



IEEE 802.3 10GBASE-T Study Group
Agenda and General Information

Vancouver, BC
January 9, 2003

Agenda

- **Welcome and Introductions**
- **Select Recording Secretary**
- **Goals for this Meeting**
- **Reflector and Web**
- **Ground Rules**
- **IEEE**
 - **Structure**
 - **Bylaws and Rules**
 - **Call for Patents**
 - **IEEE Standards Process**
- **Liaison Letter(s)**
- **Presentations**
- **Discussion and Motions**
- **Future Meetings**

10GBASE-T (as per CFI)

- **10 Gigabit Ethernet over unshielded twisted pair (UTP) copper cabling to 100 m**
- **10 Gigabit Ethernet MAC and media independent interface as specified in IEEE 802.3ae™**
- **UTP copper cabling is assumed to be a 4 pair, Category 5 or better copper cable**

Goals for this Meeting

- **Hear presentations concerning:**
 - Need for 10GBASE-T project in IEEE 802.3
 - Justification in terms of the 5 criteria (aka the critters)
 - Goals and objectives for a project
- **Start developing consensus on:**
 - Project Approval Request (PAR)
 - 5 Criteria responses
 - 10GBASE-T Objectives

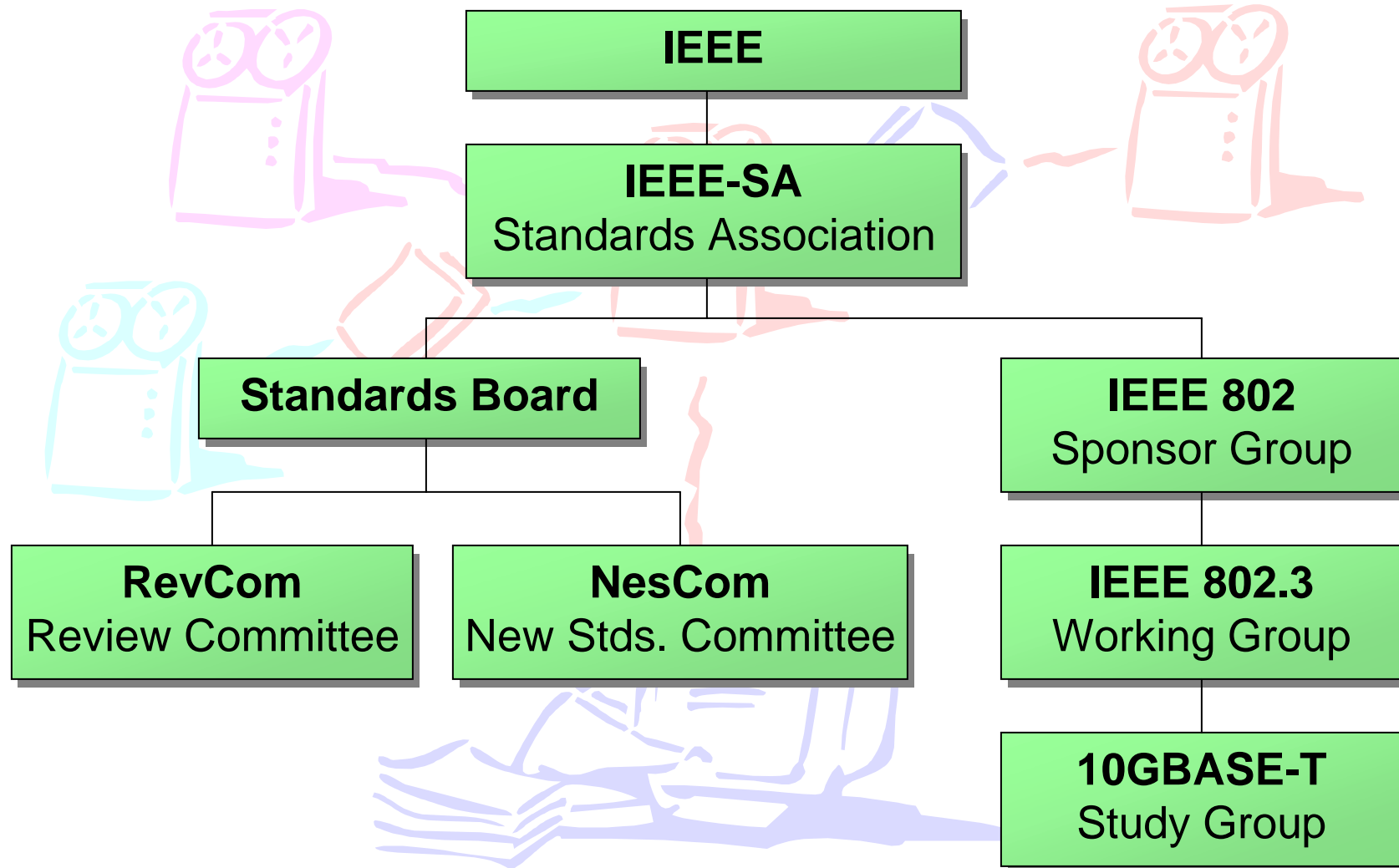
Reflector and Web

- To subscribe to 10GBASE-T reflector send an email to:
majordomo@ieee.org
with the following in the body of the message:
subscribe stds-802-3-10GBT <your email address>
- Send 10GBASE-T reflector messages to:
stds-802-3-10GBT@ieee.org
- 10GBASE-T Study Group web page URL:
<http://www.ieee802.org/3/10GBT>

