Internet Media Guides
– Update –
– Next steps –

Rod Walsh, Pekka Luoma & Yuji Nomura

MMUSIC

3.March.2004, IETF-59, Seoul

IMG Requirements: 02 => 03 changes

- Terminology (especially use of the "IMG" term) tidied up
- §1.1 "Background and Motivation"
  - Text tidied up
  - Noted that "we generally expect IMG Senders to be well connected hosts"
- §3 "Problem Statement"
  - Noted that the existing work does not satisfy all of the following requirements; and referenced the IMG Framework document
  - Improved structure of the text
- §4.2 Content Orientated Use Cases
  - Reordered
  - Added "Coming-release and Pre-released Content" which requires subscribe/notify operations
- Minor clarifications to 4 delivery requirements:
  - DEL-1, DEL-2, DEL-3, DEL-6
- Clarified IMG Description requirement DES-3:
  - Stressed the transfer envelope's need to be independent from data models
- IANA considerations & IPR boiler plates added

IMG Framework: 02 -> 03 changes

- IMG SUBSCRIBE operation further clarified:
  - Abstract operation enables both subscribe & unsubscribe functionality

- IMG NOTIFY operation further clarified:
  - IMG NOTIFY is an asynchronous response to an IMG SUBSCRIBE

- Reference removed:
  - content distribution network (CDN) architecture

- Figures improved:
  - Figure 6 placement corrected (§4.3 -> §4.2)
  - Figure 7 placement corrected (§4.4 -> §4.3)
  - Figures 6 & 7 messages named (instead of numbered).

- Existing Protocol Fit to the IMG Framework Model (new §5.1)
  - "Summary of Limitations of Existing Protocols" & "Existing Protocol Fit to the IMG Framework Model" combined, RTSP added & text tidied up

- Normative & Informative references separated

- IANA considerations & IPR boiler plates added

- Handful of typos corrected

What next…

- Freeze the current documents
  - IMG Requirements & IMG Framework IDs
  - WGLC for Informational RFCs
  - Started Monday, ends 15.March

- Take up recommended specifications:
  - IMG Transfer Envelope
  - IMG Multicast Delivery Protocol (announcement protocol)
  - IMG Point-to-point Subscribe+Notify Mechanism

- IETF charter each of these 3

- Maximum reuse and interoperability with other WGs:
  - Avoid copy & pasting and competing solutions
  - 3GPP/SA4/MBMS work on service announcement delivery protocol
    - Based on RMT-FLUTE
  - 3GPP/SA4/MBMS work on transfer envelope
    - TBD
  - DVB/ETSI work on baseline data model
    - TBD

IMG Framework: Layered Model

Media/content descriptions
and other associated metadata

Structure and representation
of IMG Metadata

Data model

Maintenance, Encapsulation

**IMG Delivery
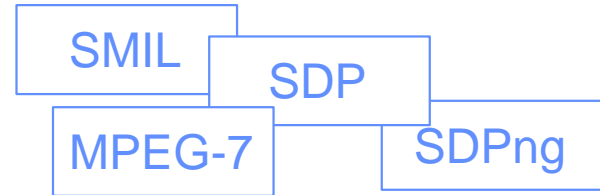(announce, query, notify)**

Transport Protocol(s)

Network and lower layers

IP, L2, etc.

New IETF IMG Components Needed

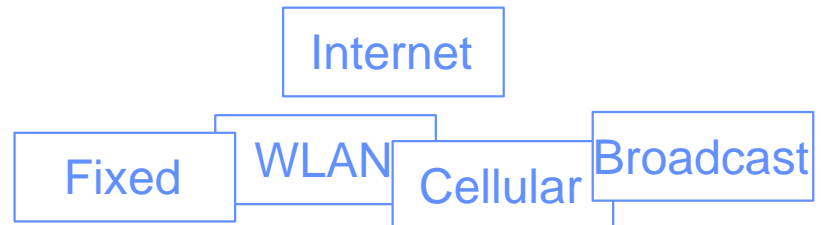Media/content descriptions and other associated metadata

Data model

SMIL
SDP
MPEG-7
SDPng

Maintenance, Encapsulation

IMG Transfer Envelope

Transport Protocol(s)

IMG Delivery Method

IMG Subscribe/ Notify Method

IP, L2, etc.

Internet

Fixed
WLAN
Cellular
Broadcast

IMG Transfer Envelope

- Need to provide a common minimal set of information to manage transfers of IMG information
  - Independent of delivered IMG Metadata & of IMG Transport Protocol
  - Identify, Version & Validity/expiry time of "a block of" IMG metadata

- Working assumption to use XML definition
  - 2 methods under consideration:
    - A wrapper encapsulating an IMG description
    - A separate object referencing the IMG description

- Groundwork already an individual ID
  - `draft-luoma-mmusic-img-metadata-envelope-00`
  - Need to request a new MIME content type for the envelope
  - Align the terminology section with IMG Framework

- Proposed MMUSIC charter item!

Multicast Transport Protocol

- SAP does not meet the IMG requirements

- A new and untested protocol from scratch is unnecessary…

- Working assumption is to specialize RMT-FLUTE
  - Provides all the basic functionality as file delivery
  - With reliability, fragmentation, channelization, etc.
  - IMG Metadata announcement can be abstracted as unidirectional multicast file delivery

- Groundwork already an individual ID
  - `draft-luoma-mmusic-img-muppet-04`
  - Focuses on the channelization of IMG transport
  - Bootstrap options need to be considered
  - Align the terminology section with IMG Framework

- Proposed charter item (MMUSIC/RMT)

IMG Unicast Subscribe & Notify Mechanism

- HTTP does not meet the IMG requirements
  - Always-on sessions & polling do not scale (# of users & data quantity)
  - Need an update notification mechanism

- Working assumption is to base on SIP Event Notification
  - Already has SUBSCRIBE and NOTIFY functionality
  - Good candidate for update notification
  - Need to standardize ″Event Package″ for IMG
    - Take RFC 3427 into account (SIP change process)
  - Need ″Envelope″ to make IMG metadata delivery maintainable
    - Needs to support ″delta description″

- Proposed charter item (MMUSIC/SIPPING)

New Work Items for WG Charter

We propose chartering the following work items:

- IMG Transfer envelope

- IMG Delivery Protocol (announcement protocol)

- IMG Point-to-point Subscribe+Notify Mechanism

- "WGLC November 2004 ±1 month"