

IP-DVB List Activities

2nd Open Meeting
Toulouse

Gorry Fairhurst
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Agenda

Gorry Fairhurst (gorry@erg.abdn.ac.uk)

Agenda Bashing
WG Status
Review Charter

Review of drafts
draft-req
draft-enc

Other issues
IP-CC (Pekka)
IPv6 (MJM)
IP enc & label switch (ASPI)
IP address resolution

Attendance next IETF
Link with other WGs ETSI; DVB; ATSC?
TIA? (34... Aaron Falk....etc)
ITU-T q13? ATM-Forum?
Timeline?

Current Status

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Started: Sept 2001

First Meeting: Dec 2002 (IETF Minneapolis)

Combined Meeting: May 2002 (DVB-GBS Helsinki)

Web pages

<http://www.erg.abdn.ac.uk/users/gorry/ip-dvb/>

Proposed charter (rough consensus)

Mailing list established

131 people (lunchtime friday)

Charter Roadmap

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-
- | | |
|----------|--|
| Nov 01 | Individual submissions of IDs to IETF |
| Dec 01 | Meeting to co-ordinate activities |
| XXX | BoF to assess potential for work in this area |
| XXX | Second BoF (as required to consolidate charter) |
| Start | Issue WG ID on requirements / framework |
| Start+04 | Achieve consensus on requirements |
| Start+06 | If required, submit ID to IESG as an RFC (info) |
| Start+08 | Issue WG Internet-Draft defining Encapsulation |
| Start+12 | Submit Encaps ID to IESG for publication as an RFC Issue Internet-Draft(s) defining Address Resolution Issue Internet-Draft(s) defining Multicast Operation Submit Address Resolution to IESG for RFC |
| Start+24 | Possible recharter to investigate MIBs, and other protocol components |

<http://www.erg.abdn.ac.uk/users/gorry/ip-dvb/charter.html>

INFORMATIONAL RFC on Requirements / Framework

Based on: [draft-fair-ipdvb-req-01.txt](#)

DRAFT STANDARD RFC(s) defining Encapsulation

Based on: [draft-unisal-ipdvb-enc-00.txt](#)

DRAFT STANDARD RFC(s) defining Address Resolution

Include QoS issues?

Service Discovery?

IPv6 (ND)?

DVB-GBS: INT

DVB: IP-CC (above IP)

No draft yet issued.

DRAFT STANDARD RFC(s) defining Multicast Operation

No draft yet issued.

Security Issues

Requirements for transmission of IP datagrams over
DVB Networks;

draft-fair-ipdvb-req-01.txt; May 2002

Fixed NiTs

Added Rationale for encapsulation

To do (-02)

Diagrams for TS
Rationale for address resolution

More input required

Desires

Efficient Plug&Play Receiver Design

Simple encapsulation

Unicast address resolution

Multicast address resolution

Better support for next-generation IP features

QoS features

QoS signalling ?

Multi-homing ?

Mobility ?

Nomad ? (things move....)

Native operation of IPv6 and Multicast

Good match to DVB and IP Architectures

Must **work** with DVB in its different uses

Broadcast TV Links (e.g., opportunistic data)

ISPs (network-to-customer links)

NSPs (network-to-network links)

Ad-Hoc networks

Must **consider** technologies

DVB-S; DVB-T;

DVB-RCS; DVB-RCT

Regenerative Systems

Must **be**:

Flexible (future proof!!!)

Ubiquitous (support all uses of IP)

Scalable (to large numbers of users)

Scalable (to small numbers of users)

Compatible (e.g., with MPE)

Need to tell receiver for each IP Flow:

- TS Mux
- TS (PID)

May also need:

- QoS requirements
- Dynamic update by attached systems

May need to work with:

- Encapsulators that change connectivity
- A choice of upstream encapsulator

Supporting Protocols for IP over DVB

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Points of debate:

How do we support multiple MPEG-2 Muxes?

Use of DVB Tables?

How much can be done at the IP / sub IP level?

