



Aligning Standards to Maximize Bluetooth™ Market

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Bluetooth is a trademark Telefonaktiebolaget L M Ericsson, Sweden¹

Overview



- ◆ Specification Versus Standards
- ◆ What is being “Standardized”
- ◆ Standards-Specific Additions to the Bluetooth Specification
- ◆ Status of the Draft Standard
- ◆ Plans for Future Bluetooth/IEEE Collaboration



My Involvement with Bluetooth

- ◆ TI Short Distance Wireless Business Unit formed
- ◆ Chief Technical Editor, IEEE802.15 **WPAN**[™] Standards
- ◆ Lead Technical Editor, IEEE802.15.1
- ◆ Editorial interface between BSIG and 802.15.1
- ◆ Author
 - "An IEEE Guide: How to Find What You Need in the Bluetooth Spec"
 - <http://standards.ieee.org/catalog/press/index.html#Bluetooth>
- ◆ Bluetooth Specification Section Owner, L2CAP

WPAN is a trademark of the IEEE



Specification versus Standard



versus



The Specification Artist



Helps people see
the world in a **new**
way.





The Standards Engineer

Codifies well-understood
phenomena

and

applies them to
well-known problems



Specification vs. Standard



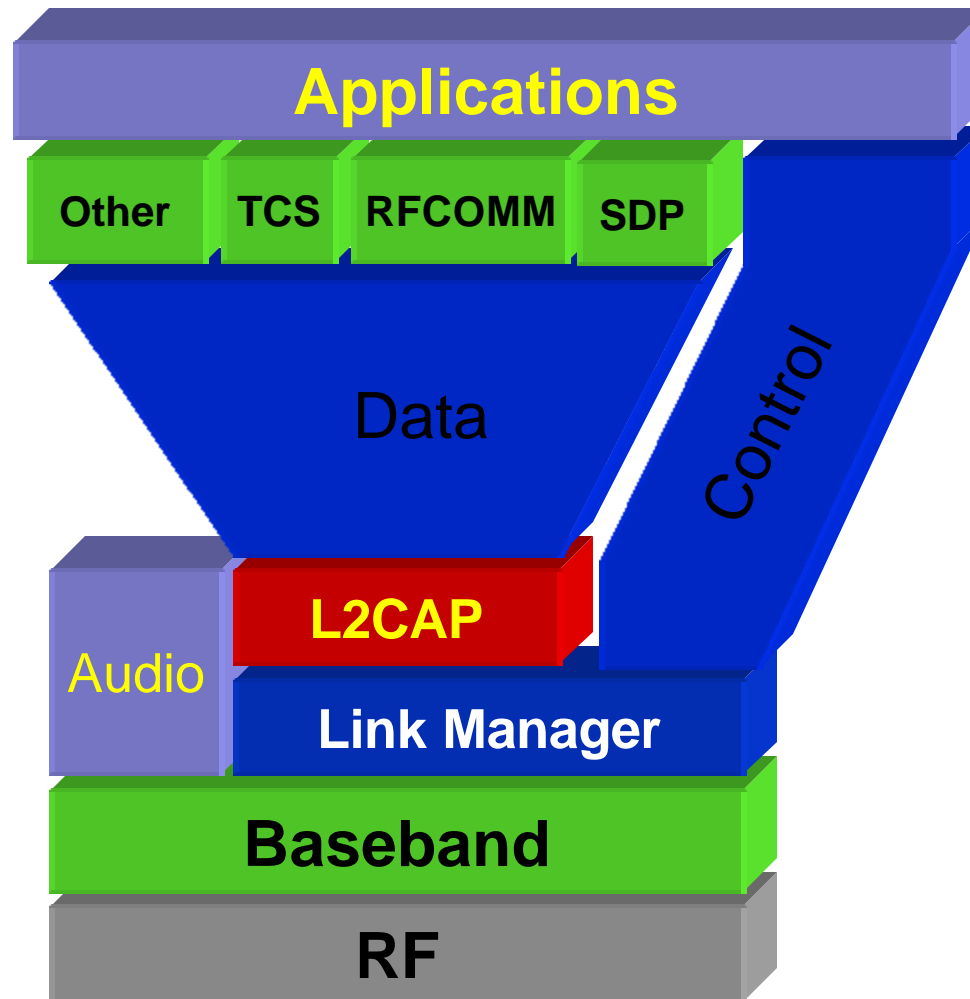
- ❖ Starts with a blank canvas
- ❖ Free format
- ❖ Usually evolves
- ❖ Often describes an implementation
- ❖ Says many (perhaps different) things to many people
- ❖ Sometimes "you had to be there"
- ❖ Inspires