Ground Rules

- **802.3 Rules apply**
 - Foundation based upon Robert's Rules of Order
- **Anyone in the room may speak**
- **Anyone in the room may vote**
- **RESPECT... give it, get it**
- **NO product pitches**
- **NO corporate pitches**
- **NO prices!!!**
 - This includes costs, ASPs, etc. no matter what the currency
- **NO restrictive notices**

IEEE Structure



Bylaws and Rules

- **Bylaws of the IEEE Standards Association (IEEE-SA):**

<http://standards.ieee.org/sa/sa-bylaws.pdf>

- **Bylaws of the IEEE-SA Standards Board:**

<http://standards.ieee.org/guides/bylaws/sb-bylaws.pdf>

- **IEEE LAN/MAN Standards Committee (LMSC) Operating Rules:**

<http://www.ieee802.org/rules.pdf>

- **IEEE 802.3 Working Group Operating Rules:**

<http://www.ieee802.org/3/rules/>

IEEE-SA Standards Board Bylaws on Patents in Standards

6. Patents

IEEE standards may include the known use of patent(s), including patent applications, provided the IEEE receives assurance from the patent holder or applicant with respect to patents essential for compliance with both mandatory and optional portions of the standard. This assurance shall be provided without coercion and prior to approval of the standard (or reaffirmation when a patent becomes known after initial approval of the standard). This assurance shall be a letter that is in the form of 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 the proposed IEEE standard against any person or entity using the patent(s) to comply with the standard or
- b) A statement that a license 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 shall apply, at a minimum, from the date of the standard's approval to the date of the standard's withdrawal and is irrevocable during that period.



Approved by IEEE-SA Standards Board – December 2002

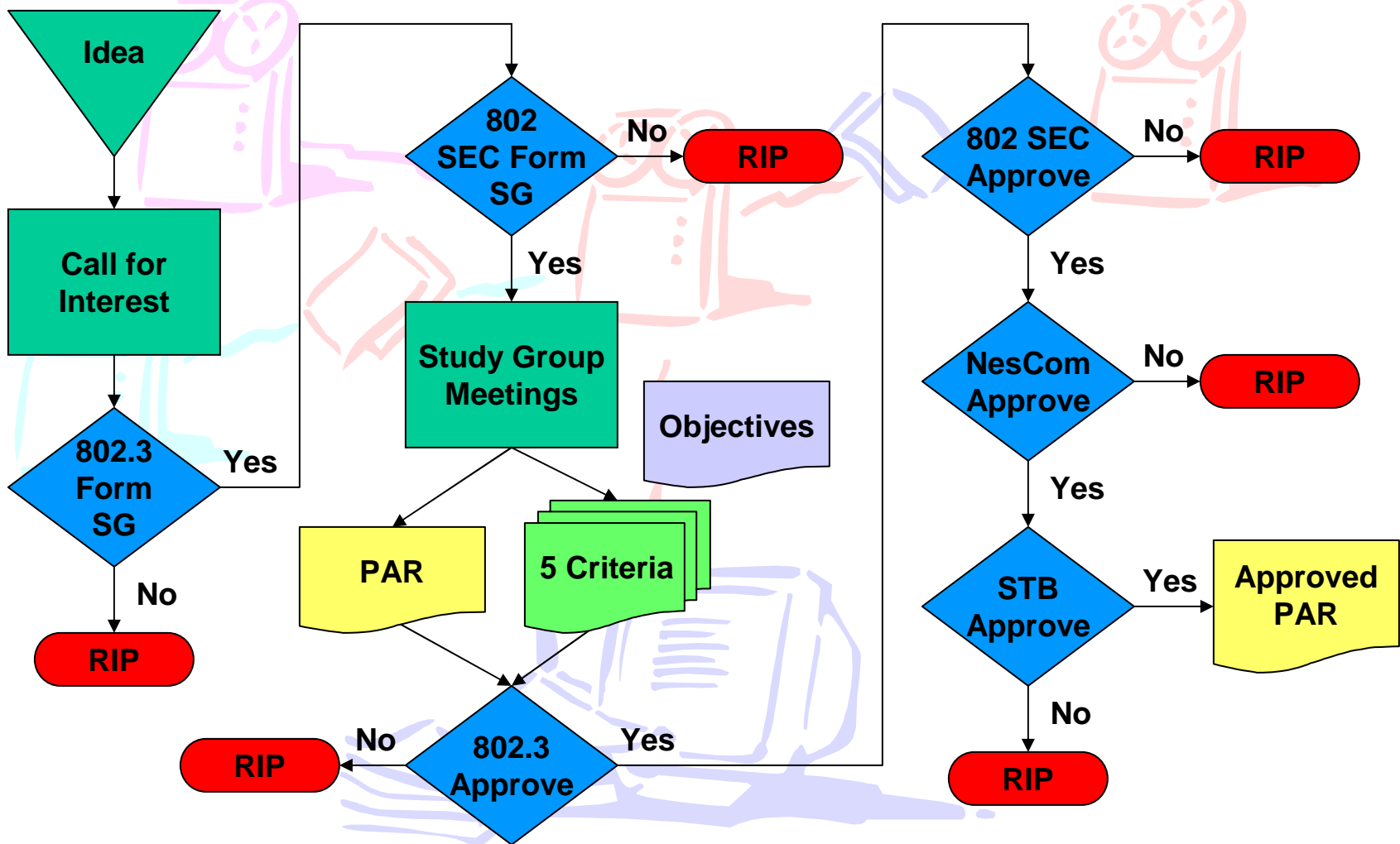
Inappropriate Topics for IEEE WG Meetings

