



SBS Implementers Forum

- State of the Industry and Future Course -

Keynote

By Francis Truntzer, Intel Corp



Agenda

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



History of the SBS Specs

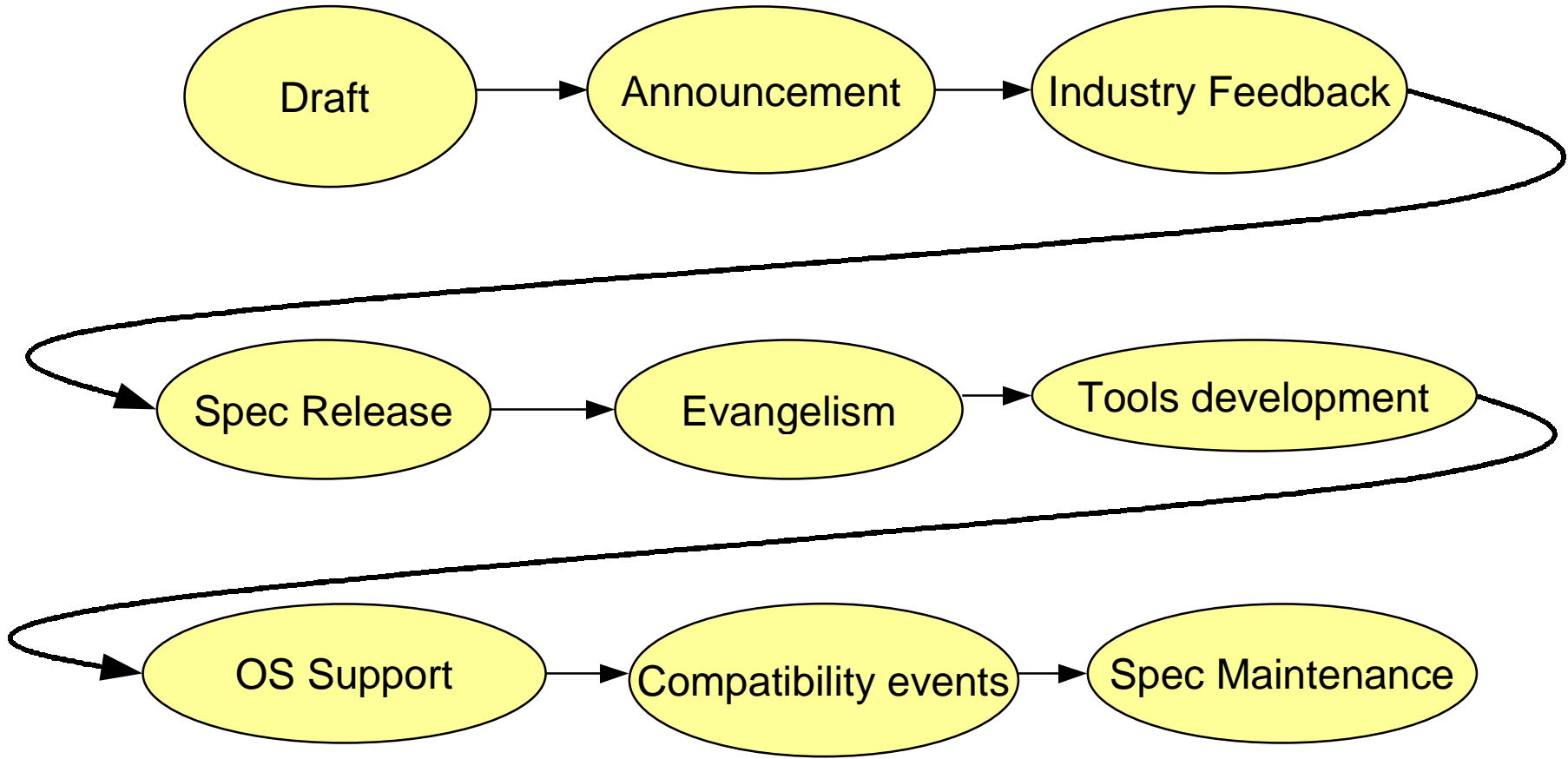
- 4/94: Intel/Duracell Announcement
- 2/95: SMBus, SBD v1.0 release
- 6/96: Charger spec v1.0 release
- 9/96: Selector spec v1.0 release
- 10/96: SBS Core Group Created
 - 10 Companies co-own the specs
- 1/97: SBS support in ACPI spec
- 4/97: SBS Implementer Forum (SBS-IF) Created
 - 51 members as of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

