

Association of Communications Engineers



Applications, Challenges and Emplacement of Broadband Services

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Headend Aggregation



INNOVATION TO THE NEXT POWER

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Video Services Implementation Challenges

- Acquiring content
 - Standard Definition
 - High Definition
- System Integration
 - Transport Systems
 - Emergency Alert Systems
 - Billing Systems
 - Middleware
 - Encryption
 - Set-Top Boxes
- Lack of interoperability standards

Different Requirements for Different Video Deliver

- CATV Systems
 - Variable Bit Rate MPEG 2 for SD and HD
- DSL based IPTV System
 - Constant Bit Rate MPEG 4
- Fiber to the Premise IPTV Systems
 - Bandwidth available to support both technologies

Headend Aggregators

- They provide:
 - “Packaged” solutions for Video
 - Integration of system components
 - Management of the system

Types of Providers

- Transport Only
 - Independent of content provider
- Integrated Headend
 - Provides Turn-Key Solution with:
 - Middleware
 - Encryption
 - Set-Top Box
- Managed Headend Services
 - Turn-Key Solution along with system management and support

Underlying Satellite Transport and Programming Vendors for Headend Aggregators

- Limited Number of Satellites in Orbit
- Avail Media
 - Intelsat and NRTC
- IP Prime
 - SES Americom and NRTC
- EchoStar

Headend Aggregation Vendors

- Echostar
 - MPEG 4 CBR
 - Open to all contracts NCTC.....
 - Programming includes most local stations
 - Transport only options provides local, HD, movies and international channels
 - Turn-Key Integrated Systems
 - Managed solutions

IP Prime

- SES America, NTCA & NRTC
 - Pre-packed programming
 - 5-6 racks of equipment
 - MPEG 4 IP Transport
 - Centrally managed middleware and encryption
 - Transport only and fully managed solution
 - HD4 HD overlays of 32 HD Channels

Transparent Video

- Digital CATV System Upgrade
- Inputs can be HITS, Analog or Digital Satellite or 8VSB
- Separable Security Cable Smartcards
- Low cost, \$80 Set-Top boxes
- Seamless implementation of digital

Additional Headend Aggregators

- Nortel
- Falcon
- INS Regional Headend
- Avail Media
- CSI Digital

Advantages of Headend Aggregators

- Lower Headend costs by eliminating the need to Encode, Transcode or rate limit video streams at the Headend.
- Provides a solution with interoperability issues are worked out prior to deployment.
- Ongoing interoperability issues associated with vendor software upgrades should be resolved.
- Managed system simplify technical issues for smaller operators.

Disadvantages of Headend Aggregators

- There may be limitations on sharing Headends with neighboring companies.
- Ongoing monthly costs for transport and management.
- Limited to equipment supported by the Headend Aggregator.
- Single vendor solutions-
 - What happens if a vendor leaves the market?

Questions?