- **Don't discuss licensing terms or conditions**
- **Don't discuss product pricing, territorial restrictions or market share**
- **Don't discuss ongoing litigation or threatened litigation**
- **Don't be silent if inappropriate topics are discussed... do formally object.**

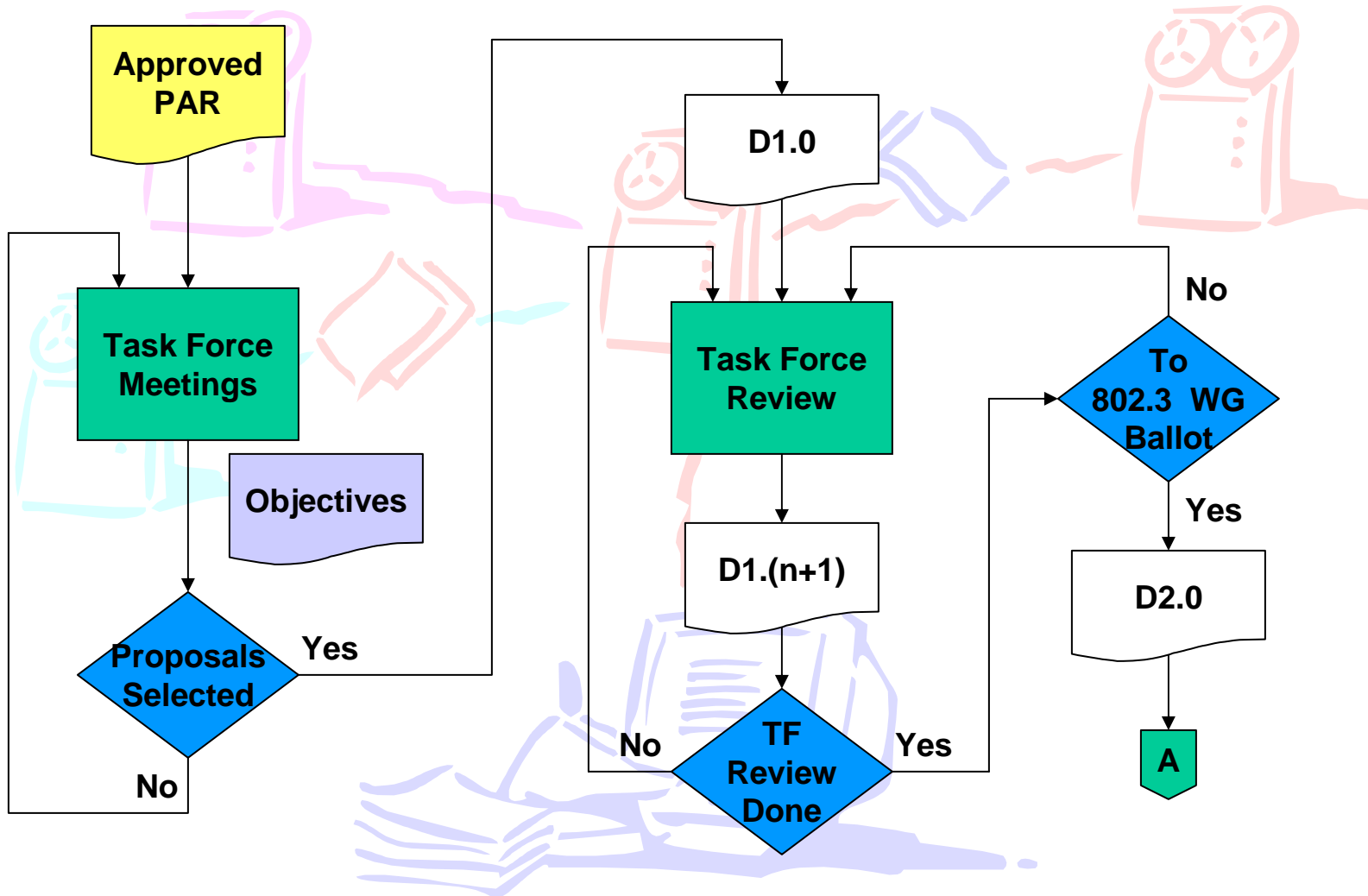
If you have questions,
contact the IEEE Patent Committee Administrator
at patcom@ieee.org