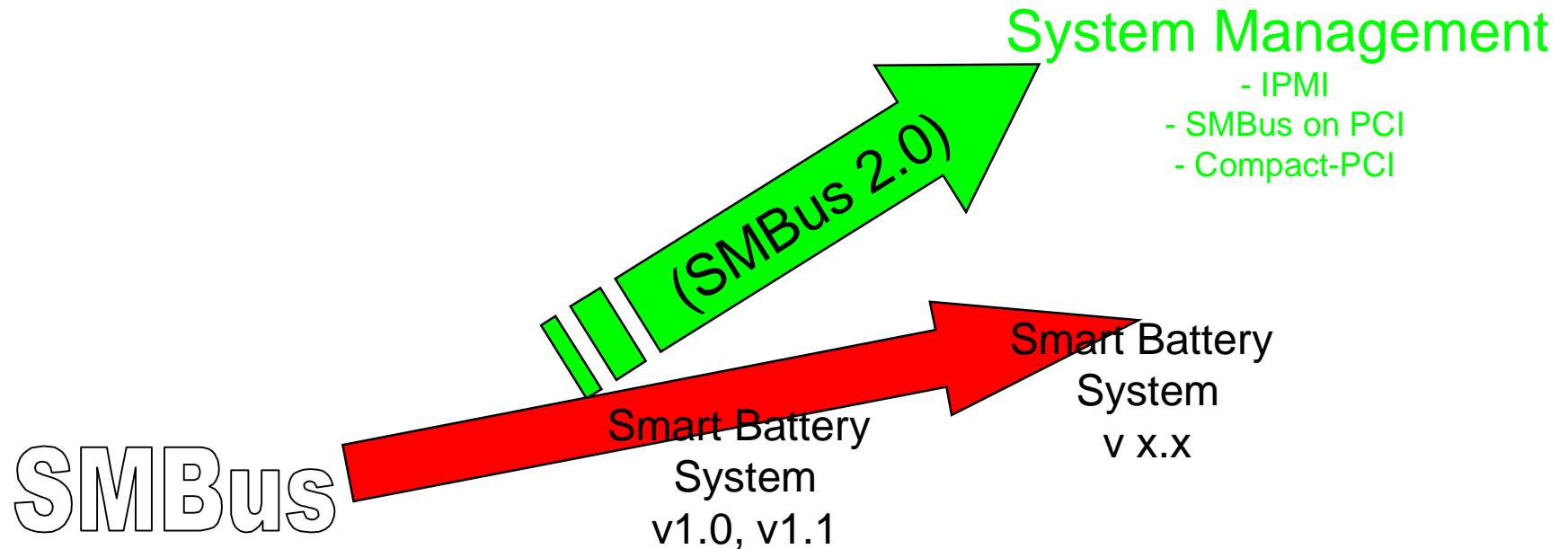


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SMBus Evolution



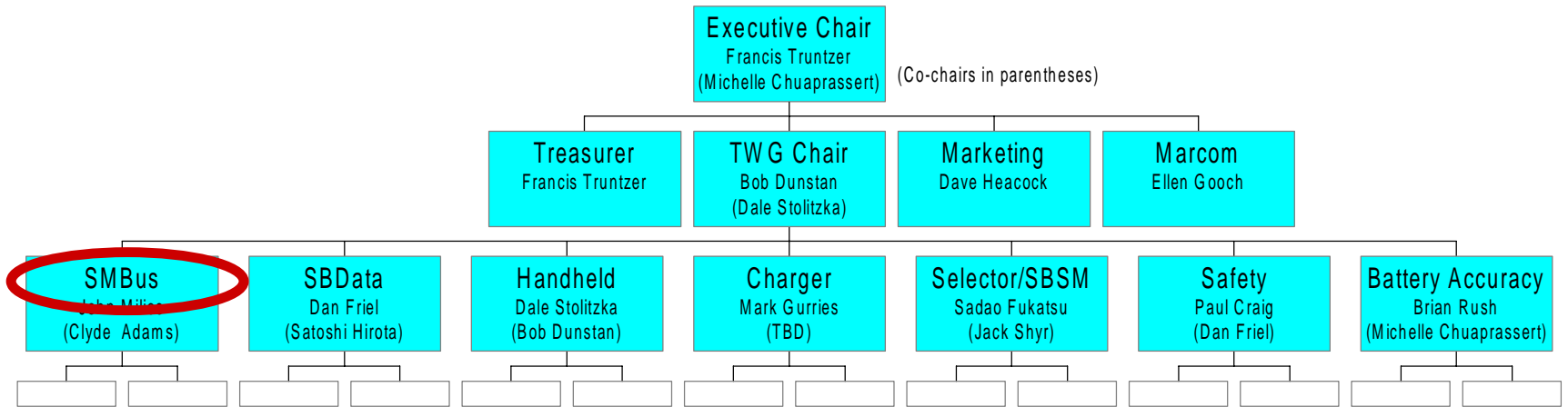
- Strong drive for enhancing the SMBus spec
- PC Manageability is the motivation



