to come. Of course, these islands of analog, SDI and file-based systems—whether SD or HD—must operate simultaneously, and in harmony. To do so they require an infrastructure that can also operate in all these domains at the same time—providing both legacy compatibility and the promise of being “future proof.”

At Snell & Wilcox, we see the best antidote to the endless technology transition as a *smart infrastructure*. By smart, we mean an infrastructure that can quickly and easily adapt to change—no matter how often it may come; an infrastructure that can quickly be configured to build “bridges” to the various islands that make up the evolving facility. That’s why Snell & Wilcox offers a single infrastructure system that simultaneously provides legacy compatibility with analog and SD standards as well as future-proof compatibility with HD standards and metadata-rich IT-based architectures.

In the old days (circa—about three years ago), many broadcasters used the term “digital glue” to describe devices that interconnect products from the analog and digital eras. These days, the glue won’t hold. A far more sophisticated “bridge-building” integration strategy is needed that includes not only networking, self-configuration and automatic monitoring functionality, but—for near term future-proofing—the built-in capability to recognize metadata and to identify file movement throughout an existing SDI television plant.



For example, a small broadcast station may upgrade to a digital switcher while still using analog studio cameras. Bridges must be built between the two generations of equipment while preserving the best image quality available. Larger facilities, with an installed SDI plant, must bridge file-based technologies that are quickly gaining momentum. No matter the size of the broadcast operation, a quickly adaptable infrastructure is the best way to adapt to this “transition continuum.”

Some broadcasters see modular infrastructure components as mature “commodity” products that differ little from manufacturer to manufacturer.

We strongly disagree with that misconception, especially at a time when flexible, networked modular infrastructure components are finding new importance as buffers against constant technological change.

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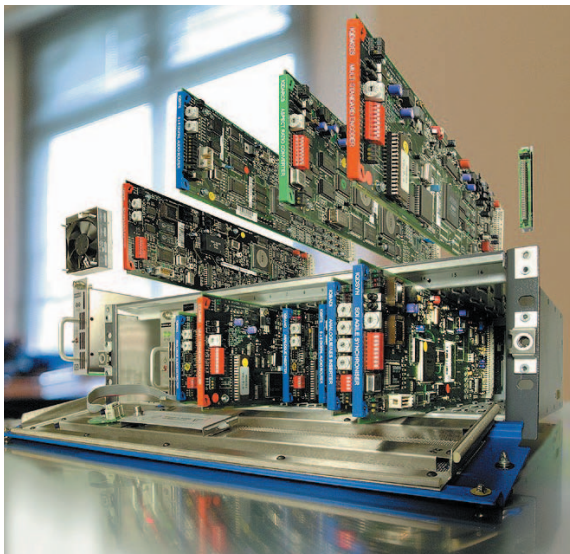


IQ MODULAR

Remarkable record of reliability

At Snell & Wilcox, our IQ Modular line—now consisting of more than 300 modules—is the leading infrastructure product in the world. Three of the world's largest broadcast facilities to deploy modular infrastructures chose Snell & Wilcox over any other supplier. Turner Entertainment Networks employs about 7,000 IQ modules serving more than 20 networks; DirecTV operates more than 2,500 modules; and TVB in Hong Kong has deployed more than 2,000 modules. All three operations use our advanced, field-proven **RollCall** and **RollMap** networked software control and monitoring solutions. All three sites have had a remarkable record of reliability.

But the Snell & Wilcox IQ Modular range is not just for the largest installations. We have shipped more than 150,000 modules to large and small broadcasters worldwide including TF1 in France, Channel Seven in Australia and APTN. In the USA, several station groups including Cosmos, Scripps Broadcasting and Post-Newsweek have also chosen our IQ modules for infrastructure tasks—from DTV up-conversion/ ployout to image processing to bridges between analog and digital islands. Of several hundred modules in constant use at 15 Cosmos stations since 2002, not a single component has failed. We'd argue that the peace of mind total reliability like this brings to an over-worked engineering staff is not a "commodity."



Performance, scalability and reliability

How does Snell & Wilcox's IQ Modular solution differ from its competitors? Each of our modules is "self-aware." Plug it in the card rack and within seconds it announces itself to our RollCall network, which can be run from a standard PC. From there it can easily be configured for precise functionality. Every module acquires full membership in a system of *integrated intelligence* that extends beyond any competitive system in reliable, advanced control and monitoring. There is no need to update control system software or firmware. The Rollcall system updates the entire network in seconds—automatically. Other systems may claim levels of intelligence, but none have consistently delivered the same performance, scalability and reliability as our IQ Modular system.



Advanced and scalable control

Beyond the IQ modules, virtually all of Snell & Wilcox's standalone products have RollCall network capability built-in. This means the finest conversion and pre-processing devices from across the Snell & Wilcox product line can be instantly configured and monitored on any previously installed RollCall network.

By centralizing the control and monitoring of a broadcast infrastructure, stations can do more with less. That's because RollCall software makes broadcasters more efficient.