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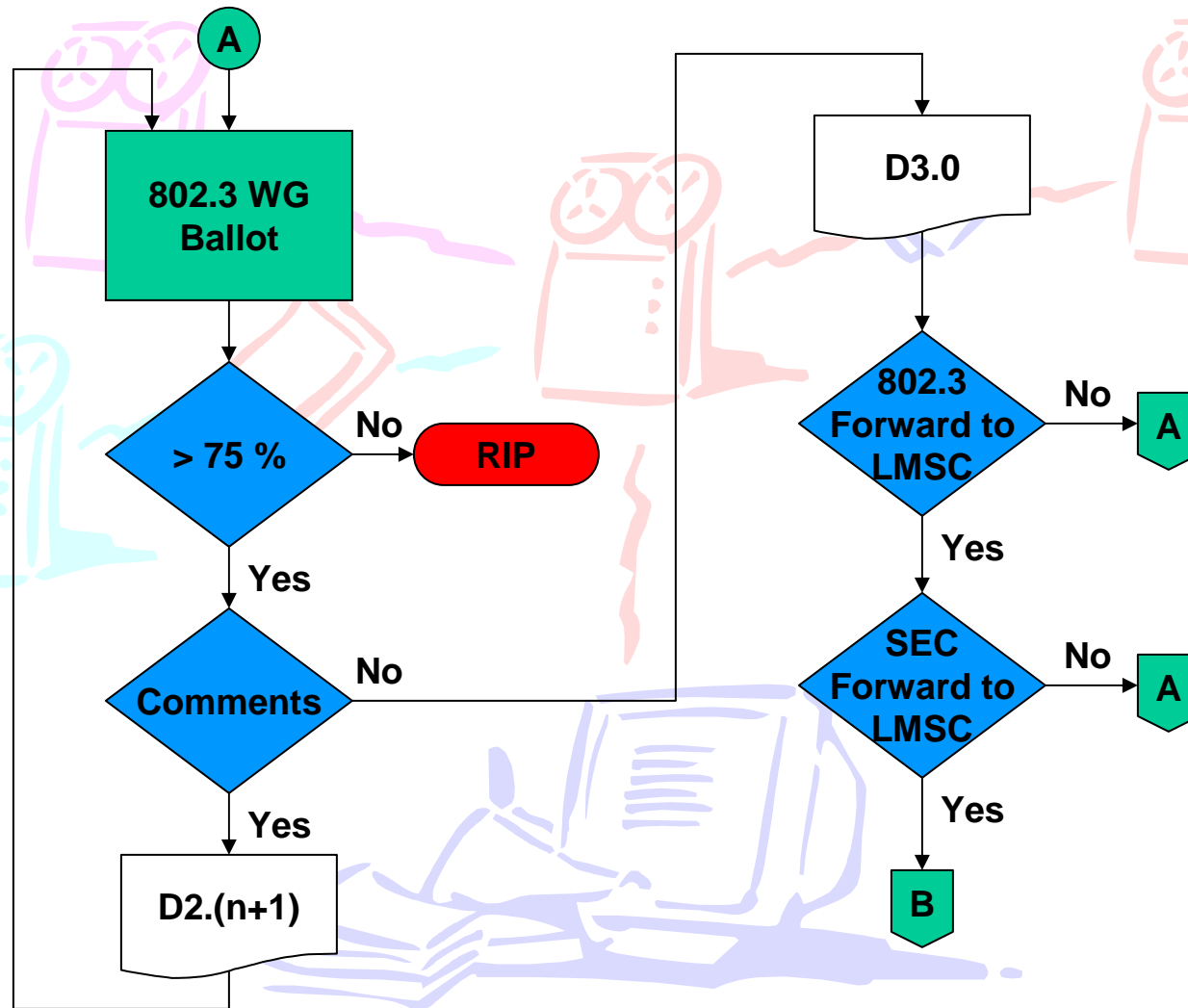
IEEE Standards Process



