Broadcast Network Control System (BNCS+)

Comprehensive control and monitoring for complex media networks

Atos

A proven way to orchestrate IT for Media

The Atos Broadcast Network Control System (BNCS+) integrates and orchestrates both physical and virtual resources and workflows, providing precise, intuitive management control within media hybrid infrastructures.

Built by broadcast professionals for broadcast professionals

Atos controls equipment that adheres to SMPTE ST2110 standards. SMPTE ST2110 standards:

- Specify carriage synchronization and description of separate media streams over IP to enable real-time production, playout and other professional media applications.

- Represent a fundamental shift for the industry, with a move to IP that parallels the evolution from physical tapes to virtualized media files.

- Foster new functionality and workflows, simplifying control and making it easier to manage complexity within broadcast functions.

Atos first designed and implemented BNCS+ for the world's leading public service broadcasting organization nearly 20 years ago, and has been continuously refining, enhancing and extending BNCS+ capabilities ever since. Its excellence has been recognized throughout the industry, and BNCS+ is now used as the key foundation master control system by many of the world's leading media companies.

Leading broadcasters have come to rely on BNCS+ to control and automate their broadcast transmissions. They know from experience that BNCS+ is the most reliable and flexible control platform on the market – critical to efficient, reliable content delivery across all channels, all the time.

As the media industry has evolved, so too has Atos' involvement with key industry organizations and standards, such as the Advanced Media Workflow Association (AMWA) and the Networked Media Open Specifications (NMOS), developed by AMWA.

As a leader in the drive for open standards, Atos ensures that BNCS+ provides full interconnectivity between vendor products within a hybrid infrastructure. It utilizes simple-to-control, IP-based SMPTE ST2110 video, audio and metadata content, delivering excellent performance today while future-proofing your control environment.

Media: facing an inflection point

Technology is changing everything. A 'perfect storm' is shaking the industry, as a variety of factors — from customer demands to evolving business models and services — combine to drive radical transformation.

The way content is consumed has changed dramatically, with video on-demand and mobile services now a normal part of daily life. Traditional linear TV may remain dominant for some time, but audiences are fragmenting across numerous platforms – from social media to over-the-top (OTT) and streaming content providers such as Netflix, Amazon Prime and NowTV. The traditional media value chain has also been disrupted by internet and mobile connectivity — meaning that content is now expected to be delivered anytime, anywhere and on any platform.

To keep up with consumer demands and market threats, media organizations are scrambling to reshape their traditional business models and processes, consolidate operational procedures, and make themselves as agile and customer centric as possible.

From a technology standpoint, the industry is shifting from custom broadcast hardware solutions to software-based platforms based on the commodity IT and IP-based infrastructures and networks that were traditionally restricted to non-critical applications like monitoring and management. The move to a commodity infrastructure reduces support and capital costs, improves scalability and flexibility, while allowing new technological breakthroughs. BNCS+ can help media companies deal with this fallout:

- Making the wrong decisions about control system integration can lead to cost overruns and potential investment write-offs.

- Broadcast media depends on a steady supply of talented engineers. The innovative design of BNCS+ alleviates the need for highly trained technical employees.

- Broadcast professionals cannot afford to make mistakes. The right tools, training and consulting services are needed to ensure proper re-evaluation and restructuring of core media processes.

How BNCS+ can make a difference for you:

- Orchestrate, monitor and control all broadcast operations, including video, audio and metadata.

- Simplify complex broadcast environment processes with a single system to monitor and control the entire broadcast chain.

- Streamline and improve control of broadcast equipment with highly configurable network-based software.

- Maintain a vendor-agnostic control system to reduce broadcast production costs and eliminate manual errors.

- Dynamically allocate production resources remotely, giving complete access to all facilities from any control location.

- Monitor and control media in every conceivable format with no single point of failure, using BNCS+ peer-to-peer architecture.

Managing Complexity

Broadcasting professionals must manage complex environments with complete assurance, at high speed and without errors. Their daily routine involves switching between multiple sources and locations, combining studio content with mobile feeds, live and recorded segments, while confidently handling unexpected events.

