

BigBand Digital TV Management

BigBand Networks provides the comprehensive functionality needed by a cable operator offering a complete lineup of digital programming. BigBand Digital TV Management speeds delivery of new services and content while fully leveraging embedded network infrastructures, lowering operating expenses and assuring strong returns on investments. At the core of BigBand Networks' solution is the BMR[®] (Broadband Multimedia-Service Router), the recognized benchmark platform for network delivery of video services.

Interoperable with a broad range of sources of programming, the BMR processes MPEG, IP and Ethernet packets natively, and Rate-Shaping[®] algorithms ensure that channel lineups provide the highest quality video while consuming the least bandwidth.

BigBand Digital TV Management supports the creation of multiplexes combining SDTV, HDTV, digital audio and other types of content. The solution contains special provisions for

HDTV such as the ability to cope with dynamic programming changes and aggregation of program related data, and is ideally suited for this application.

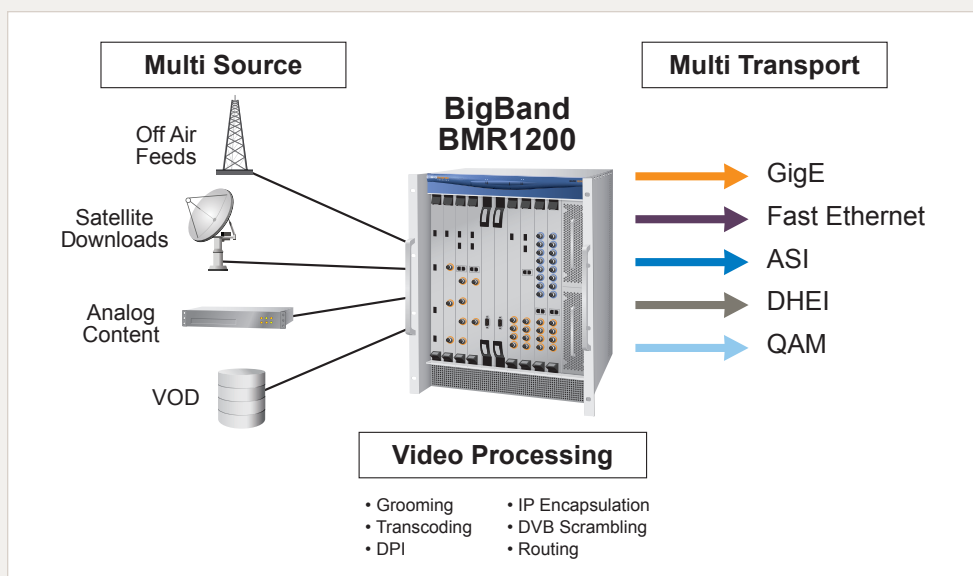
Digital ad splicing is implemented on the BMR, allowing RateShaping to be applied to multiplexes that combine programs and advertisements, for ads delivered with superior quality and bandwidth efficiencies. In addition to complying with SCTE standards, special features are provided, such as the ability to simultaneously splice different ads into multiple copies of the same program for lucrative targeting of geographic zones and demographic profiles.

Privacy and restricted access are supported in accordance with DVB Common Scrambling and DVB Simulcrypt standards for conditional access, ensuring interoperability with all headend environments, digital set-top boxes and emerging cable-ready digital TVs.

Summary

- Comprehensive solution addressing bandwidth constraints and speeding delivery of news services and content
- Media-aware processing of feeds from broad range of sources of digital programs and digitally-encoded analog programs
- Grooming of multiplexes combining a variety of content, including SDTV, HDTV and digital audio, with operator-selectable RateShaping priorities
- Digital ad insertion complying with relevant SCTE standards and providing advanced features such as lucrative targeting to geographic zones and demographic profiles
- Special provisions for HDTV including PSIP table aggregation and custom slate insertion
- Conditional access meeting DVB Common Scrambling and DVB Simulcrypt standards
- Insightful GUI-based management providing wide range of features, including drag-and-drop creation of broadcast multiplexes

BigBand BMR simplifies headend operations and saves space



BigBand Digital TV Management

Superior Quality Video with Improved Bandwidth Efficiencies

The BigBand BMR provides the functionality of a “headend in a box”. Interoperable with a broad diversity of infrastructure, the platform receives feeds in formats that span ASI, high speed ASI, DHEI, Fast Ethernet and Gigabit Ethernet, along with analog programming that has been digitally encoded. The high density BMR1200 chassis, capable of holding up to eight I/O cards, for a total of 96 ASI or DHEI inputs, 72 ASI or DHEI outputs, 32 GigE inputs/outputs, and 64 broadcast QAM outputs, connects any input to any output, removing the need for complex cabling.

Comprehensive Solution for HDTV Growth

By enabling HDTV and SDTV to be part of the same statistical re-multiplexing pool, significant improvements in bandwidth efficiency can be achieved since statistical characteristics often offset each other. BigBand Digital TV Management gives an operator full control in assigning RateShaping priorities to different programs.

When grooming HDTV feeds, the BMR extracts incoming PSIP (Program and System Information Protocol) tables and determines what PSIP data goes with which content. The BMR switches programs to the appropriate output ports, creates new PSIP tables and transmits them in-band alongside other content. Information such as program numbers, closed captioning content and other associated data is maintained.

When a broadcaster switches signal from HD to SD, the BMR can insert a slate as a substitute program, reducing the number of calls from subscribers thinking that service has been interrupted. A suite of software tools enables an operator to create and MPEG encode a slate in HD or SD, decode and monitor program feeds, and select the criteria that trigger slate insertion.

Advanced Digital Ad Splicing

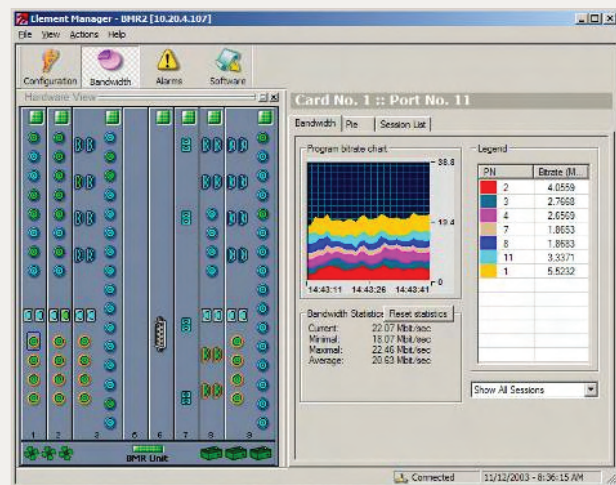
In addition to providing basic requirements, BigBand Digital TV Management offers advanced features, such as the ability

to simultaneously splice different ads into multiple copies of the same program and forward them to specific geographic zones or demographic profiles. This enables a service provider to attract advertisers interested in reaching lucrative niche markets. Ad splicing on the BMR is performed on any output, enabling ads to be inserted across the entire programming spectrum to best accommodate content, versus concentrating it on a single channel. Furthermore, by splicing ads on a program-by-program basis, operator control is enhanced and the need to change program lineups eliminated. The BigBand ad insertion gateway is compliant with the SCTE 30 2001 standard governing the server/splicer interface and the SCTE 35 2001 standard for digital cueing.

User-Friendly Management Suite

The BigBand Management and Server Suite makes it easy to configure and monitor the BMR, and dynamically provision content and services. GUI-based management provides a wide range of features, including drag-and-drop creation of output.

Screen capture from the BMR Element Manager, one of several GUIs available in the Deep Digital Management solution



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