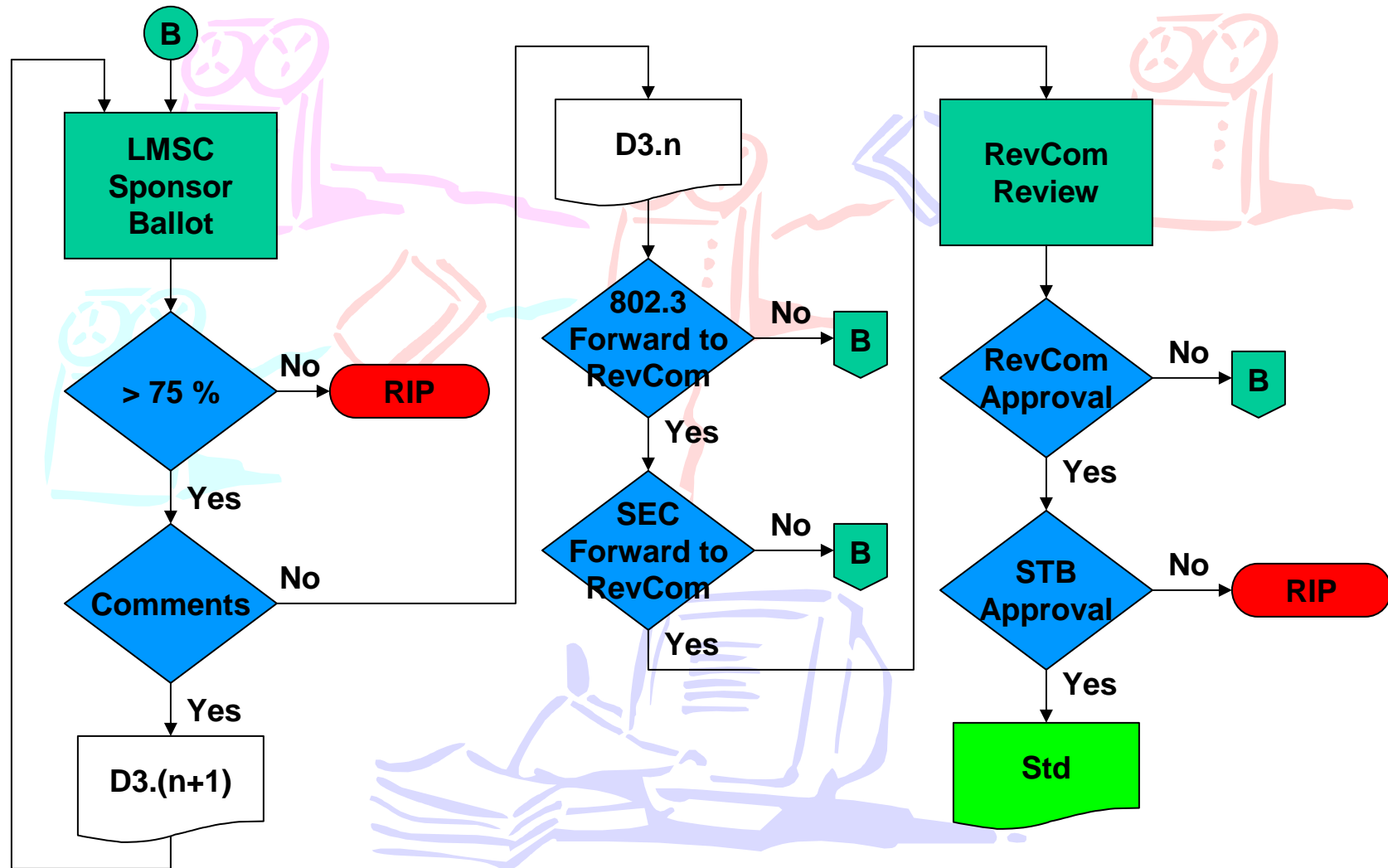
IEEE Standards Process (cont.)



IEEE Standards Process (cont.)



IEEE Standards Process (cont.)