The BNCS+ interface is the key to complete control, no matter how many functions are involved. It provides full access to all facilities from any number of designated control locations, combined with full signal path and resource assignment. BNCS+ can combine content from multiple sources and locations in any configuration, while rapid adoption of IP enables you to monitor and control media in any format.

Intuitive Control

Complexity is not just about the technologies and systems within a modern hybrid broadcast infrastructure: it's also about content sources, often with highly variable sound and visual quality, different rights management requirements, payment options and advertising needs.
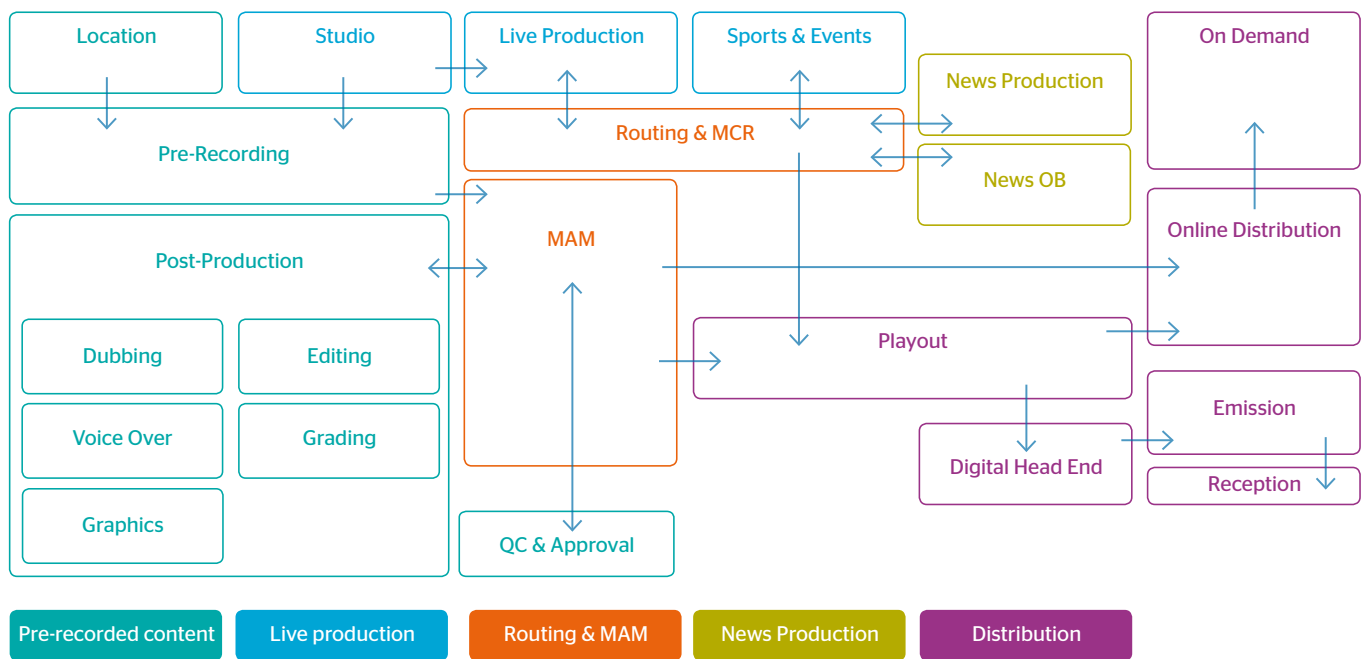
Broadcasters need the agility to blend content of every kind, for every audience, at high speed. Atos provides the fastest, simplest means of control, using touch screen and menu-driven techniques to simplify the most complex requirements.

Different, better, faster: cutting costs and improving quality

In the Digital Age, efficiency and quality can go together. We help you get the best of both worlds, all the time. Innovation and creativity drive higher productivity, leading to operational efficiency and cost reduction — without compromise.

