



Scientific-Atlanta Discussion With FCC July 13, 2004

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What We Will Cover Today:

- R&O / NPRM Digital Broadcast Copy Protection

[MB Docket No. 02-230]

- ¶ 58 – MVPD Retransmission [of Broadcast Flag]
 - The clear language in ¶58 exempts Scientific-Atlanta’s commercial products for MVPDs from the Table A certification process
 - MVPDs and content owners establish mutually agreeable content and copy protection terms via the commercial content supply negotiation process making the Table A process redundant and unnecessary in that case.
 - This same logic should apply to the “trusted domains” of MVPD operator provided home video networks and professional [MVPD headend] equipment.
- Scientific-Atlanta supports the Petition for Reconsideration or Clarification of the NCTA [dated January 2, 2004]...specifically that:
 - ¶ IV – “The Commission Should Clarify That Cable Operators May Distribute Programming Over Robust Home Networks”
 - ¶ III – “Professional Cable Equipment Should Be Expressly and Automatically Exempted”
- Background on S-A Settop Box Copy Protection

¶ 58 – MVPD Retransmission [of Broadcast Flag]

¶ 58. MVPD perpetuation of a flag content protection system for DTV broadcast retransmissions could occur in one of two ways: (1) by MVPD pass-through of the ATSC flag where the retransmission is unencrypted, or (2) where the retransmission is encrypted, by conveying the presence of the flag through the MVPD's system by some means that requires the consumer's reception equipment to protect the content as if the flag were present. DIRECTV asserts that it can pass-through the flag, but asks that MVPDs be given the discretion to decide how to carry and implement the ATSC flag. To ensure that the flag does not interfere with cable operators' home networking capabilities, NCTA seeks flexibility to provide DTV broadcast content with redistribution control protection through alternative means. The Joint Proposal allows for both mechanisms. **We agree that MVPDs should have the latitude to implement the flag as appropriate for their distribution platforms, whether it be through direct pass-through or by effectuating the flag's intent through their own conditional access system...**

Set Top Box (STB) Copy Protection

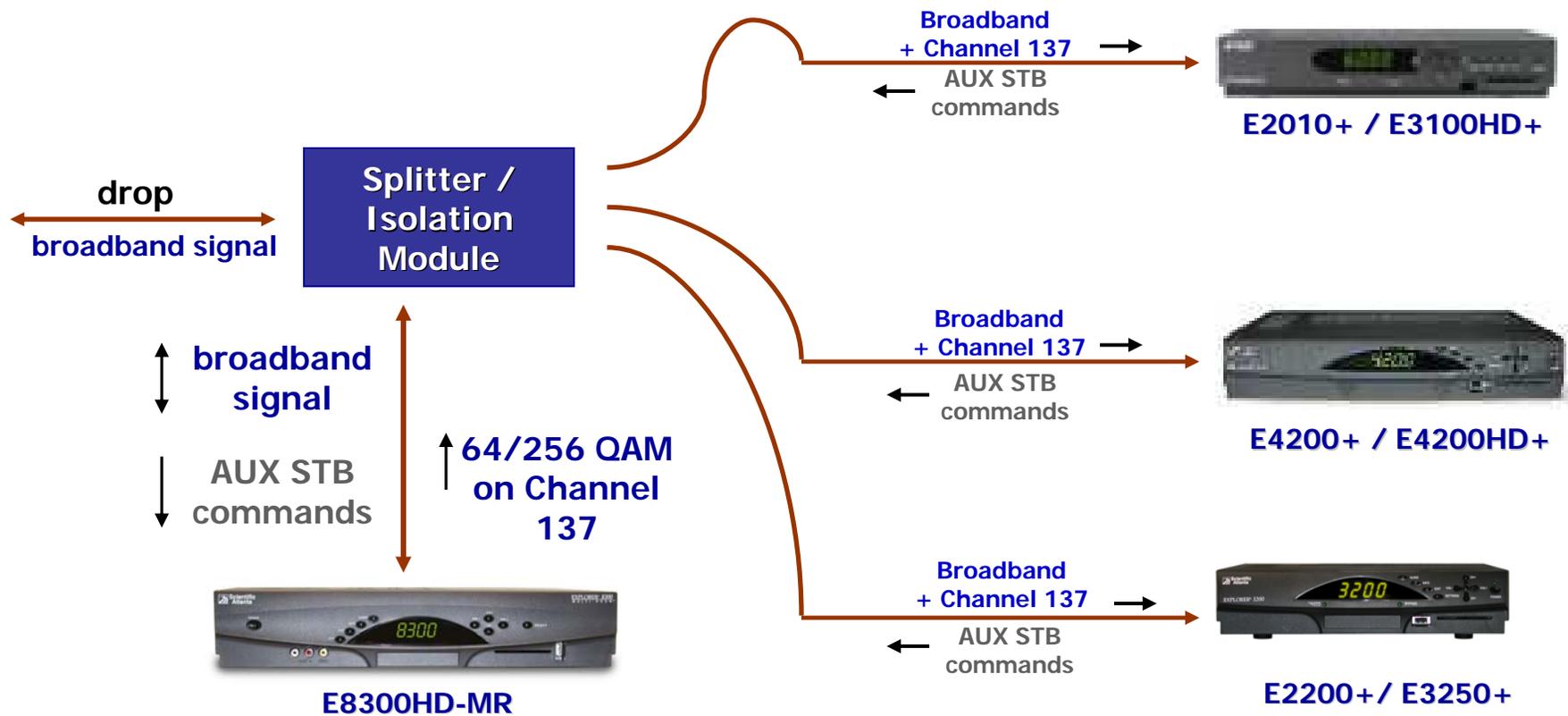
- Digital content delivered from network using PowerKEY Conditional Access System (CAS)
- Outputs use copy protection according to Broadcast Flag rules.
 - HDCP (DVI and HDMI outputs)
 - DTCP (IEEE 1394)
 - Macrovision (on NTSC analog outputs)
 - CGMS-A (passed through analog Composite and Component outputs)
 - Broadcast Flag passed through on IEEE 1394 port; and to operator-controlled home network
- Copy Protection bits carried securely via PowerKEY.

Multi-room DVR

- Subscriber service that allows up to 3 other TVs in the home to access and playback content stored on the Explorer 8300 DVR
- Supported on all legacy S-A STBs via software download
- Same simple user interface for accessing the recorded list on all set-tops
- Pause, rewind and fast forward modes are supported on playback from all set-tops
- Ability to access recordings in progress on non-E8300 set-tops



Explorer 8300-MR: Multi-Room DVR



DVR Conditional Access

- PowerKEY CAS encrypts digital content delivered to all STBs (DVR and non-DVR).
 - Uses RSA public key infrastructure to deliver permissions and exchange authenticated keys with each STB.
- DVR decrypts content from network and re-encrypts content (3DES) for storage on HDD using STB specific PowerKEY keys.
 - HDD can not be moved to another STB.
- External HDD supported through SATA interface using same STB specific keys.

Multi-Room Conditional Access

- Uses existing PowerKEY CAS infrastructure
- Client must be authorized by operator via PowerKEY for MR-DVR service
- DVR securely exchanges encryption keys with client STB on request.
- DVR delivers content via QAM to client STB using 3DES PowerKEY encryption.
- Client provides same copy protection for content as though it was real time broadcast.