



# SBS Implementers Forum

- State of the Industry and Future Course -

## Keynote

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# Agenda

- SBS Specs, looking back
- SBS-IF Future Organizational Changes



# History of the SBS Specs

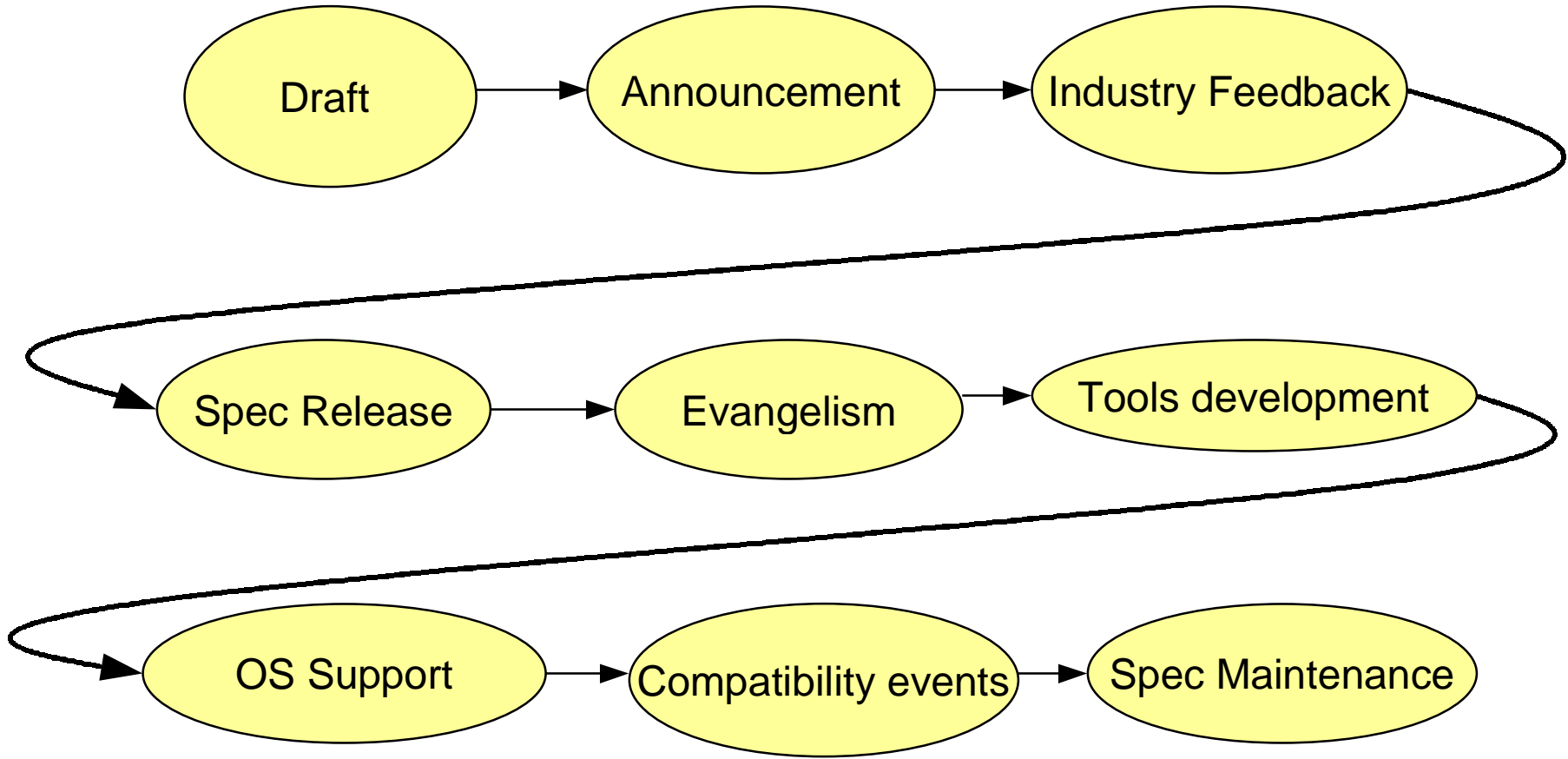
- 4/94: Intel/Duracell Announcement
- 2/95: SMBus, SBD v1.0 release
- 6/96: Charger spec v1.0 release
- 9/96: Selector spec v1.0 release
- 10/96: SBS Core Group Created
  - 10 Companies co-own the specs
- 1/97: SBS support in ACPI spec
- 4/97: SBS Implementer Forum (SBS-IF) Created
  - 51 members as of 11/98
- 12/98: v1.1 spec release



All products, plans and dates are preliminary and subject to change without any notice.

