IEEE 802.3 Study Group
10Gb/s PHY for EPON

Agenda and
General Information

Glen Kramer, glen.kramer@ieee.org

Outline

- Welcome and introductions
- Reflector and web
- Objectives for this meeting
- Presentations and Meeting Schedule
- Study group timeline
- Ground rules
- Patent Policy
- Future work and next meeting
- Wrap up

Reflector and Web

- Currently 185 subscribers on 10GEPON SG reflector

- To subscribe to 10GEPON reflector, send email to:

  listserv@ieee.org

  and include this line in the *body of the message:*

  subscribe stds-802-3-10GEPON *firstname lastname*

- Our web site is located at:

  http://www.ieee802.org/3/10GEPON_study/

Work Group Organizational Structure

- Study Group is not a Task Force
  - Different functions
  - Different lifetime

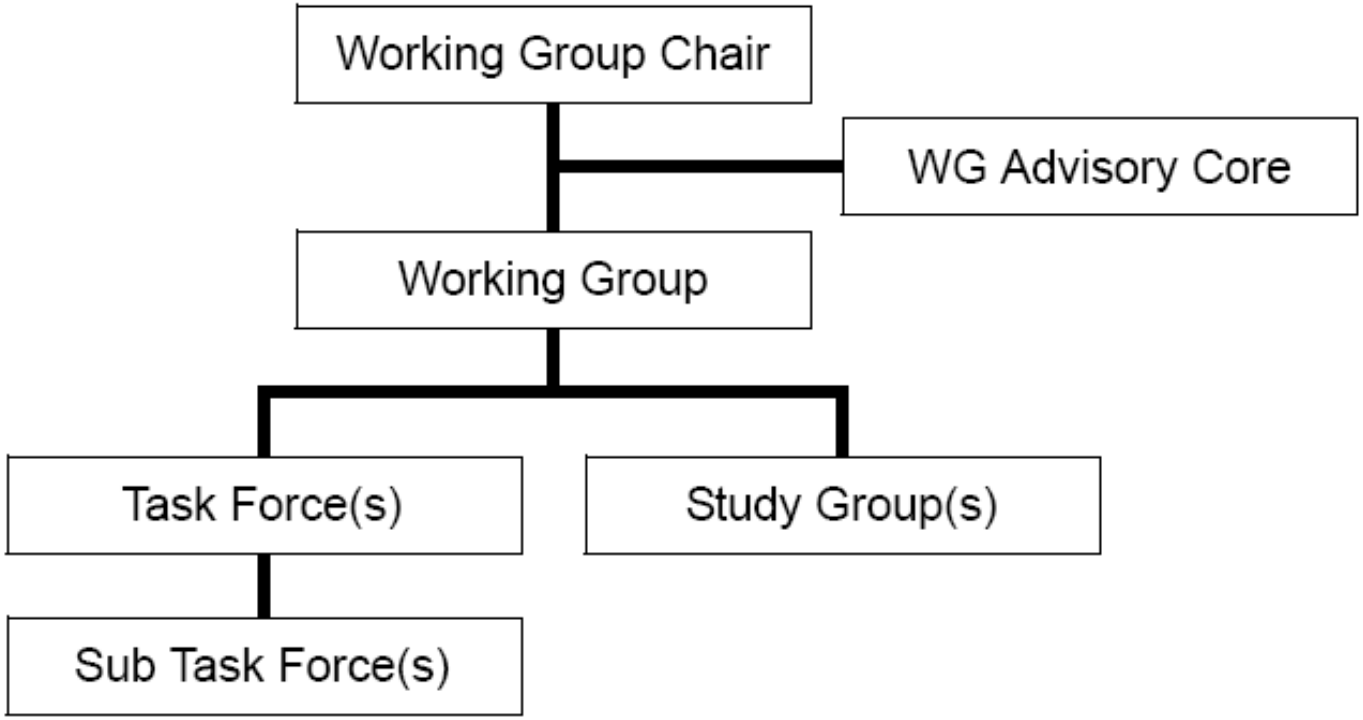


Figure 2 — Working Group Organizational Structure

Functions of SG and TF

IEEE 802.3 WG Operating Rules

7.1.2 Study Group

Study Groups are covered in Clause 4 and the IEEE project 802 LAN MAN Standards Committee (LMSC) policies and procedures (see ref [1], 7.4). Steps in this stage include:

- Develop PAR and Five Criteria (see 7.2).
- Provide a plenary week tutorial to the LMSC.
- Obtain approval at the WG, LMSC EC, NesCom and IEEE-SA Standards Board.