- Starts with defined goal
- Format dictated by Standard
- Evolution by formal means
- Implementation Independent
- Unambiguous
- All you need to know is right there (or in the references)
- Communicates

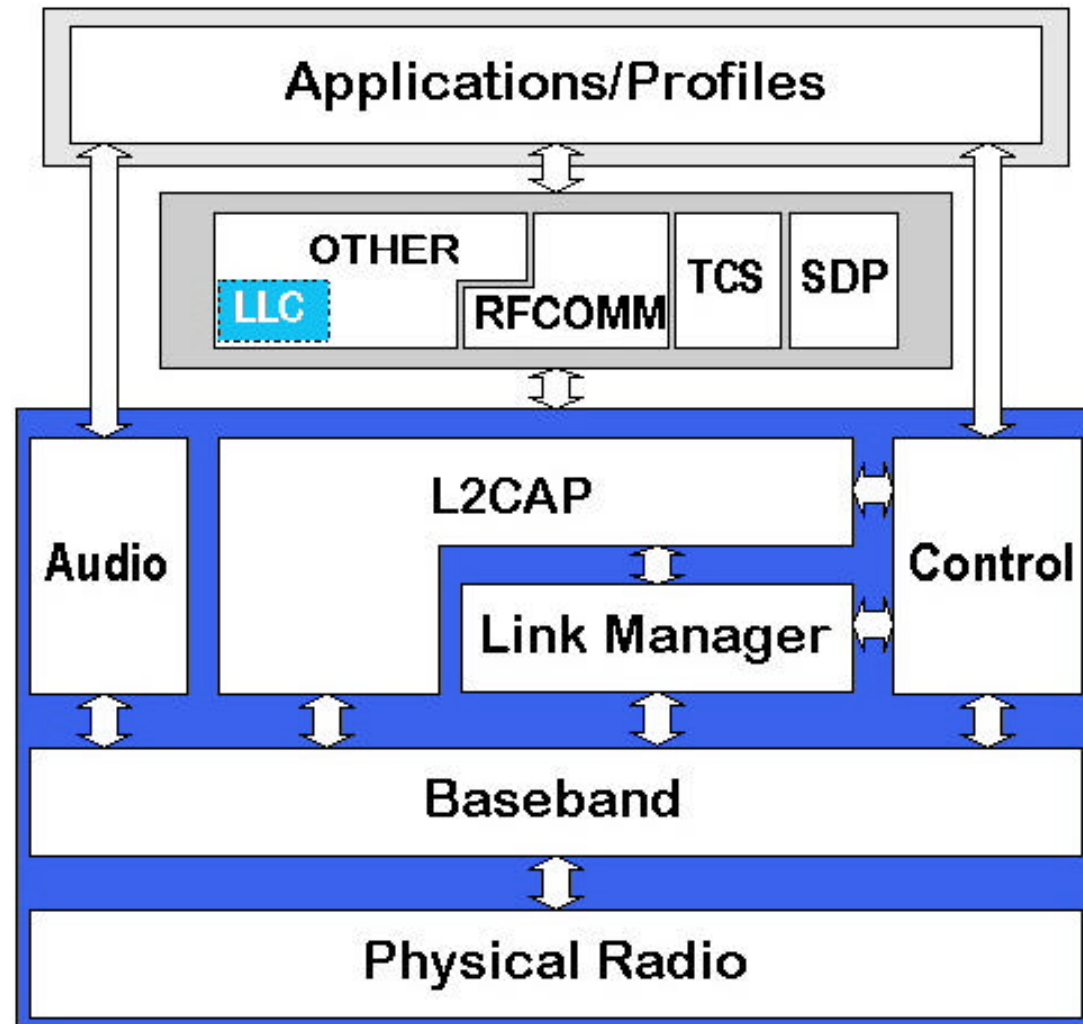


Bluetooth Specification



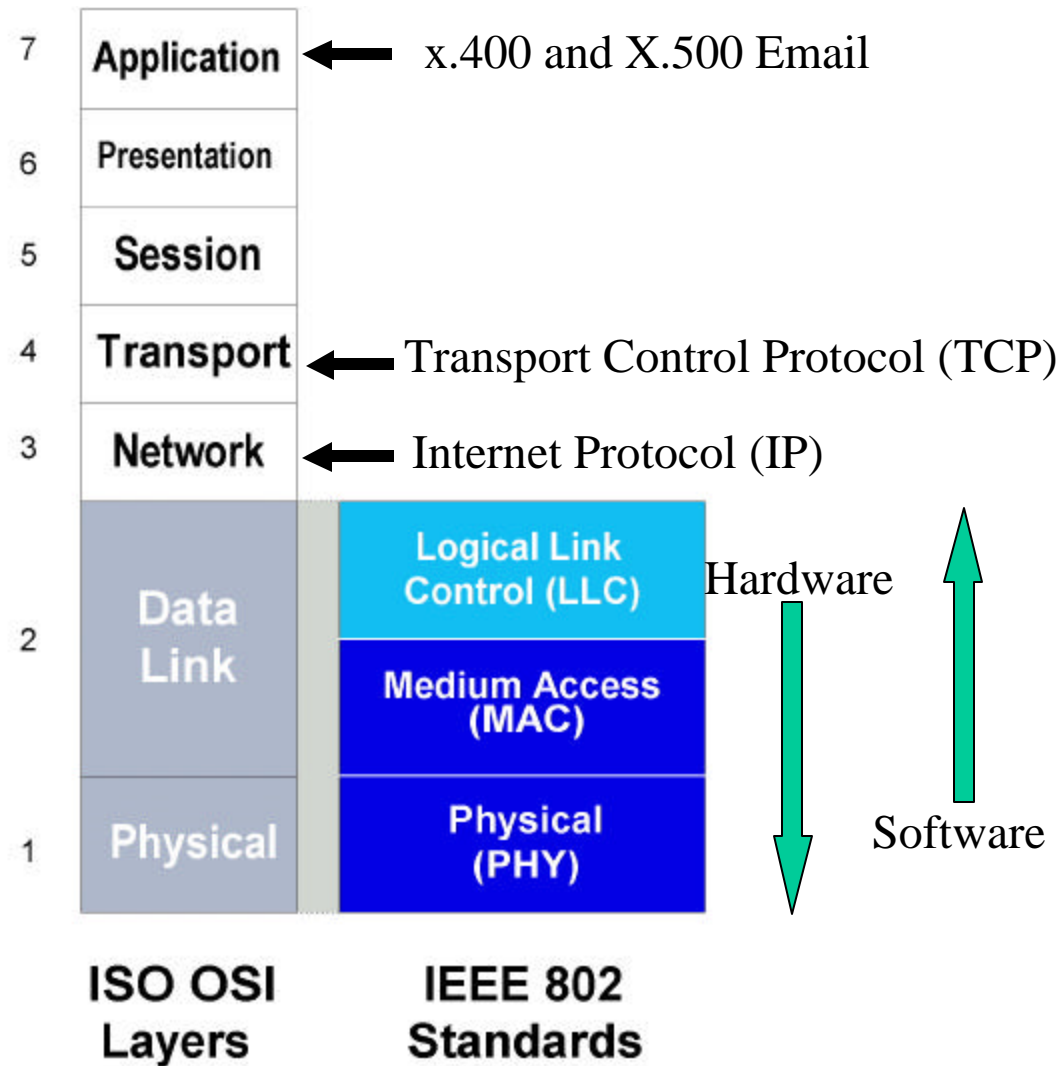


Bluetooth Specification

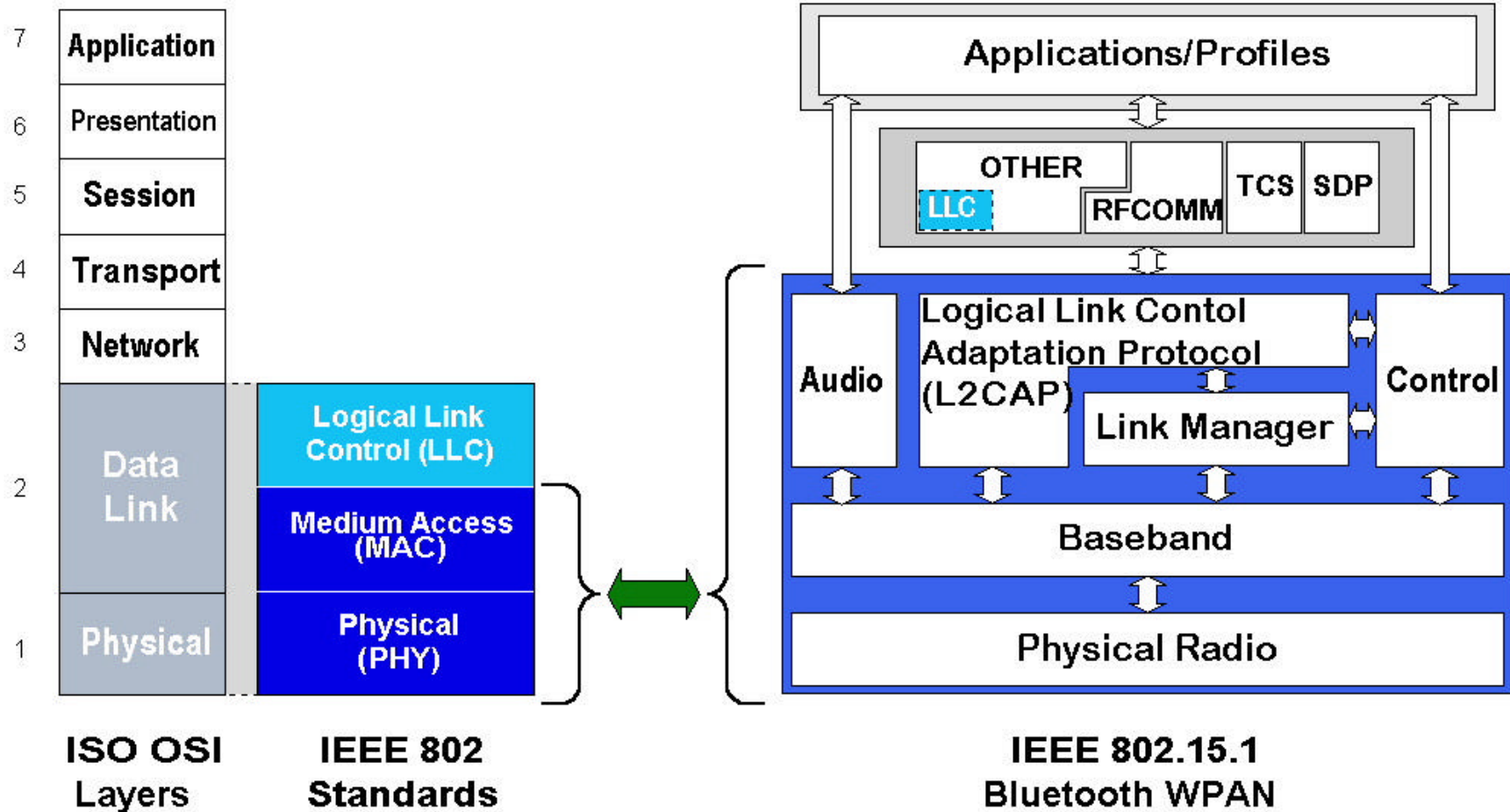




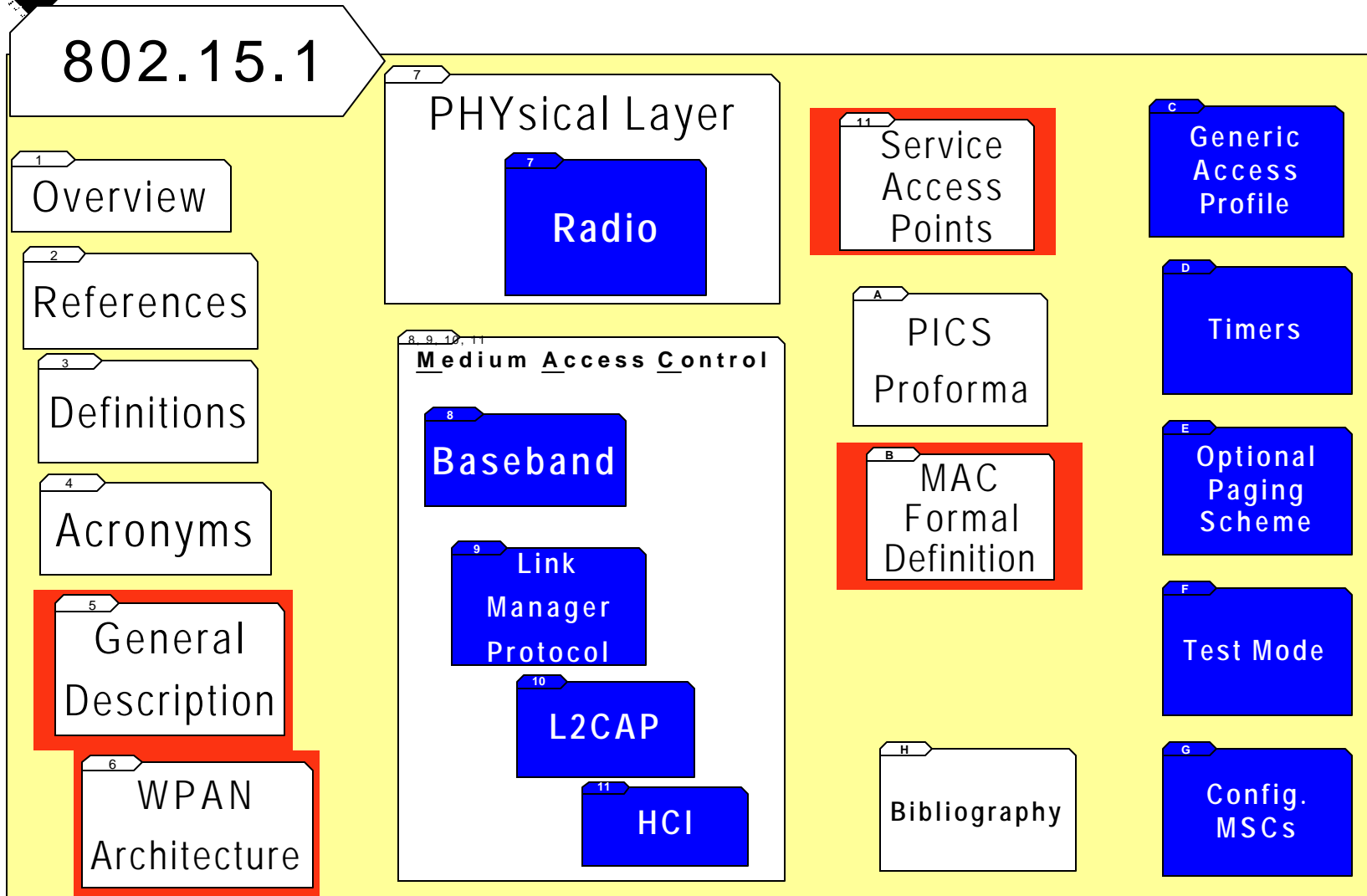
IEEE Project 802 Standards



How Does That Relate to Bluetooth?



Constructing the Draft



802.15.1 SDL



- ◆ Derived a picture of what the structure of the BT spec is in IEEE terms.
- ◆ Helped to uncover holes in existing spec
- ◆ Enables bench testing and validating of components
- ◆ Provides a common language between the SIG and the IEEE
- ◆ Generation of TTCN from SDL is possible