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# Most New Industry Specs Require Significant Efforts



USB, SBS, 1394 took 4+ years



# SBS Specs Acceptance is Good

- Systems shipping with smart batteries
  - Acer
  - Compaq
  - Dell
  - Fujitsu
  - Gateway
  - Hitachi
  - IBM
  - NEC
  - Sony
- Battery vendors
  - All are supplying custom size SBS packs
  - Several are supplying standard packs

9 out the top 10  
notebook OEMs have  
adopted the SBS specs

**Industry-wide specifications have enabled  
significant cost reductions and market growth**



# SBS-IF Accomplishments To Date

- 8 PlugFests :
  - Burlingame, Santa Clara, Monterey, Hawaii, Napa, Tokyo
- Power'94,'95,'96,'97,'98
  - SBS courses and plenary presentations
- Portable by Design '96,'97,'98
  - Tutorials, Booth, Portable After Dark
- Intel Developers Forum
  - US, Sept '98, 2hr Smart Battery Lab
  - Taiwan, Oct '98, all-day track
- Japan meetings
  - Quarterly meetings organized by Mitsubishi and Fujitsu
- Weekly DRB conference calls

**Thank you to all the active members**



# Issues Needing Resolution

- Microsoft
  - No standard SBS driver in Win'98
  - Windows 2000 support on track but does not fully exploit capability
- Battery data accuracy
  - All SBS batteries report the same data,...but can it be trusted?
    - Testing methodology is defined (Samsung/Mummah)
    - Needs to be promoted and adopted by all battery vendors
    - “Accurate battery” symbol would be nice for user



# Key issue: When are we done?

- When technology is broadly adopted by OEMs and components suppliers
  - Status: Mostly done
- When benefits have been realized by customers
  - Status: Not yet done
    - Need better OS support
    - Need recognition of accurate batteries