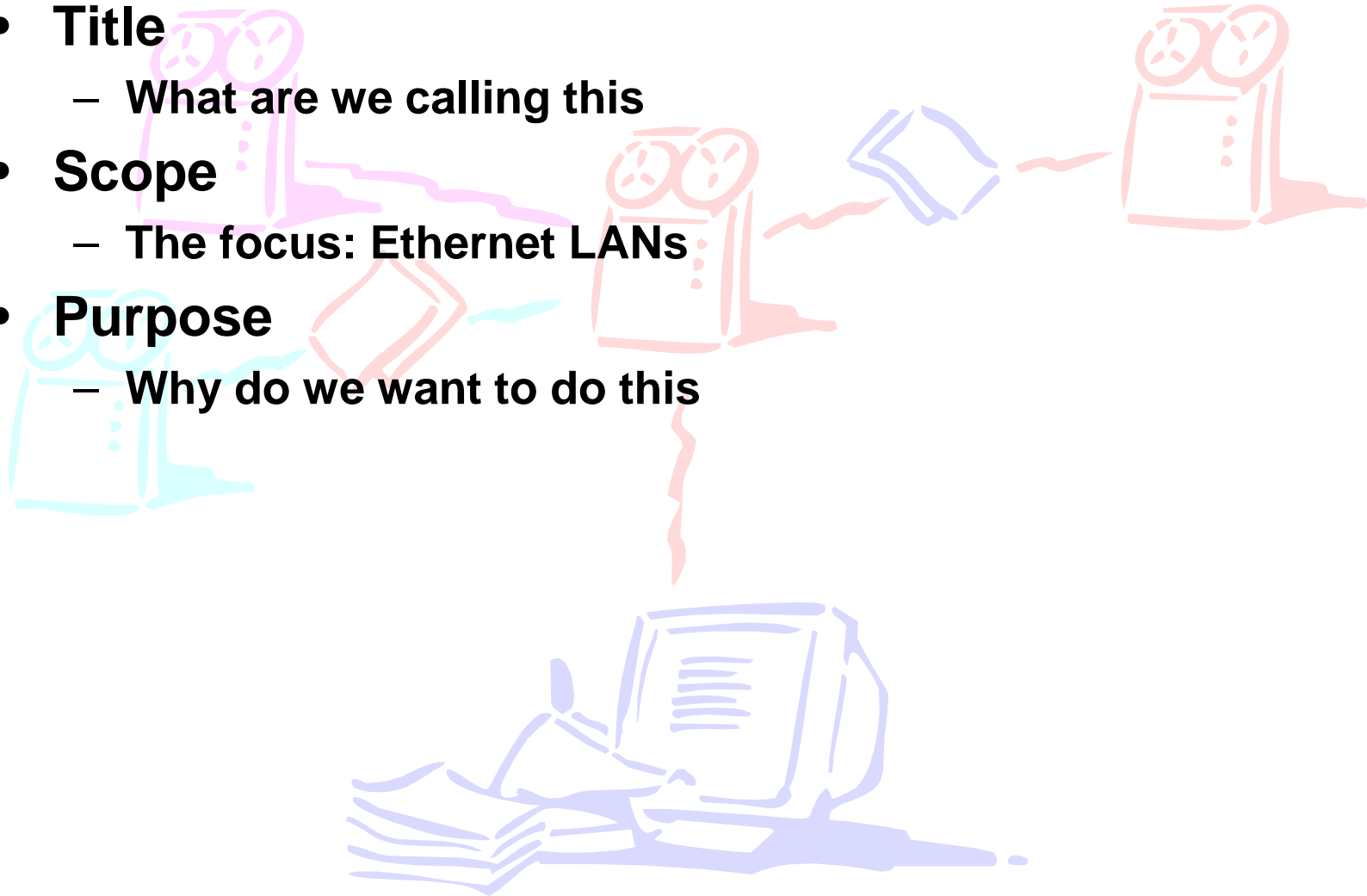


Study Group

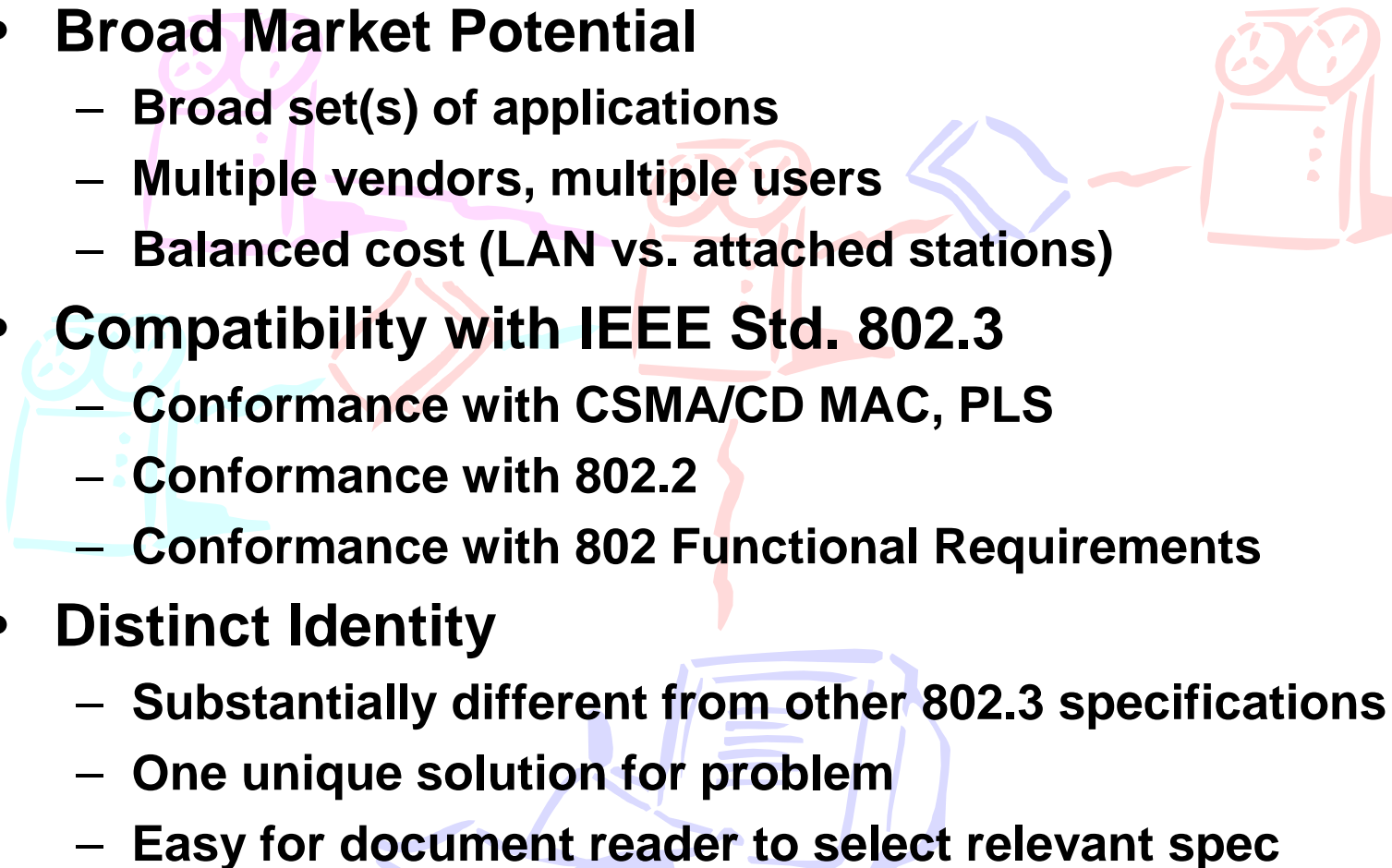
- **Function is to draft a PAR and 5 Criteria**
- **Gain approval at WG 802.3, 802 EC, IEEE NesCom and IEEE Stds. Board**
- **SG only exists for 6 months**
 - Extensions can be requested... voted on by 802.3, ratified by SEC
- **Development of Objectives help set the goals for the Task Force**
 - Some are as simple as using the Ethernet frame format
 - Others, like reach and cabling, can be more complicated
- **Education and consensus**
 - Education helps build consensus
 - Consensus required to move forward

PAR

- **Title**
 - What are we calling this
- **Scope**
 - The focus: Ethernet LANs
- **Purpose**
 - Why do we want to do this