7.1.3 Task Force

Task Forces are covered in Clause 3 of this documents. Steps in this stage include:

- Develop goals.
- Develop agreed upon complete draft.

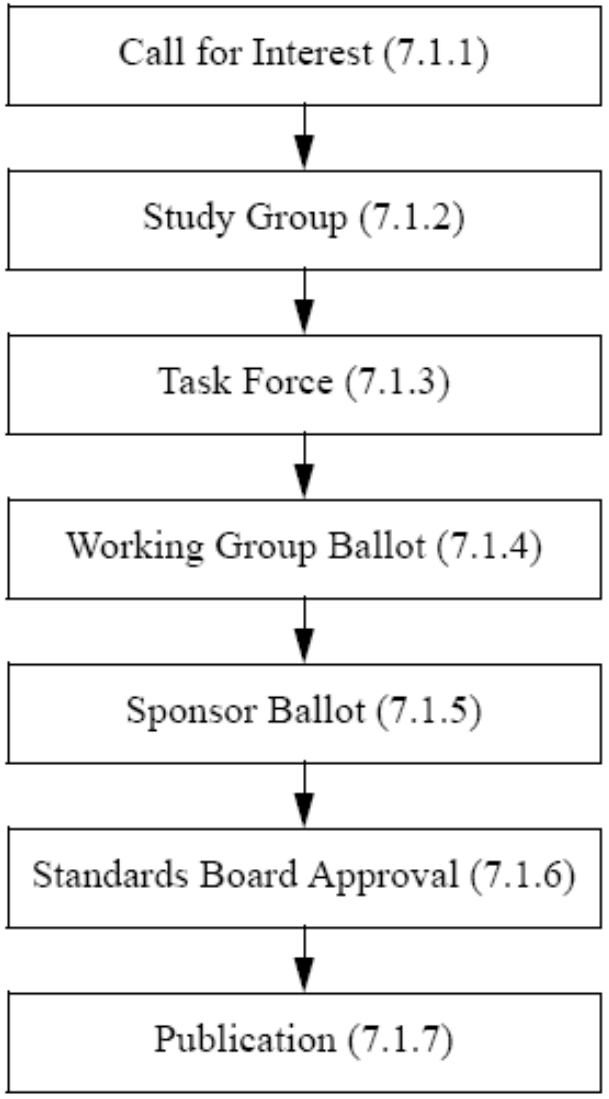
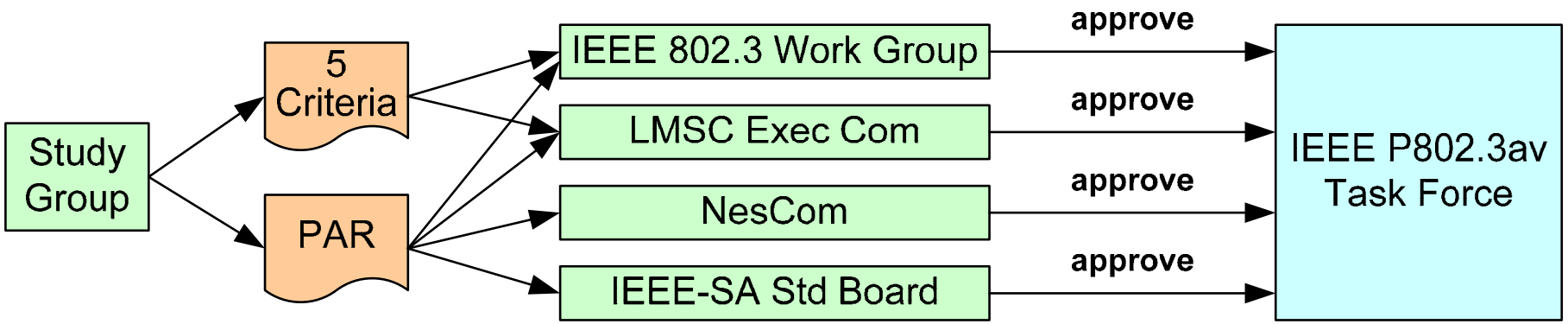