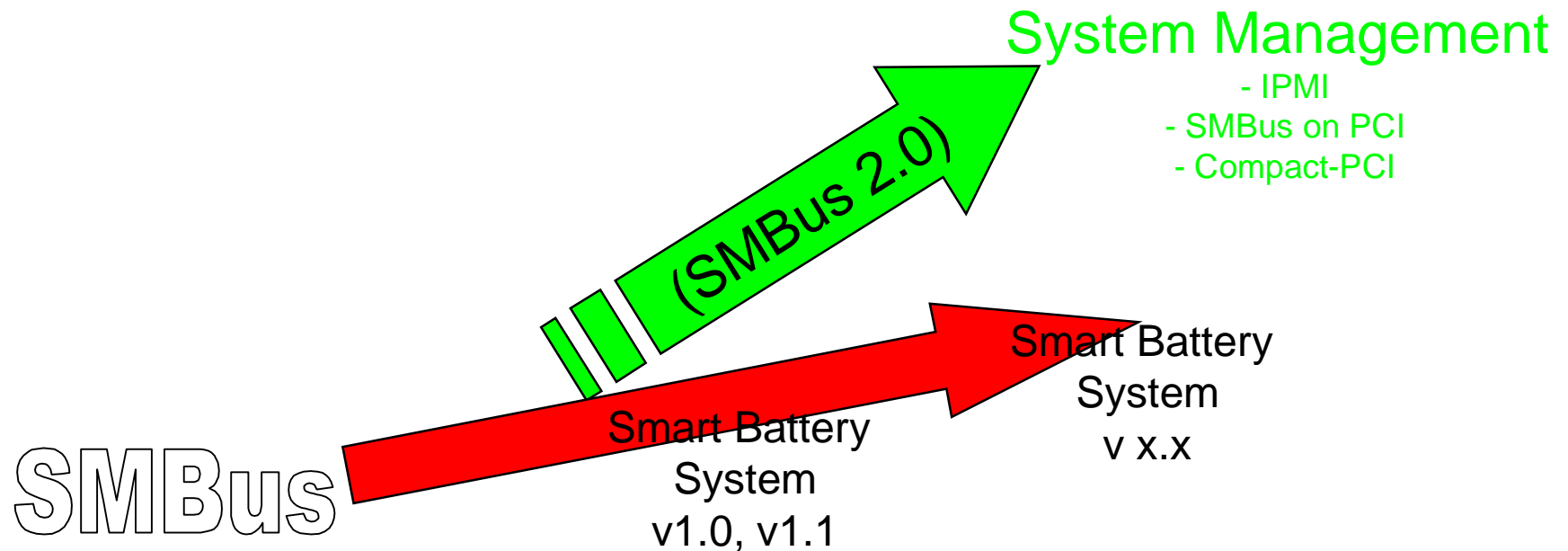


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# SMBus Evolution



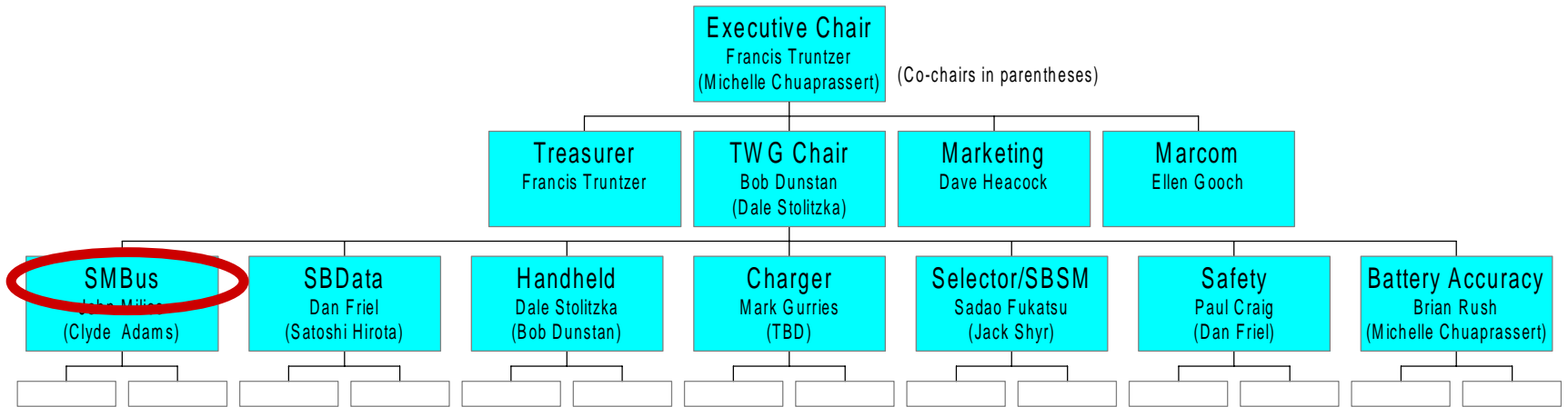
- Strong drive for enhancing the SMBus spec
- PC Manageability is the motivation



# SMBus Ownership Today

Core Group

- Benchmarq
- Intel
- Linear Tech
- Maxim
- Mitsubishi
- National
- Duracell
- Energizer
- Toshiba Battery
- Varta



Very Battery-Centric



# Motivations For Org. Change

- SBS-IF is attracting new companies with no involvement in batteries
  - SBS Adopters Agreement is inappropriate for non-battery companies
  - Promoters agreement is limited to battery related specs
- SMBus spec needs organizational and decision structure involving other than battery experts
- Current organization is not suited for software distribution and support



**A new organization is needed**

# Guidelines for New Organization

- Make SMBus the Foundation specification
  - Include all Flavors of SMBus
    - E.g. SMBus-One™
  - No ties to any specific application
- Entrust development of application specific specs to Working Groups, led by experts in their field.