5 Criteria

- **Broad Market Potential**
 - Broad set(s) of applications
 - Multiple vendors, multiple users
 - Balanced cost (LAN vs. attached stations)
 - **Compatibility with IEEE Std. 802.3**
 - Conformance with CSMA/CD MAC, PLS
 - Conformance with 802.2
 - Conformance with 802 Functional Requirements
 - **Distinct Identity**
 - Substantially different from other 802.3 specifications
 - One unique solution for problem
 - Easy for document reader to select relevant spec
- 

5 Criteria (cont.)

- **Technical Feasibility**
 - Demonstrated system feasibility
 - Proven technology, reasonable testing
 - Confidence in reliability
- **Economic Feasibility**
 - Cost factors known, reliable data
 - Reasonable cost for performance
 - Total installation costs considered



IEEE P802.3ae Objectives (Example)

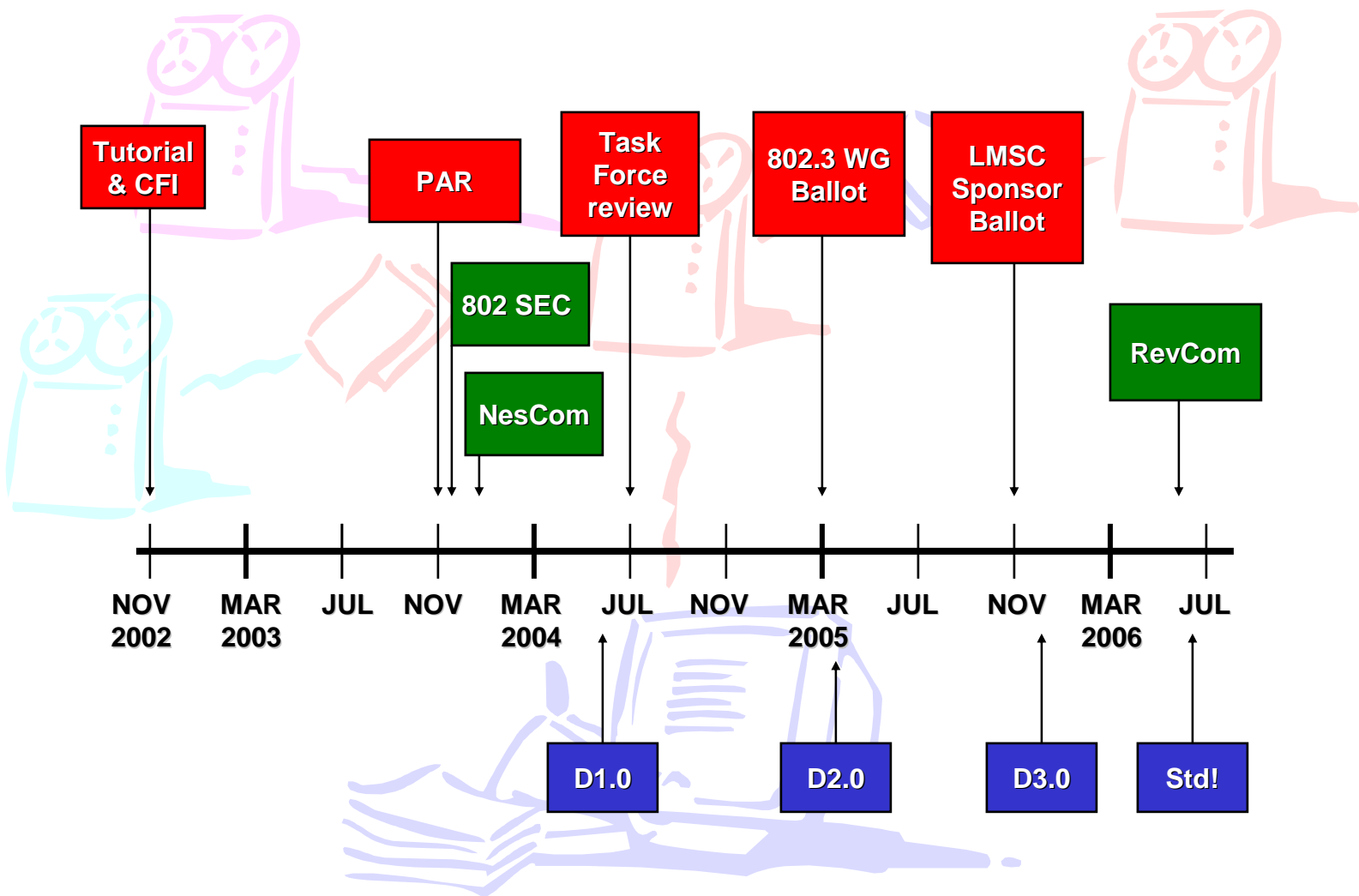
- **Preserve the 802.3/Ethernet frame format at the MAC Client service interface**
- **Meet 802 Function Requirements, with the possible exception of Hamming Distance**
- **Preserve min. and max. frame size of current 802.3 Std.**
- **Support full duplex operation only**
- **Support star-wired local area networks using point-to-point links and structured cabling topologies**
- **Specify an optional Media Independent Interface (MII)**
- **Support proposed Std. 802.3ad (Link Aggregation)**
- **Support a speed of 10.000 Gb/s at the MAC/PLS service interface**