Multi-homing and Multiple gateway issues

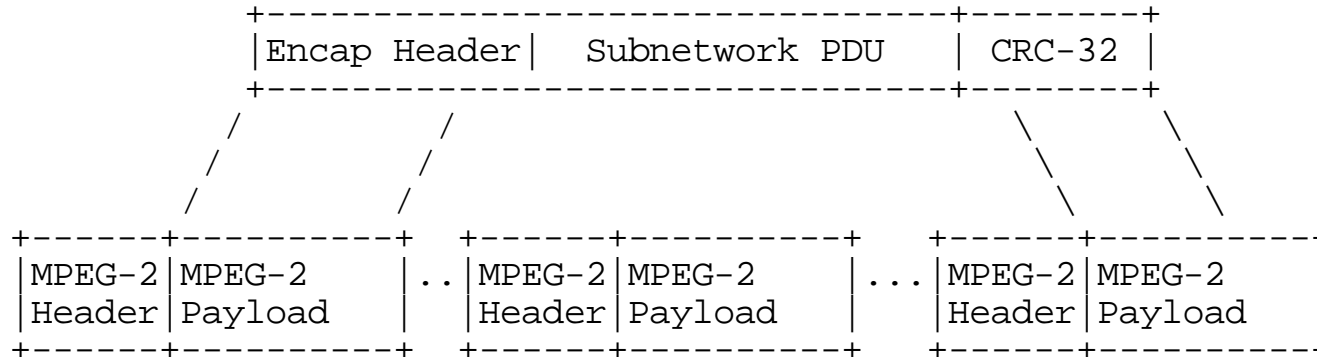
Multicast issues?

QoS Support

Simple Encapsulation for transmission of IP datagrams over
MPEG-2/DVB networks; draft-unisal-ipdvb-enc-00.txt; April 2002.

Efficient Encapsulation for IP over DVB

Gorry Fairhurst (gorry@erg.abdn.ac.uk)



Goals

- Direct transmission over MPEG-2 TS, and use of PUSI
- IPv4 and IPv6
- Support for Header Compression (ROHC)
- Multicast and Unicast
- Eliminate options and reduce per-packet processing

Allow extensions (not options) for the future?
Adaptation field?

Efficient Encapsulation for IP over DVB

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Convergence Functions

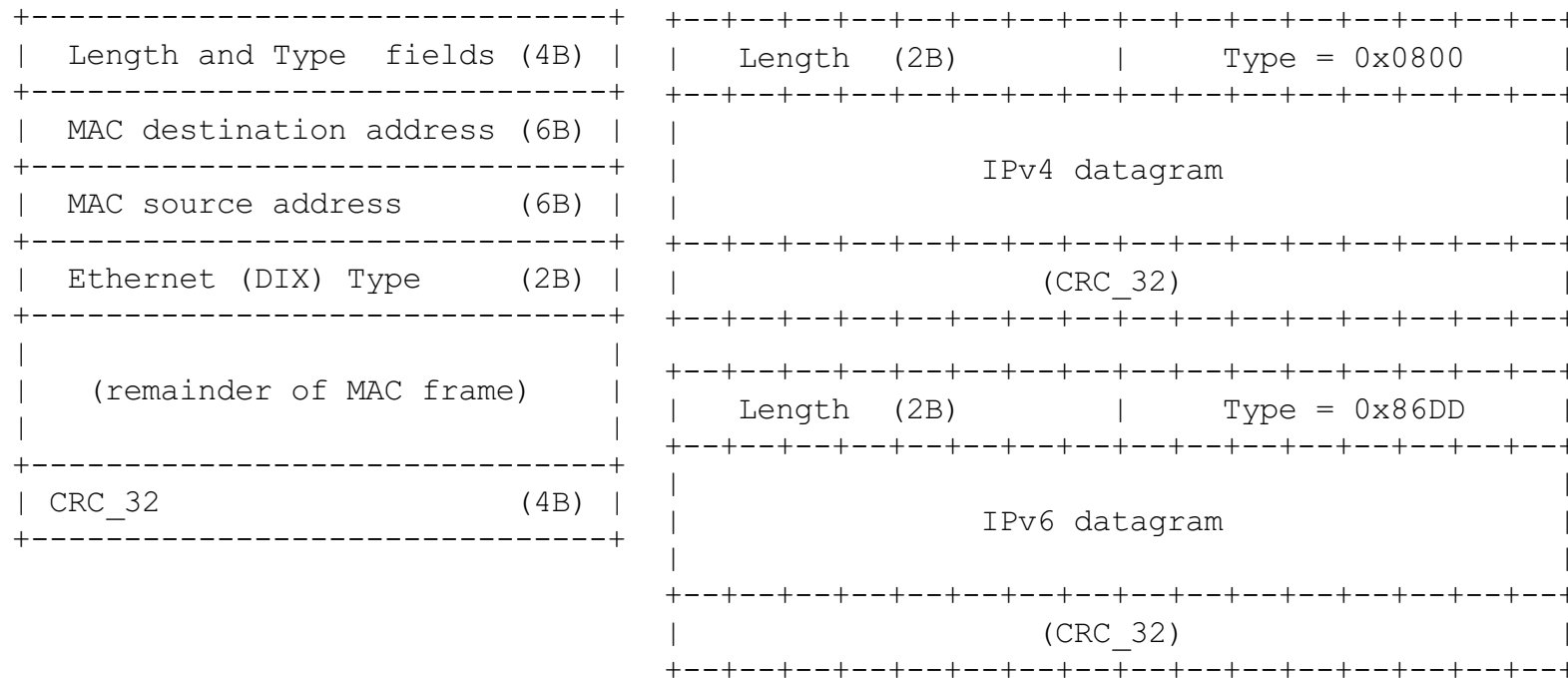
Mandatory Extensions (MUSTs)