Figure 4 — Overall Project Process

IEEE 802.3 WG Operating Rules

4.1 Function

The function of a Study Group is to complete a defined task with specific output and in a specific time frame established within which they are allowed to study the subject. Once this task is complete the function of the SG is complete and its charter expires. The normal function of a IEEE 802.3 Study Group (SG) is to draft a complete PAR and five criteria (see 7.2) and to gain approval for them at the WG, LMSC EC, IEEE-SA New Standards Committee (NesCom) and the IEEE Standards Board.



Criteria for Standards Development (LMSC P&P)

17.5.1 Broad Market Potential

A standards project authorized by IEEE 802 shall have a broad market potential. Specifically, it shall have the potential for:

a) Broad sets of applicability.
b) Multiple vendors and numerous users.
c) Balanced costs (LAN versus attached stations).

17.5.2 Compatibility

IEEE 802 defines a family of standards. All standards shall be in conformance with the IEEE 802.1 Architecture, Management, and Interworking documents as follows: 802. Overview and Architecture, 802.1D, 802.1Q, and parts of 802.1f. If any variances in conformance emerge, they shall be thoroughly disclosed and reviewed with 802. Each standard in the IEEE 802 family of standards shall include a definition of managed objects that are compatible with systems management standards.

17.5.3 Distinct Identity

Each IEEE 802 standard shall have a distinct identity. To achieve this, each authorized project shall be:

a) Substantially different from other IEEE 802 standards.
b) One unique solution per problem (not two solutions to a problem).
c) Easy for the document reader to select the relevant specification.

17.5.4 Technical Feasibility

For a project to be authorized, it shall be able to show its technical feasibility. At a minimum, the proposed project shall show:

a) Demonstrated system feasibility.
b) Proven technology, reasonable testing.
c) Confidence in reliability.

17.5.5 Economic Feasibility

For a project to be authorized, it shall be able to show economic feasibility (so far as can reasonably be estimated) for its intended applications. At a minimum, the proposed project shall show:

a) Known cost factors, reliable data.
b) Reasonable cost for performance.
c) Consideration of installation costs.

Objectives for this Meeting

- Hear Presentations related to 5 Criteria, Goals, and Objectives
- Discuss and attempt to reach consensus on:
  - Project Authorization Request (PAR)
  - 5 Criteria responses
  - Goals and Objectives
- Hear additional presentations in preparation for technical work