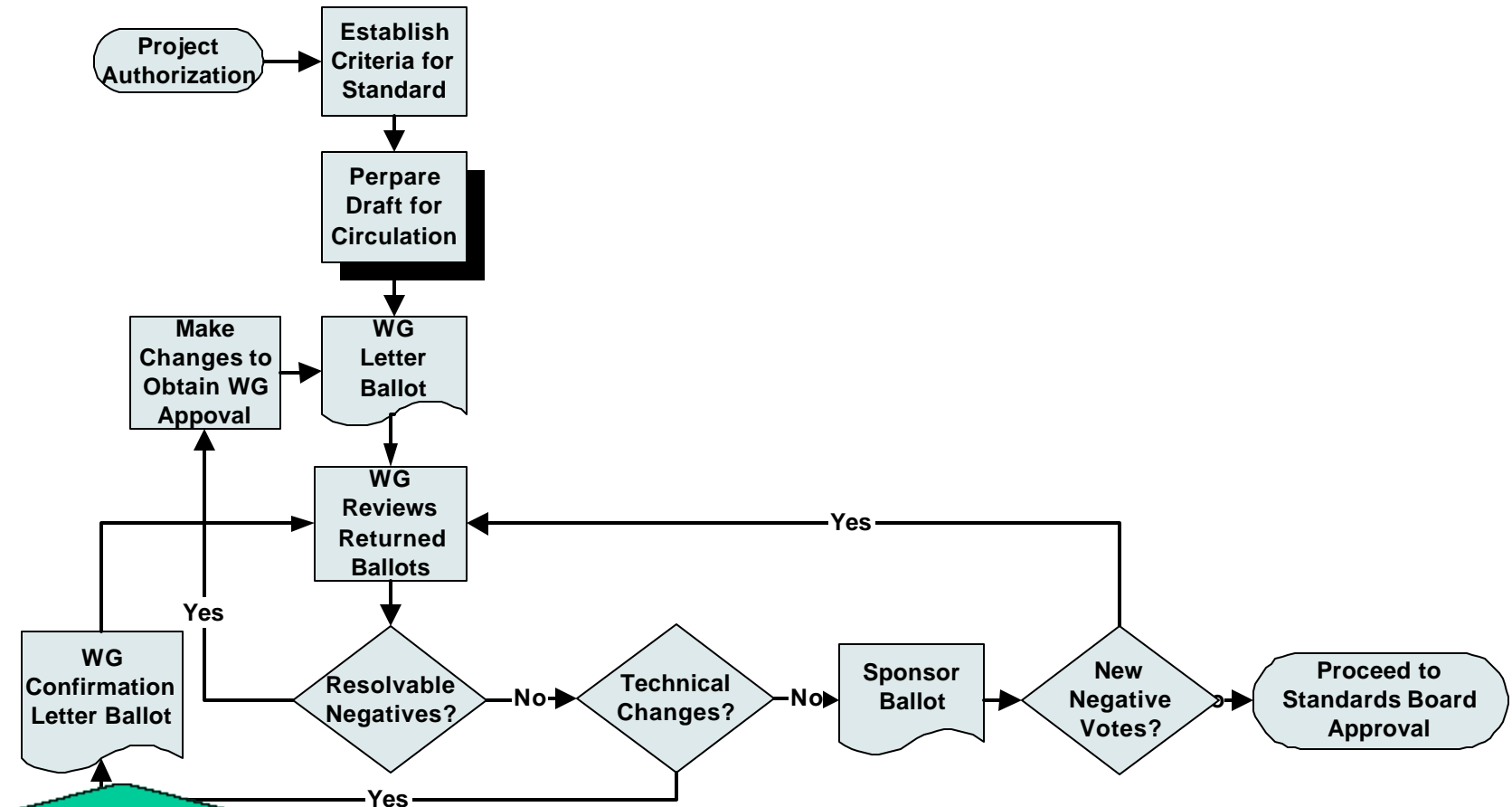


Implications for the future of Standards

- ◆ Normative SDL makes an unambiguous Standard
- ◆ Working SDL models can be used to extend currently working Standards, minimizing the danger of breaking the protocol
- ◆ SDL makes the relationship between Standards and Test Suites explicit



The Process of Creating a Standard



You are here



Project 802.15.1 Status

- ◆ Presented to Working Group and then IEEE 802 Executive Committee September00
- ◆ Delayed for Bluetooth V1.1 publication
- ◆ Confirmation Letter Ballot started 9Feb01, ends 11Mar01
- ◆ Comment Resolution at March01 IEEE meeting in Hilton Head, SC.
- ◆ LAN/MAN 802.15 Sponsor Ballot(s) during the Summer or Fall
- ◆ RevCom will submit Final Draft Std for approval upon successful completion of the Sponsor Ballot



Future Bluetooth/IEEE Collaboration

- ◆ IEEE 802.15 continues to work with the Bluetooth Special Interest Group
 - Submission of Errata
 - “Early” updates of the Spec from the SIG – current version of Draft includes v1.1 Bluetooth Specification
 - Plans for future revisions of
 - ◆ Version 1.x
 - ◆ Future versions
- ◆ There now is an overlap of “ownership” of the two documents.

More Information



IEEE: Contact Information

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Backup Slides