Broadcasters must manage a mix of live and pre-recorded content on different technology stacks for distribution on multiple platforms, creating interlinking broadcast chains.

| Pre-recorded content | Live production | Routing & MAM | News Production | Distribution |

Custom Operator Panels

Using BNCS+, operators can build their own interfaces using standard components, unlocking creativity and enabling faster, better ways of working without any cost penalty. This is a key factor in making the digital revolution work for your business, your business customers, consumers and your most creative people.

Automatic Modules

In today's complex media environment, specialists coordinate activities between hundreds of devices from different manufacturers. In the past, interoperability was a challenge. BNCS+ automates specific operations, with frequently used or complex presets stored by users for simple, trouble-free use.

Common Interface

With BNCS+, it's no longer necessary to navigate between multiple interfaces from device manufacturers. Instead, you can create a unified interface control panel that reflects your own style, language and brand. This is not just about aesthetics — it's about creating an environment in which professionals can work together flexibly, intuitively and effectively.

BNCS+ features and functionality

The BNCS+ software suite is fully configurable and scalable by design. It will flex and grow as your business develops, always giving you ultimate control over the widest range of operational and technical requirements for broadcast remote control, monitoring and alarms.

Functionality

BNCS+ includes all these critical functions:

- User friendly touch screen control for all broadcast equipment

- All essential control and monitoring needs integrated into a simple, flexible, workflow-based interface

- Alarms and monitoring modules for event logging

- Simple-to-use remote control of broadcast systems

- Integration of broadcast infrastructure

- Remote and lights-out operation and monitoring of remote sites

- Integrated panel designer

- Easy system update management

- Simple, intuitive configuration tools

Look and Feel

BNCS+ user interfaces are designed for intuitive, easy to understand operation.

- User interface designs model the workflow, rather than just the equipment

- Designs include consistent, well thought-out color schemes with consistent product styling and clear brand guidelines

- Interfaces are equipped with fully re-skinnable control panels for easy "makeovers"

Technology

BNCS+ is built from proven technology components that deliver:

- Resilient peer-to-peer architecture with no single point of failure

- Full enterprise scalability

- Intelligent device modelling

- Alarms and monitoring based on an IFTTT (if-this-then-that) logic system, for easy configuration, management and reporting of system alarms

- Parallel integration of new and existing systems

Operator Panels

BNCS+ provides an interface designed to suit the individual operational requirements of every operator.

- The process is standardized, simple-to-use and intuitive in design and layout

- Operators can easily control a wide range of equipment from touch screen panels, while excluding parameters that may cause confusion or lead to errors

Hardware

The BNCS+ architecture uses standard desktop PCs as user interface workstations on a TCP/IP LAN.

- Broadcast equipment is connected to the LAN via dedicated device driver PCs, hosting driver applications to manage the communication between each device and BNCS+

- Provides a simple, easy-to-use and fully integrated approach to monitoring and control

Integration

The BNCS+ system allows the exact parameters, capabilities and appropriate user interface elements to be described in a way that the system can understand.

- Employs remote-control interfaces or APIs implemented by equipment manufacturers, mapping controls and alarms from each device and consistently presenting them to the network

- Once all devices exist are connected and accurately described on the network, user interfaces can be designed and linked to build complete operational systems

Resilience to meet the demands of the Digital Age

Resilience

BNCS+ is also highly resilient to meet the always-on requirements of the Digital Age.

- Monitors and reports both its own status and that of controlled devices, to ensure efficient operation and enable proactive management

- Provides redundant controls for critical broadcast equipment

- Includes configuration, management and administration tools for super users, who can review and manage the panels on each operator workstation

- Additional tools allow configuring major system parameters, and a visual panel editor enables WYSIWYG user interface design and functionality modification