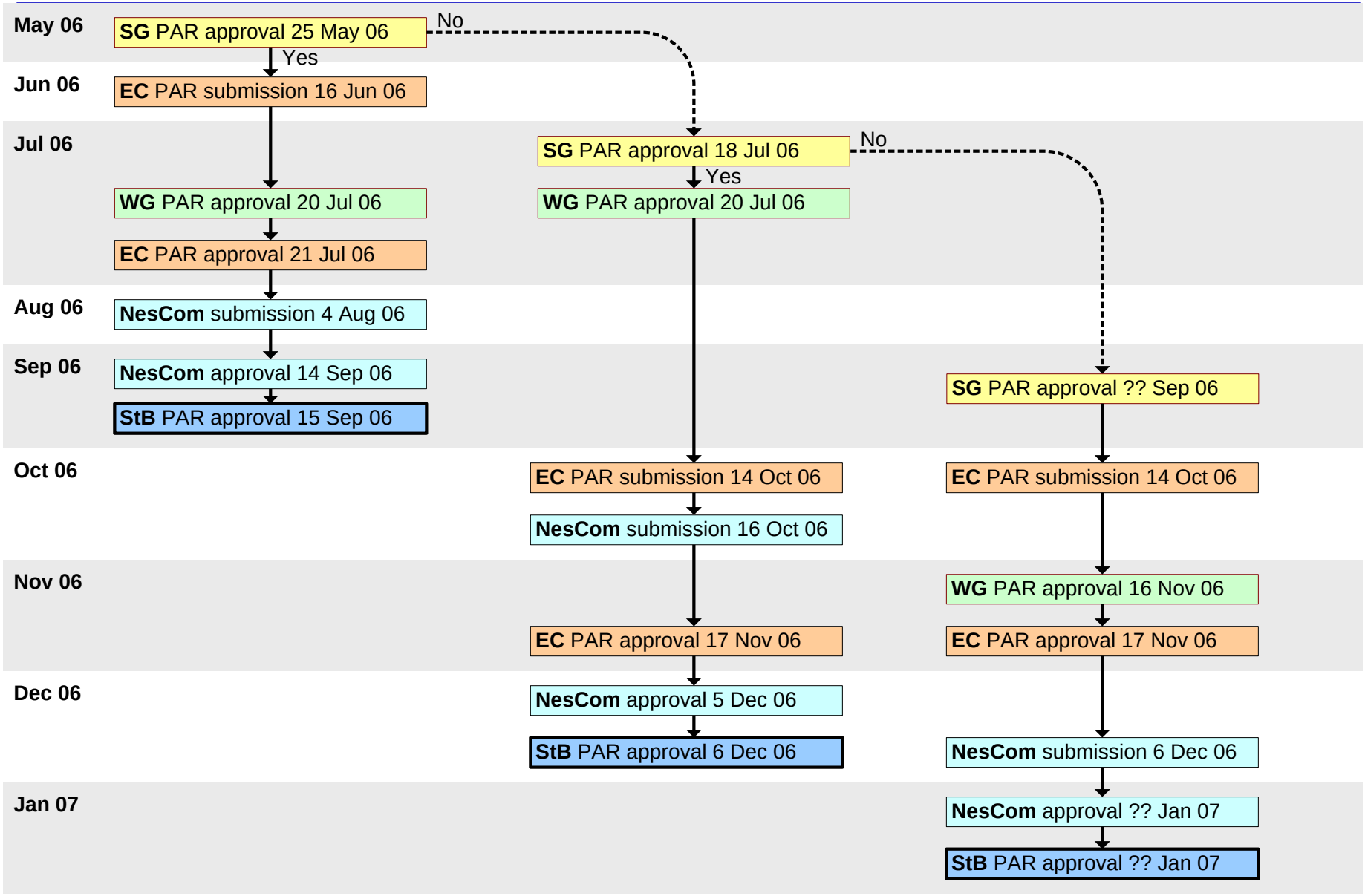
Schedule for Wednesday, May 24, 2006

Time	Title	Presenter	Company
8:30 – 8:50	IEEE process overview and SG timeline	Glen Kramer	Teknovus
8:50 – 9:10	Brief overview of 10GbE interfaces	Eric Lynskey	UNH IOL
9:10 – 10:00	Nonlinear Impairments in High Data Rate Systems	Sergey Ten	Corning
10:00 – 10:20	Considerations for 10G EPON	Hiroshi Murata	Sumitomo
10:20 – 10:35	Multicast Logical Link for 10G-EPON	Motoyuki Takizawa	Fujitsu
	Coffee break (15 min)		
10:50 – 11:00	Technical feasibility of 10Gb/s PHY for EPON	Toshiaki Mukojima	Oki
11:00 – 11:30	Requirements for 10G EPON	Akihiro Otaka	NTT
11:30 – 12:00	5 Criteria	Onn Haran	PMC Sierra
	Lunch break (1hr 30 min)		
1:30 – 2:15	Downstream considerations	Haim Ben-Amram	PMC Sierra
2:15 – 3:15	Protocol Stack	Jeff Mandin	PMC Sierra
3:15 – 3:30	MPCP compatibility with 10Gb/s PHY	Ryan Hirth	Teknovus
3:30 – 3:45	10G EPON Obstacles	Mitsunobu Kimura	Hitachi
3:45 – 4:00	Reconsideration on 10Gb/s EPON Standardization	Shoichiro Seno	Mitsubishi
	Coffee break (15 min)		
4:15 – 4:30	Comments on “10Gb/s PHY for EPON”	Tatsuya Kubota	NEC
4:30 – 4:45	Backward Compatibility	Keiji Tanaka	KDDI R&D
4:45 – 5:00	Asymmetric MAC options	Howard Frazier	Broadcom
5:00 – 5:45	The 10G Ethernet Link Model	Piers Dawe	Avago Tech.
5:45 – 6:00	10G EPON: Market Requirements & Economic Feasibility	Lowell Lamb	Teknovus