(likely not shown)



IEEE: An Overview

- ◆ Established in 1884 (AIEE & IRE)
- ◆ Membership was 360,00 Dec99;
66% USA & 33% Non-USA
- ◆ Produces 30 percent of the world's published literature in electrical engineering, computers and control technology,
- ◆ Holds annually more than 300 major conferences
- ◆ Has more than 800 active standards with 700 under development.

IEEE P802 LAN/MAN



- ◆ IEEE Project 802 Local and Metropolitan Area Network Standards Committee
- ◆ Accredited by ANSI, Sponsored by IEEE Computer Society
 - Ethernet, Token Ring, Wireless, Cable Modem Standards
 - Bridging, VLAN, Security Standards
- ◆ Meets three times per year
(400 individuals, 15% non-US)
- ◆ Develops equivalent IEC/ISO JTC 1 standards
JTC 1 series of equivalent standards are ISO 8802-nnn
- ◆ IEEE URLs
 - 802 <http://www.ieee802.org/>
 - 802.15 <http://www.ieee802.org/15/>



IEEE 802 Standards Principals

- ◆ **Due Process** through established rules and procedures
- ◆ **Consensus** highly desired, near unanimity is generally the rule
- ◆ **Openness** where all individuals, world-wide, have access to the process
- ◆ **Balance** maintained by having balloting group include both developers and users
- ◆ **Right to Appeal** both procedural and technical issues at any time during the process

More Detail of IEEE P802 Structure