By centralizing the control and monitoring of a broadcast infrastructure, stations can do more with less. That's because RollCall software makes broadcasters more efficient. The power of this system enables stations to choose a financial model that makes sense for them, whether it's full-blown centralcasting of multiple stations over a wide area network or simple use of a few modules in a single facility.

When it comes to the integrity of the broadcast plant, the RollCall system provides a dual redundant control network that takes full advantage of Internet Protocols, but also can operate in real-time over its own, completely independent coaxial network, giving engineers peace of mind that their facility control is not solely dependent on the reliability of an IT network. With the smart infrastructure solution from Snell & Wilcox if your IT network goes down, you remain in full control.

Engineers faced with real-world problem solving will also appreciate the wide choice and flexibility of IQ modules. These facility building blocks cover all the infrastructure bases, with dozens of available conversion, distribution, routing, video, MPEG processing, monitoring, audio and test generator modules.

Some of our unique image processing modules are without peer, embracing well-known, award winning Snell & Wilcox core technologies in compact, cost-effective configurations. And, just as the needs of broadcasters constantly change, so do we.

Our modules are constantly being re-engineered and improved to meet the requirements of our customers—whether it's combining standard and high definition functionality, multi-channel embedded audio, or support for longer cable runs. Whatever advances are made, backward and forward compatibility remain key features of the development process, ensuring complete control and peace of mind for the broadcaster.

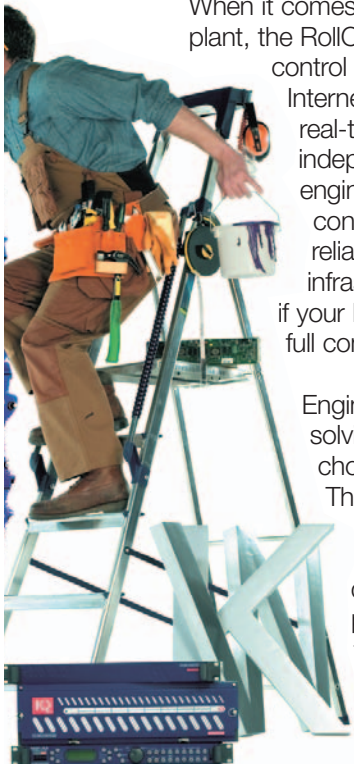
RollSNMP

Already the most advanced and scalable control and monitoring solutions in the industry, RollCall and its sister, RollMap, now take SNMP monitoring to a new level with **RollSNMP**. It provides the ability to control and monitor signals on IP networks beyond Snell & Wilcox products. RollSNMP can recognize devices from such vendors as Pinnacle, Omneon, Cisco and Pro-Bel. Others are being added continuously. While many manufacturers claim SNMP monitoring capability, no one equals Snell & Wilcox in its execution and flexibility with third-party products. Take a closer look to see the difference.

Future-proof solutions

Broadcast IT technology may seem in the distant future to some broadcasters, but for others it's a reality today. Snell & Wilcox recognizes that each broadcaster has a unique timetable for transition, based on its business model and in-house workflow. However, there is no doubt that recent advances in technology, broadcast industry standardization and high performance, generic IT hardware mean that open standards IT-based broadcasting is an idea whose time has come.

The standardization of **MXF** (the Material eXchange Format) and the **SMPTE RP-210** metadata dictionary as well as the latest **AAF** Edit Protocol will empower broadcasters to create multi-vendor systems with complete interoperability, and to begin a move away from costly proprietary storage and asset management systems. The driver for this transition will be the improved economic performance IT technology offers the business of broadcasting through more efficient workflows and better asset management.



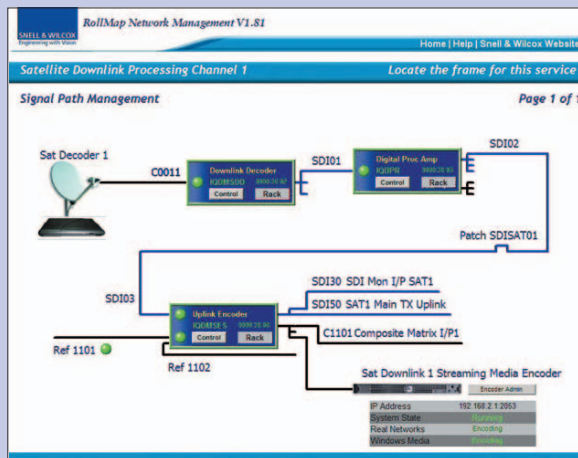
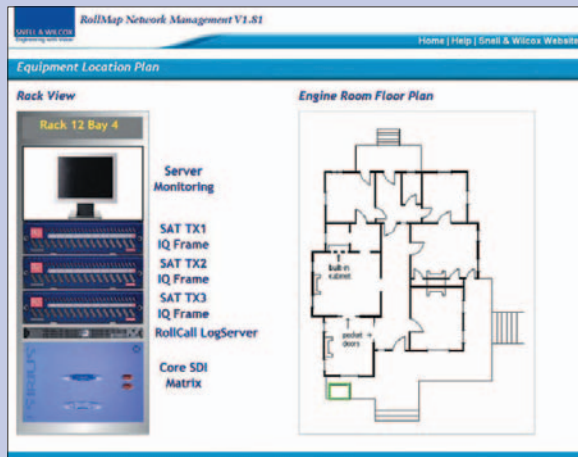
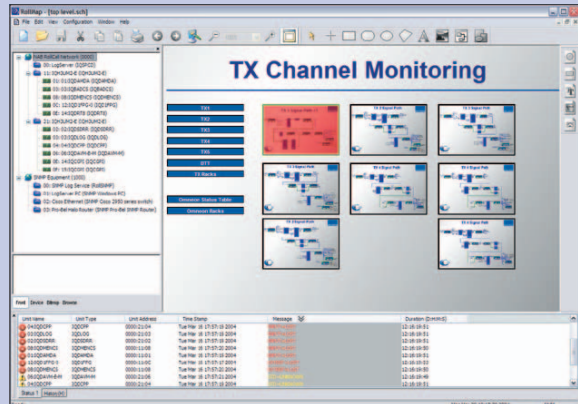