IEEE P802.3ae Objectives (Example)

- **Support two families of PHYs:**
 - A LAN PHY, operating at a data rate of 10.000 Gb/s
 - A WAN PHY, operating at a data rate compatible with the payload rate of OC-192c/SDH VC-4-64c
- **Define a mechanism to adapt the data rate of the MAC/PLS service interface to the data rate of the WAN PHY**
- **Provide Physical Layer specifications which support link distances of:**
 - At least 300 m over installed MMF
 - At least 65 m over MMF
 - At least 2 km over SMF
 - At least 10 km over SMF
 - At least 40 km over SMF
- **Support fiber media selected from the second edition of ISO/IEC 11801 (802.3 to work with SC25/WG3 to develop appropriate specifications for any new fiber media)**

10GBASE-T Possible Timeline

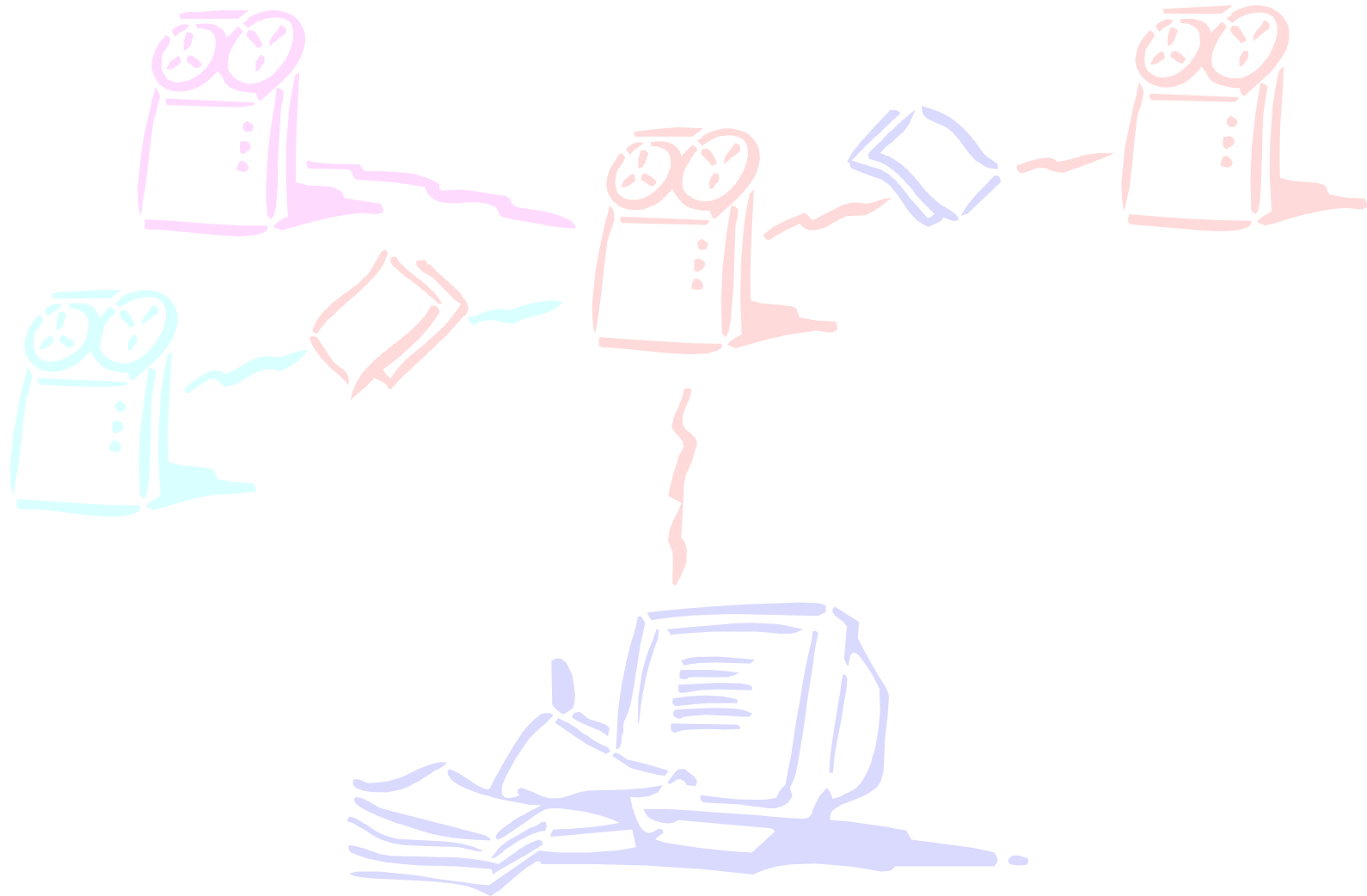


Liaison Letter(s)

- Liaison letter from IEC 46C



Presentations



Future Meetings

- **March 10-13, 2003 – Dallas, TX – 802 Plenary**
- **May, 2003 Options:**
 - 12-15: South Korea, hosted by Infineon & Samsung
 - ?
- **July 20-25, 2003 – San Francisco, CA – 802 Plenary**
- **September, 2003 Options:**
 - Date TBD: Italy, hosted by Aethra
 - ?
- **November 2003 – Albuquerque, NM – 802 Plenary**

Adjourn