BNCS+ Enhancements

The advanced BNCS+ platform enables you to rapidly exploit all the potential benefits that Networked Media Open Specifications (NMOS) can offer, including:
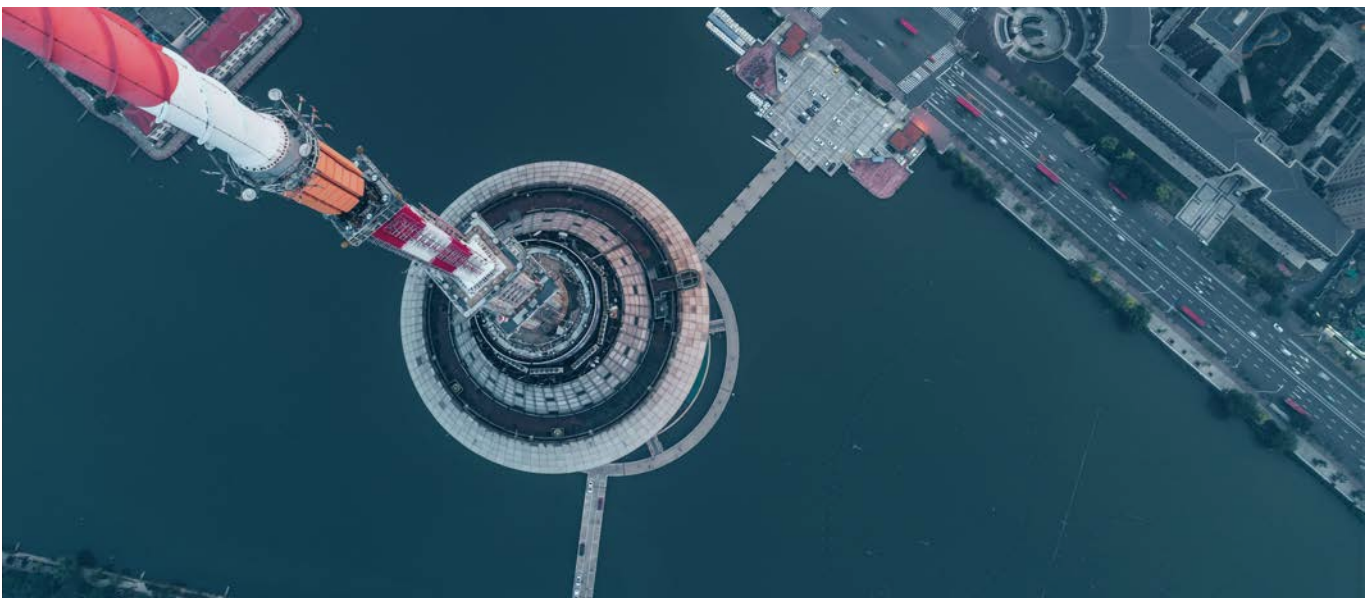
- Extended infodriver slots, a basic mechanism of BNCS+

- Full support for the latest version of NMOS

- Enhanced security

- Improved tooling for development and deployment

- Future compatibility hooks between BNCS+ and emerging techniques, such as Slink and Shared Driver Framework

In addition to full NMOS compatibility, BNCS+ offers access to a growing range of new modules, including analytics, machine learning and new workflow options.

Staying in control

The broadcast world has changed dramatically in the past decade and the speed of change is still accelerating. Atos BNCS+ is the broadcast control platform of choice for leading broadcasters worldwide. Intuitive, vendor neutral and consistent with emerging global standards, BNCS+ gives you greater control, automation and efficiency today — helping you move into the future with confidence.

About Atos

Atos is a global leader in digital transformation with 110,000 employees in 73 countries and annual revenue of € 12 billion. European number one in Cloud, Cybersecurity and High-Performance Computing, the Group provides end-to-end Orchestrated Hybrid Cloud, Big Data, Business Applications and Digital Workplace solutions. The Group is the Worldwide Information Technology Partner for the Olympic & Paralympic Games and operates under the brands Atos, Atos|Syntel, and Unify. Atos is a SE (Societas Europaea), listed on the CAC40 Paris stock index.

The purpose of Atos is to help design the future of the information space. Its expertise and services support the development of knowledge, education and research in a multicultural approach and contribute to the development of scientific and technological excellence. Across the world, the Group enables its customers and employees, and members of societies at large to live, work and develop sustainably, in a safe and secure information space.

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