Length Indicator (in encapsulation header)

Next level Protocol Type (in encapsulation header)

Addressing (optional NPA/MAC address)

Integrity Check (CRC-32 ?)

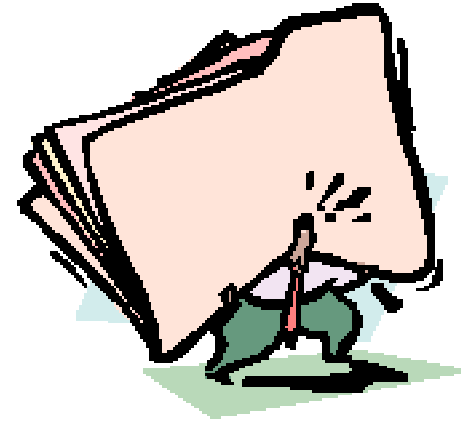


HELP!

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We need to complete more of our goals

Publish more ID's
Request IESG to form a Working Group
Do the Work
Publish the RFCs
Implement the protocols
Rest



This is only possible if we bring together:

Internet engineers - IETF
Experts outside the IP area - ETSI-BSM; DVB-GBS?
Equipment vendors and implementers

Request a WG

Will ADs be convinced?

Does this work NEED to be done?
Universal Broadband Access?
Performance goals ?

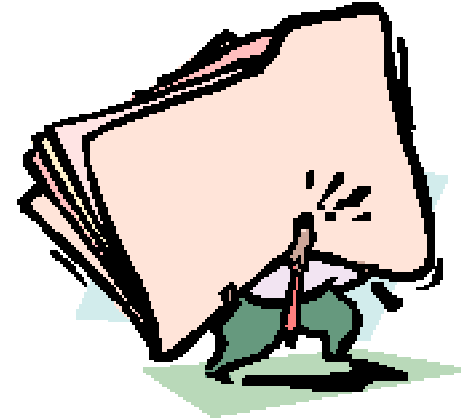
Agree on Charter

Publish set of IDs

IPR entanglements & other bodies??

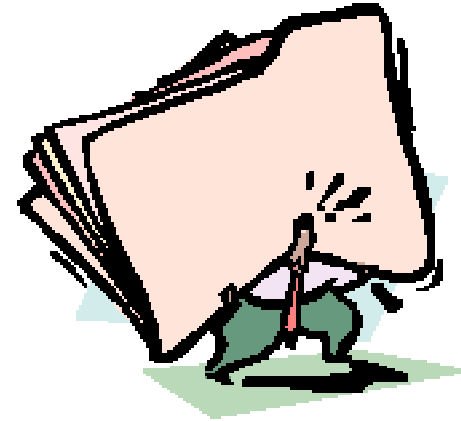
Attendance at the BoF !!!

SHOULD this be done at the IETF?



IETF-55!

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November 17th - 22nd 2002

Host: Nokia
Atlanta, GA
USA

Who will be there?