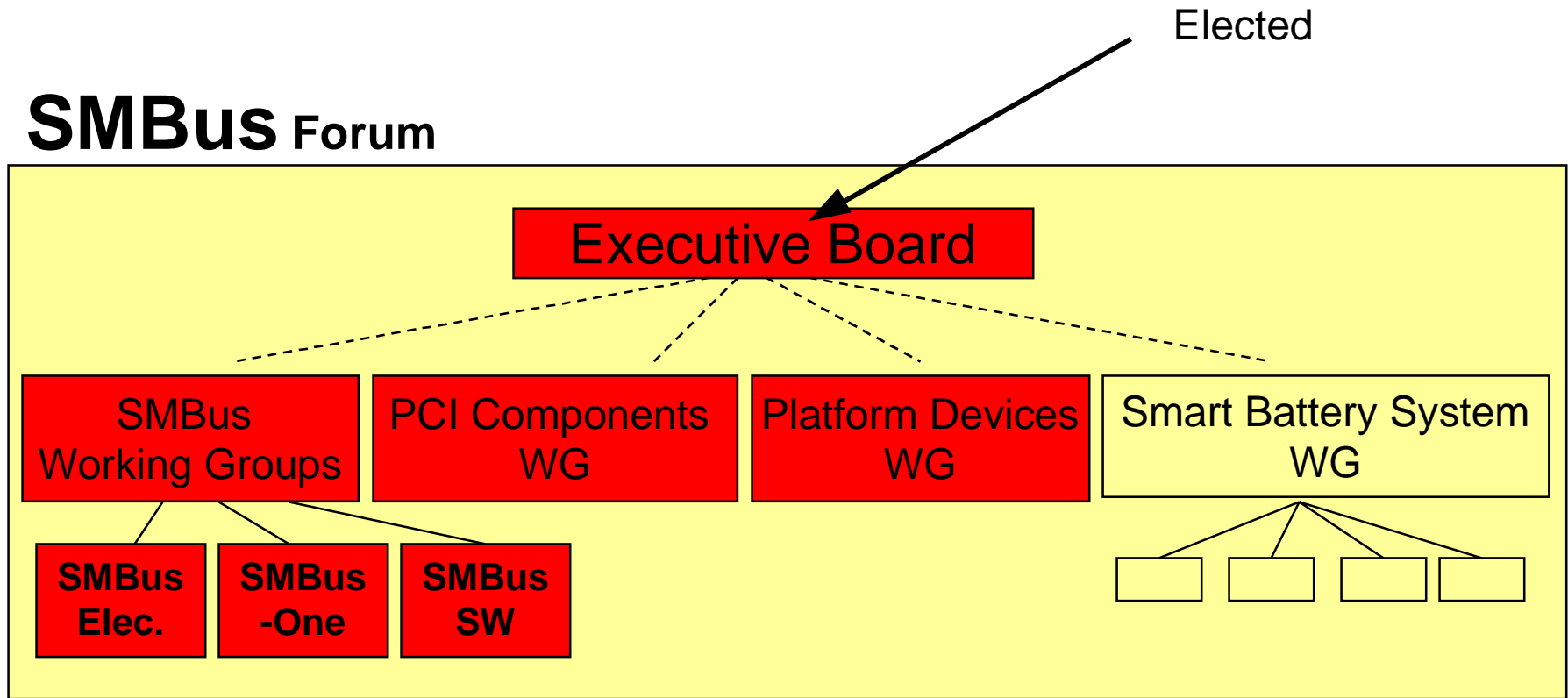
# Plan: Create An SMBus Forum

- Legal Entity:
  - Can own IP
    - But operates under Open reciprocal IP or Reasonable and Non Discriminatory fee principle
  - Can own and license software
  - Is run by a board of elected officials
    - Voting process defined by bylaws
  - Protects member companies
- Make SMBus the focus of the legal entity
  - Working groups create applications specific specs
    - e.g SMBus on PCI, Smart Battery etc
- Invite major OEMs to become board members



Forum mission: promote and facilitate the adoption of SMBus in PC Platforms

# Future Organization



SMBus Forum, a non-profit corporation, owns the specs

Smart Battery System IF membership will automatically transfer to new organization



# Timeline

- Statement of direction today
- SMBus Forum Bylaws agreed upon by key OEMs: 4/99
- SMBus Forum Announced: 5/99
  - SMBus 2.0 spec release
  - SMBus on PCI ECR release
  - SMBus driver release

