Metadata format and Update Notification Protocol

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Background

- Standardization activities for electronic program guides (EPGs)
  - MPEG-7, TV Anytime Forum, DVB, etc.
- Proprietary EPGs
  - e.g., Cable TV, PVR
- Also, protocol managing metadata

Issues

- draft-nomura-mmusic-pguide-requirements-00.txt
  - Are requirements for EPGs appropriate?
  - Does existing formats meet the requirements?
- Protocol to manage metadata

Requirements for Metadata

- Describe features of multimedia content comprehensively:
    - URL, genre, rating, availability, bandwidth, billing,..
    - Multiple segments in a program
- Multiple metadata EPG sources

MPEG-7

- Provides description tools for multimedia content
- Defines a comprehensive set of audiovisual description tools
  - Description Definition Language (DDL) = XML schema + some extended datatypes
  - Description Schema (DS) = structure, semantics
  - Descriptor (D) = features
- DDL was standardized in Sep. 2001

TV Anytime Forum (TVA)

- Uses MPEG-7 tools to describe EPGs
- Describes structure of programs
    - Multiple programs in a program group
    - Multiple program locations for a program
- Allows multiple EPG sources
- Describes user preferences and usage history
    - Time, content, format, action, …

Other Activities

- DVB-IPI
- iEPG
  - text-based straightforward description
  - lack of extensibility
  - on-demand retrieval using HTTP
- Proprietary EPGs
  - Replay TV, TiVo

Requirements for Protocol

- On-demand retrieval
- Simple update notification mechanism
- Managing metadata status on a server and a client
    - Useful for a content management in general
- Delta description methods
    1. defined by XML schema
    2. using existing algorithm like "diff"

SIP Event Notification

- draft-nomura-cdi-mmusic-mupdate-00.txt
- Simple: using SUBSCRIBE and NOTIFY
- Server and client can manage metadata status
- Delta description
- Is the protocol suitable for MMUSIC-WG?
  - WEBI-WG was closed
  - CDI-WG is focusing on requirement works