802.3ad Link Aggregation Task Force

November 9, 1998

Albuquerque, NM

November 802.3ad Objectives

- Cutoff date for new proposals for Link Aggregation
 - Selection of a Link Aggregation Control Protocol proposal for inclusion in the first draft of the standard.
- Primary objective of this meeting is to resolve any open issues and authorize the editor(s) to generate a first draft of the 802.3ad Link Aggregation standard.
- Presentations:

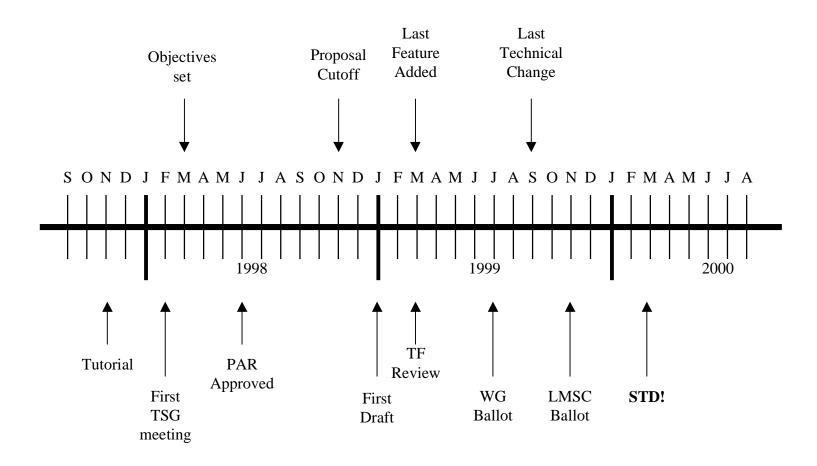
Tony Jeffree

Link Aggregation Control

Jeff Lynch

Selection Rules

802.3ad Timeline



Link Aggregation Reference Model

OSI REFERENCE MODEL LAYERS

LAN CSMA/CD LAYERS

APPLICATION		HIGHER LAYERS					
	1	MAC Client					
PRESENTATION	/	LINK AGGREGATION SUBLAYER					
SESSION		MAC CTRL	MAC CTRL		MAC CTRL		
TRANSPORT		MAC	MAC		MAC		
NETWORK		Recconcil.	Recconcil.	•••	Recconcil.		
TILLIWORK		PCS	PCS		PCS		
DATA LINK		PMA	PMA		PMA		
PHYSICAL		PMD	PMD		PMD		

STANDARDIZED LINK AGGREGATION COMPONENTS

Link Aggregation Control Model

MAC Client	MAC Client	•••	MAC Client
Aggregator	Aggregator	Link Aggregation Sub-layer	Aggregator
LA state	LA state		LA state
MAC CTRL	MAC CTRL		MAC CTRL
MAC	MAC		MAC
Recconcil.	Recconcil.		Recconcil.
PCS	PCS	•••	PCS
PMA	PMA		PMA
PMD	PMD		PMD

"Big Ticket" Issues

- Specification of Distributor frame ordering constraints
 - Current frame ordering constraint is adequate.
 - A brief informative annex with example traffic distribution rules may be included.
- Architectural Model: # of aggregate ports required
 - # of aggregate ports may be <= to # of physical ports</p>
- Addressing: MAC address per aggregate or per physical
 - Aggregate port has one individual MAC address
 - Physical MACs are only required to recognize a single individual MAC address at any given time.
 - When bound to an Aggregate, the Physical MAC recognizes the MAC address of the Aggregate.
 - When not bound to an Aggregate, it is recommended that each Physical MAC recognize a unique individual address.

"Big Ticket" Issues

- Dynamic Key modification rules
 - To be discussed following Tuesday's presentations
- Selection rules
 - To be discussed following Tuesday's presentations
- MAC addresses in LA Control frames
 - Will request a new Ethertype to be assigned for LA Control frames
 - Will request a new group MAC address from the 802.1 block.
 - The address should be re-usable by other compatible protocols.
- Extensibility of LA Control frames
 - To be discussed following Tuesday's presentations
- Managed objects for LA Control and "logical MAC"
 - Action Item to a small group to create a proposal by Wednesday