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.



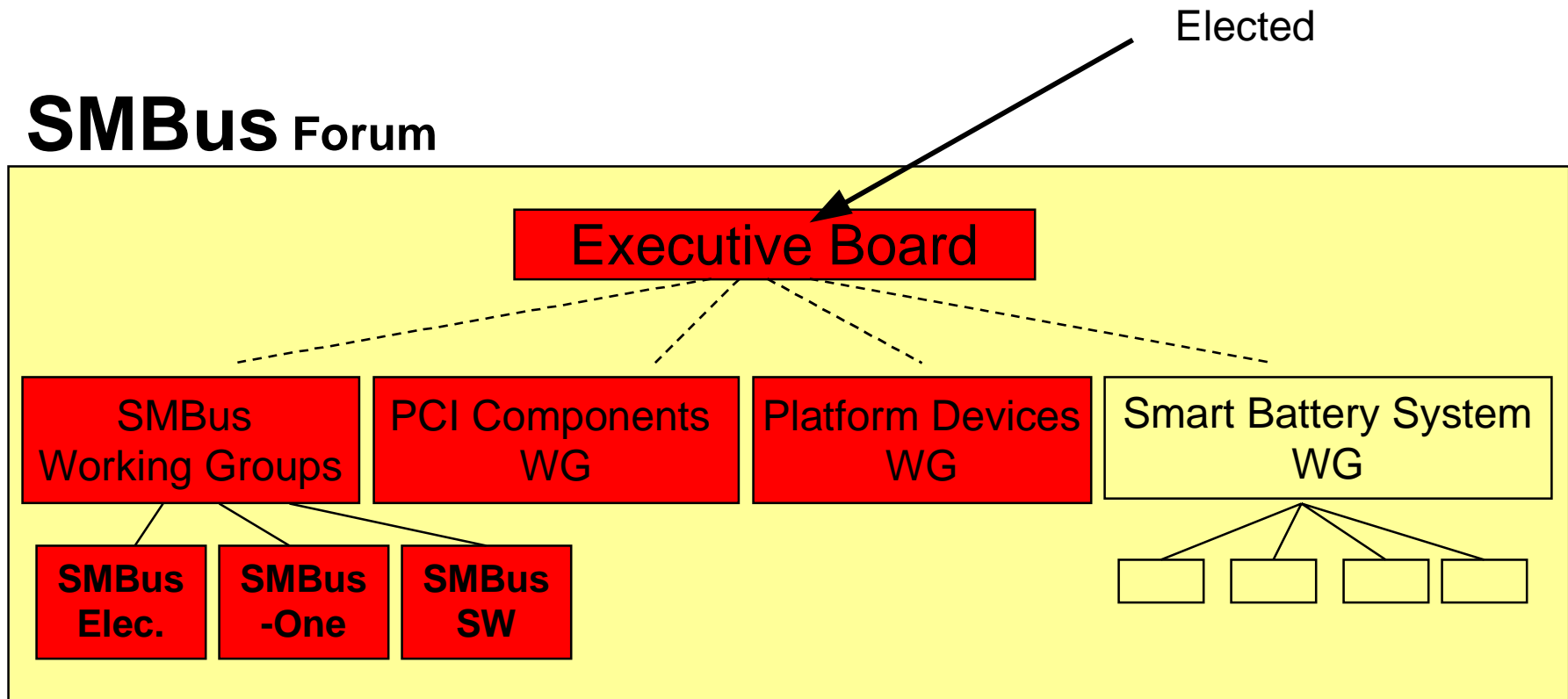
Plan: Create An SMBus Forum

- 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