Schedule for Thursday, May 25, 2006

Time	Title	Presenter	Company
8:30 – 9:30	Draft Project Authorization Request	Glen Kramer	Teknovus
9:30 – 10:00	5 Criteria: Broad market Potential	Shane Eleniak	Alloptic
10:00 – 10:30	5 Criteria: 802 Compliance	Glen Kramer	Teknovus
	Coffee break – 30 min		
11:00 – 11:30	5 Criteria: Distinct Identity	Jeff Mandin	PMC Sierra
	5 Criteria: Distinct Identity	Howard Frazier	Broadcom
11:30 – 12:00	5 Criteria: Economic Feasibility	Keiji Tanaka	KDDI R&D
12:00 – 12:30	5 Criteria: Technical Feasibility	Bin Yeong Yoon	ETRI
	Lunch break – 1.5 hour		
2:00 – 3:00	Draft Objectives	Glen Kramer	Teknovus
3:00 – 3:15	Address 10G EPON Tech. Feasibility and Economics Using Advanced 10G PHY	Frank Chang	Vitesse
3:15 – 6:00	Continued discussion from 5/24/06		

Study Group Timeline



Ground Rules

- Anyone in the room may speak (when recognized by the chair)
- Anyone in the room may vote (if we vote on anything)

- Be aware and do not discuss any inappropriate topics:

  (rule set by IEEE-SA Standards Board – Mar 2003, Revised Feb 2006)

  - Product pitches, corporate pitches
  - Validity/essentiality of patents/patent claims
  - Cost of specific patent use
  - Licensing terms or conditions
  - Product pricing, territorial restrictions, or market share
  - Ongoing litigation or threatened litigation

  Don't be silent if inappropriate topics are discussed… do formally object.

Patent Policy

IEEE-SA Standards Board Bylaws on Patents in Standards

6. Patents

IEEE standards may include the known use of essential patents and patent applications provided the IEEE receives assurance from the patent holder or applicant with respect to patents whose infringement is, or in the case of patent applications, potential future infringement the applicant asserts will be, unavoidable in a compliant implementation of either mandatory or optional portions of the standard [essential patents]. This assurance shall be provided without coercion. The patent holder or applicant should provide this assurance as soon as reasonably feasible in the standards development process. This assurance shall be provided no later than the approval of the standard (or reaffirmation when a patent or patent application becomes known after initial approval of the standard). This assurance shall be either:

a) A general disclaimer to the effect that the patentee will not enforce any of its present or future patent(s) whose use would be required to implement either mandatory or optional portions of the proposed IEEE standard against any person or entity complying with the standard; or

b) A statement that a license for such implementation will be made available without compensation or under reasonable rates, with reasonable terms and conditions that are demonstrably free of any unfair discrimination.

This assurance is irrevocable once submitted and accepted and shall apply, at a minimum, from the date of the standard's approval to the date of the standard's withdrawal.

Approved by IEEE-SA Standards Board – March 2003 (Revised February 2006)

Next Meeting

- The July IEEE 802 LMSC Plenary Session will be held at the **Manchester Grand Hyatt** in San Diego, CA. USA during the week of **July 16-21, 2006**.
- Visit http://ieee802.facetoface-events.com/webs/39/index.php to
  - Register for the meeting
  - Reserve Hotel
  - Get airline ticket discount
  - Get rental car discount
  - Generate visa letter (if you need one)
  - Etc.

September Interim Meeting

- If your company would like to host September meeting, please let me know.