P802.3ar Congestion Management Task Force
Closing Plenary Meeting Report

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World Wide Packets

Denver, Colorado

Reflector and Web

- **List subscribers: ~200**

- **To subscribe to the Congestion Management TF reflector send an email to:**
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P802.3ar TF Objectives

1) **Specify a mechanism to limit the rate of transmitted data on an Ethernet link**

2) **Specify a mechanism to support the communication of congestion information**

3) **Minimize throughput reduction in non-congested flows**

4) **Preserve the MAC/PLS service interfaces**

Approved by IEEE 802.3 WG on 18-Nov-2004

Activity this week

- **Reviewed Hugh Barrass proposal**
  - **Adding informative Annex 4B MAC options**
- **Reviewed Howard Frazier presentation**
  - **Raised several concerns:**
    - **Accuracy of enhancements to rate limit mechanism**
    - **Current 802.3ar/D1.1 narrower than original PAR, 5 criteria and TF objectives**
- **Reviewed Hugh Barrass proposal**
  - **Improves accuracy of enhancement to rate limit mechanism**

802.3ar TF Motion #1

- *Current TF objective #1*
  - *Specify a mechanism to limit the rate of transmitted data on an Ethernet link*

- **Modify TF objective #1**
  - **Specify mechanism(s) to limit the rate of transmitted data on an Ethernet link**

- **M: H. Frazier S: M. Gravel**

- **Y: 10 N: 19 A: 8**

- $\geq$ **75%**

- **Fails**

802.3ar TF Motion #2

- **Remove TF objective #2**
  - **"Specify a mechanism to support the communication of congestion information"**
  - **On the assumption that 802.1 does not currently require any supporting mechanism in 802.3 standard to implement congestion management functions**

- **M: H. Frazier   S: T. Mathey**

- **Y: 30 N: 0 A: 7**
- **≥ 75%**
- **Passes**

802.3ar TF Motion #3

- **Remove TF objective #3**
  - **"Minimize throughput reduction in non-congested flows"**

- **M: H. Frazier   S: S. Muller**

- **Y: 24 N: 0 A: 13**
- **$\geq$ 75%**
- **Passes**

P802.3ar TF Objectives

1) **Specify a mechanism to limit the rate of transmitted data on an Ethernet link**

2) **Preserve the MAC/PLS service interfaces**

Revised by IEEE 802.3ar TF on 07-March-2006

802.3ar TF Motion #4

- **Modify PAR title**
  - **Information technology --**
  - **Telecommunications and information exchange between systems -- Local and metropolitan area networks – specific requirements Part 3: Carrier Sense Multiple Access with Collision Detection (CSMA/CD) Access Method and Physical Layer Specifications Amendment: Enhancements for ~~Congestion Management~~ Rate Control**

- **M: H. Frazier   S: S. Muller**
- **Y: 17 N: 8 A: 9**
- **≥ 75%**
- **Fails**

802.3ar TF Motion #5

- *Issue: Empty clauses*

- **Direct the editor to add text in draft 1.2 to fill the empty clauses (Clause 4, Annex 30A, Annex 30B) from draft 1.1, in keeping with the existing clauses in draft 1.1.**

- **M: H. Barrass S: M. Wadekar**

- **$\geq$ 75%**

- **Y: 23 N: 0 A: 6**

- **Passes**

802.3ar TF Motion #6

- *Issue: Missing Pascal*

- **Direct the editor to add all of the relevant text from the base standard into Clause 4A (and Clause 4 as appropriate) so that the new or changed text may be read and understood in context for draft 1.2.**

- **M: H. Barrass S: T. Gupta**

- **$\geq$ 75%**

- **Y: 27 N: 0 A: 5**

- **Passes**

802.3ar TF Motion #7

- *Issue: Fix ifsStretch definition*

- **Direct the editor to change the definition of ifsStretch mechanism in draft 1.2 so that the ifsStretchRatio is in the form 1024/n (where n is the # of bits in a frame that require 1 octet of extra ifs - per barrass_3_0603.pdf).**

- **M: H. Barrass S: M. Wadekar**

- $\geq$ **75%**

- **Y: 10 N: 2 A: 23**

- **Passes**

802.3ar TF Motion #8

- *Issue: Add MAC options annex*
- **Direct the editor to add a new informative annex (4B) and appropriate cross-references in draft 1.2 based on barrass_1_0603.pdf with a tabular format**

- **M: H. Barrass S: P. Thaler**
- **$\geq$ 75%**
- **Y: 24 N: 0 A: 7**
- **Passes**

802.3ar TF Motion #9

- *Produce and re-circulate draft*
- **Direct the editor to produce draft 1.2 based on changes agreed in the TF and circulate the draft for Task Force review.**

- **M: H. Barrass S: T. Gupta**
- $\geq$ **75%**
- **Y: 22 N: 5 A: 6**
- **Passes (81%)**

802.3ar TF Motion #10

- **Remove this text from the draft Technical Feasibility criteria**
  - Mechanisms for congestion management using congestion indication are known in the industry for some protocols and standards. Simulations of similar protocols show there are alternatives that can be feasibly implemented to accomplish the objectives within IEEE 802.
  - The inclusion of congestion indication in layer 2 devices was anticipated in RFC 3168 "The Addition of Explicit Congestion Notification (ECN) to IP".

- **M: H. Frazier S: T. Dineen**
- $\geq$ **75%**
- **Y: 21 N: 2 A: 14**
- **Passes**

802.3ar TF Motion #11

- **Remove this text from the draft Compatibility criteria**
  - **[bullet #1] "conform to the 802.3 MAC, and therefore will"**
  - **[bullet #2] As was the case in previous 802.3 standards, additional MAC Control sublayer functionality and MAC Control frame opcodes may be defined.**
- **Add new bullet [after #1]**
  - **"The MAC may be enhanced."**

- **M: H. Frazier S: T. Dineen**

- **Y: 20 N: 0 A: 8**
- **$\geq$ 75%**
- **Passes**

Current status

- **TF modified objectives**
- **TF agreed to improve rate limit mechanism**
- **Agreed to produce and review 802.3ar/D1.2**
- **Modified two of the 5 criteria**

- **Consensus agreement that PAR and 5 criteria should be reviewed and revised by the 802.3ar TF and presented to 802.3 WG in July 2006**

P802.3ar TF Objectives

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Revised by IEEE 802.3ar TF on 07-March-2006

802.3 WG Motion #__

- **Move that the 802.3 WG approve the revised 802.3ar TF objectives**
  - **Specify a mechanism to limit the rate of transmitted data on an Ethernet link**
  - **Preserve the MAC/PLS service interfaces**
  - **And instruct the TF to present a revised PAR & 5 criteria for review at the July 2006 802.3 meeting**
    - *M: P. Thaler S: D. Law*
    - *$\geq$ 75%*
    - *Y: 20 N: 6 A: 30*

- *M: K. Daines*

- *S: H. Barrass*

- $\geq$ **75%**

- **Y: 30 N: 6 A: 23**

- **Passes**

Future meetings

- **IEEE 802.3ar Interim**
  - *May 15-18, 2006, Beijing, China*
  - *Co-located with IEEE 802.1*
- **IEEE 802 Plenary meeting**
  - **July 16-21, 2006, San Diego, California**
- **IEEE 802.3 Interim**
  - *Week of 18 September, 2006, Montreal*

Thank you!