RollCall is the broadcast industry's most comprehensive and scalable infrastructure management solution. Incorporated into all Snell & Wilcox broadcast infrastructure products, it is in everyday use at hundreds of large and small modular infrastructure installations around the world. By employing a RollCall-controlled and monitored plant, broadcasters can choose a financial model that makes sense for them, whether it's full-blown centralcasting of multiple stations over a wide area network or the simple use of a few modules in a single facility.

A key feature of RollCall is its **RollMap** application—a unique technology that offers a global view of the entire infrastructure of a broadcast operation, whether contained in a single building or deployed around the globe. RollMap provides custom network views that enable operators to structure the representation of any equipment. Typically, views are shown as a physical representation of the network topology, but users can arrange hardware by channel, physical location or even create virtual networks and place products inside to create a virtual “channel in a box”. This logical management structure makes locating and managing the correct equipment for operations far simpler than any system in the past has been able to offer.

RollSNMP increases the power of a RollCall network by enabling RollCall to monitor SNMP status information from the products of other vendors. RollSNMP, combined with RollMap infrastructure management, is unique in the television industry because it prioritizes signal paths and broadcast workflow rather than IP network topology. In broadcasting, it's the real-time delivery of television signals that is most critical. Traditional SNMP techniques focus on machine state rather than the broadcaster's signal integrity.

RollCall offers the industry's best solution because it combines the benefits of SNMP with the broadcaster's need to deliver television signals in real-time. It monitors what's essential to the broadcaster—the integrity of on-air signals.



A flexible infrastructure is the key to a smooth migration from conventional broadcast technology to a file-based facility. That's why we have designed our infrastructure solutions to meet the needs of broadcasters no matter what technology they currently use. Snell & Wilcox provides a complete infrastructure solution that accommodates legacy analog standards and formats, SDI, HDTV, multichannel audio, widescreen, MPEG and metadata handling. Broadcasters can buy with confidence today knowing their infrastructure provides a clearly defined path to the future.

Snell & Wilcox has a strong track record of technical innovation and continues to pioneer new developments for the file-based domain. Our engineers are leaders in the standards making process. We are a board member of the AAF Association and have been influential in the creation and standardization of MXF, two critical broadcast standards. At the same time, we are incorporating "future-proof" capability into the products we make today. For example, to ensure that our new IQ modules have a useful life in the next generation facility, Snell & Wilcox is upgrading its hardware and RollCall software to support a file-based infrastructure. Today's generation of IQ modules will support not only analog, digital, audio, SD, HD, and MPEG, but the metadata that identifies file movement in the plant through the existing SDI video infrastructure. This means that products you purchase today will still work in an IT facility. It is our philosophy that long-term value is a hallmark of the Snell & Wilcox brand.

Quality, reliability and value

Meeting the needs of broadcasters is at the root of our business. Our IQ Modular infrastructure line has been chosen by hundreds of broadcasters—both large and small. Our video technology is the most advanced in the world. Our network control, maintenance and scalability is unsurpassed. Our picture quality is consistently rated the best in the industry. Our reliability is second-to-none. And we are competitive, not only on purchase price but on our value proposition to customers.

Finally, let's deal head-on with a nagging misperception: that Snell & Wilcox products are too expensive and designed only for the largest installations. If you believe this, we invite you to look again. Better yet, we'd like to personally demonstrate that this is simply not true. We offer more compelling business benefits than any other vendor—at prices that are always highly competitive. Indeed, it is often the small scale broadcaster who reports the most significant return on investment.

A well-chosen broadcast infrastructure is not a commodity product. It is a mission critical component of your television plant. No matter its size or technical evolution, any broadcast facility and its engineering staff can benefit from the quality and reliability of the best infrastructure technology.

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