



# ITU-T SG13 & SG15 Update

Dinesh Mohan (Nortel) – SG13 Liaison

Hiroshi Ohta (NTT) – SG15 Liaison



# Recent and future related meetings

## > Recent Meetings

- SG13/SG15 joint interim meeting: Nov 28–Dec 2, 2005 Chicago
  - Ethernet/MPLS related issues of the following Questions:
  - Q.5/13 (OAM)
  - Q.9/15 (Protection switching and equipment)
  - Q.11/15 (Services)
  - Q.12/15 (Network architecture)

## > Future Meetings

- SG13 plenary meeting: Jan 16–27, 2006 Geneva
- SG15 plenary meeting: Feb 6–17, 2006 Geneva
- SG13 plenary meeting: Jul 17-28, 2006 Geneva



# SG13 Update

## Q.5/13 Updates: Last meeting summary



- > Recommendation Y.1730 completed – Ethernet OAM Requirements
- > draft Recommendation Y.1731 (ex Y.17ethoam) was updated
  - Planned for consent in Jan 2006 plenary meeting
  - Y.1731 forms an input to Q.9/15 and Q.12/15 activities
  - G.8021 (equipment specification) Recommendation will provide the protocol specifications and state machines which are aligned with the IEEE 802.1ag
    - Consent date for G.8021 with OAM functionality is Nov 2006
    - IEEE 802.1ag is expected to be finished by this timeframe



## Y.1731 overview

- > Introduces OAM constructs e.g. MEs, MEGs, MEPs, MIPs, ME Levels, etc
- > Introduces relationship between different OAM constructs
- > Specifies high-level view of different OAM mechanisms required to meet different transport Ethernet requirements
  - Fault Management
  - Performance Management
- > Identifies the information fields that are required to realize the OAM mechanisms
- > Implementation details and state machines are to be specified in G.8021 (equipment specification)
  - Interest has been expressed to capture frame formats to allow equipment specification to determine pertaining issues



# Y.1731 agreements in last meeting

- > Previous IEEE 802.1 liaison responses taken into account
  - ME Level discussions closed
    - Fixed ME Levels retained inline with .1ag
    - ME Level assignments reversed to allow 7 to be highest and 0 to be lowest ME Level inline with .1ag
  - 32 OpCodes acknowledged
    - Response to .1 query: “ITU-T Rec. Y.1731” should be identified as owner of these OpCodes in 802.1ag
    - ITU-T plans to assign OpCode values for functions that are unique to ITU-T



## Y.1731 questions/request to .1

- > Allocate OpCodes values for .1ag functions such that common OAM OpCodes can be captured in Y.1731
- > Timestamps be removed from CFM header since delay measurements are done proactively
- > Terminal CCM is not seen as a requirement, therefore consider allocating values to all period values
- > Preference to reduce the CCM size to 128bytes
  - this requires the MAID size to be reduced – preference for <64bytes
- > Allocate two pairs of OpCodes for:
  - One pair for Organizationally Specific Values
  - One pair for Experimental OpCode Values



## **Y.1731 liaison to MEF**

- > When untagged frames are used by client layers, then the ME Level space has to be coordinated
- > When tagged frames are used by client layers, each layer can potentially have all 8 ME Levels of space for its use
- > Therefore it was proposed that ME Level be introduced as a service attribute for the purposes of negotiation while offering services.



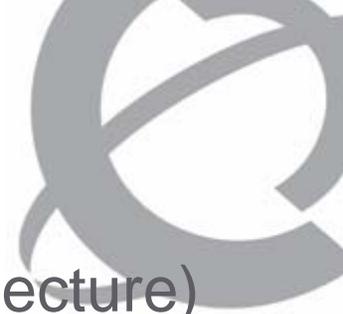
# SG15 Update

# Q.9/15 Updates: Last meeting summary



- > New Recommendation G.8031 (Ethernet protection)
  - Added protection switching state transition table
  - Decided to concentrate ETV (VLAN) protection for this version
  - ETH protection was left for further study.
  - Planned to be consented in Feb. 2006 SG15 plenary.
  
- > Revised Recommendation G.8021 (Ethernet equipment)
  - Added equipment functional description related to OAM functions, which are specified by Y.1731 (ex. Y.17ethoam)
  - Planned to be consented in Feb. 2006 SG15 plenary
  - OAM related part is planned to be consented in Nov. 2006 SG15 plenary

## Q.12/15 Updates: Last meeting summary



- > Revised Recommendation G.8010 (Ethernet architecture)
  - OAM related part is planned to be consented in Feb. 2006
  - Other parts are planned to be consented in Nov. 2006 SG15 plenary.
  - Details are contained in TD102 (3/15), TD103(3/15) and TD104(3/15) from May 2005 SG15 meeting
  
- > New Recommendation G.ufatn (Unified Framework for the Architecture of Transport Networks)
  - Q.12/15 identified the need for unified network framework (i.e., connection oriented and connectionless network models) before the discussion of this enhancements



Backup

# Rapporteur/liaison Officers (Ethernet related questions)



- > ITU-T SG13
  - Q.5/13 (OAM): Gilles Joncour (FT)
- > ITU-T SG15
  - Q.3/15 (Coordination and terminology): Hiroshi Ohta (NTT)
  - Q.9/15 (Protection and equipment): Ghani Abbas (Marconi)
  - Q.11/15 (Service, mapping): Mark Jones (Sprint)
  - Q.12/15 (Network architecture): Malcolm Betts (Nortel)
- > SG13 liaison representatives to:
  - IEEE 802.1: Dinesh Mohan (Nortel)
- > SG15 liaison representatives to:
  - IEEE 802.1: Hiroshi Ohta (NTT)

# Status of related Recommendations

Q.	Rec. No.	N/R	Title or Proposed Title	Issued date	Next Target
5/13	Y.1731 (ex. Y.17ethoam)	N	OAM functions and mechanisms for Ethernet based networks	--	02/2006
3/15	G.8001	N	Terms and definitions for Ethernet Frames over Transport	--	02/2006
9/15	G.8021	R	Characteristics of Ethernet Transport Network Equipment Functional Blocks	4/2004	02/2006
9/15	G.8031	N	Ethernet protection switching	--	02/2006
11/15	G.7041	R	Generic Framing Procedure (GFP)	05/2005	2008
11/15	G.8011	R	Ethernet over Transport – Ethernet Service Characteristics	08/2004	2007
11/15	G.8011.1	R	Ethernet Private Line Service	04/2004	2007
11/15	G.8011.2	N	Ethernet Virtual Private Line Service	05/2005	2008
11/15	G.8012	R	Ethernet UNI and Ethernet over Transport NNI	08/2004	2007
12/15	G.8010	R	Ethernet Layer Network Architecture	02/2004	11/2006
12/15	G.ufatn	N	Unified Framework for the Architecture of Transport Networks	--	11/2006