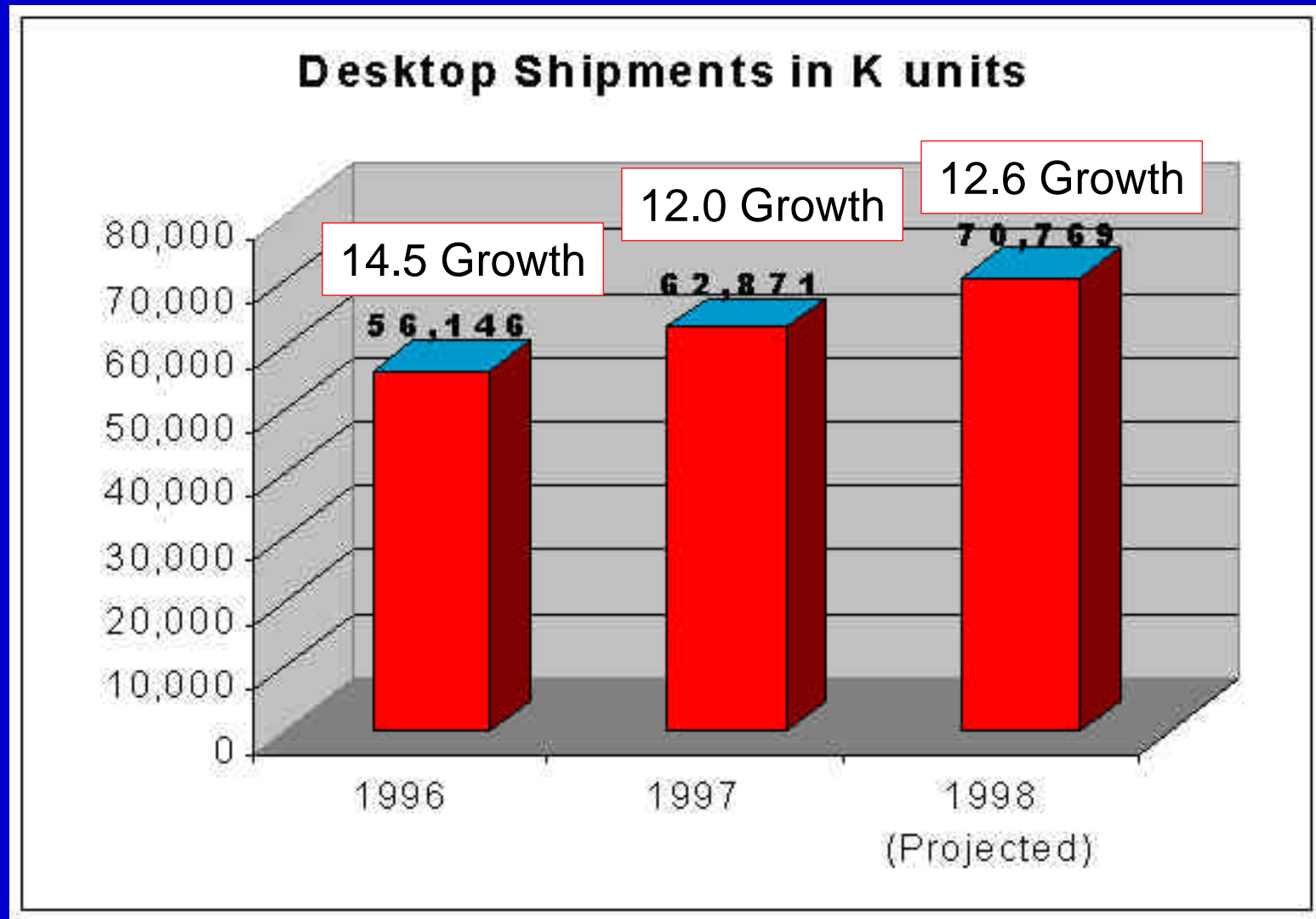


# Notebook OEM Expectations for SBS Technology

By Sadao Fukatsu  
Fujitsu Personal Systems, Inc.

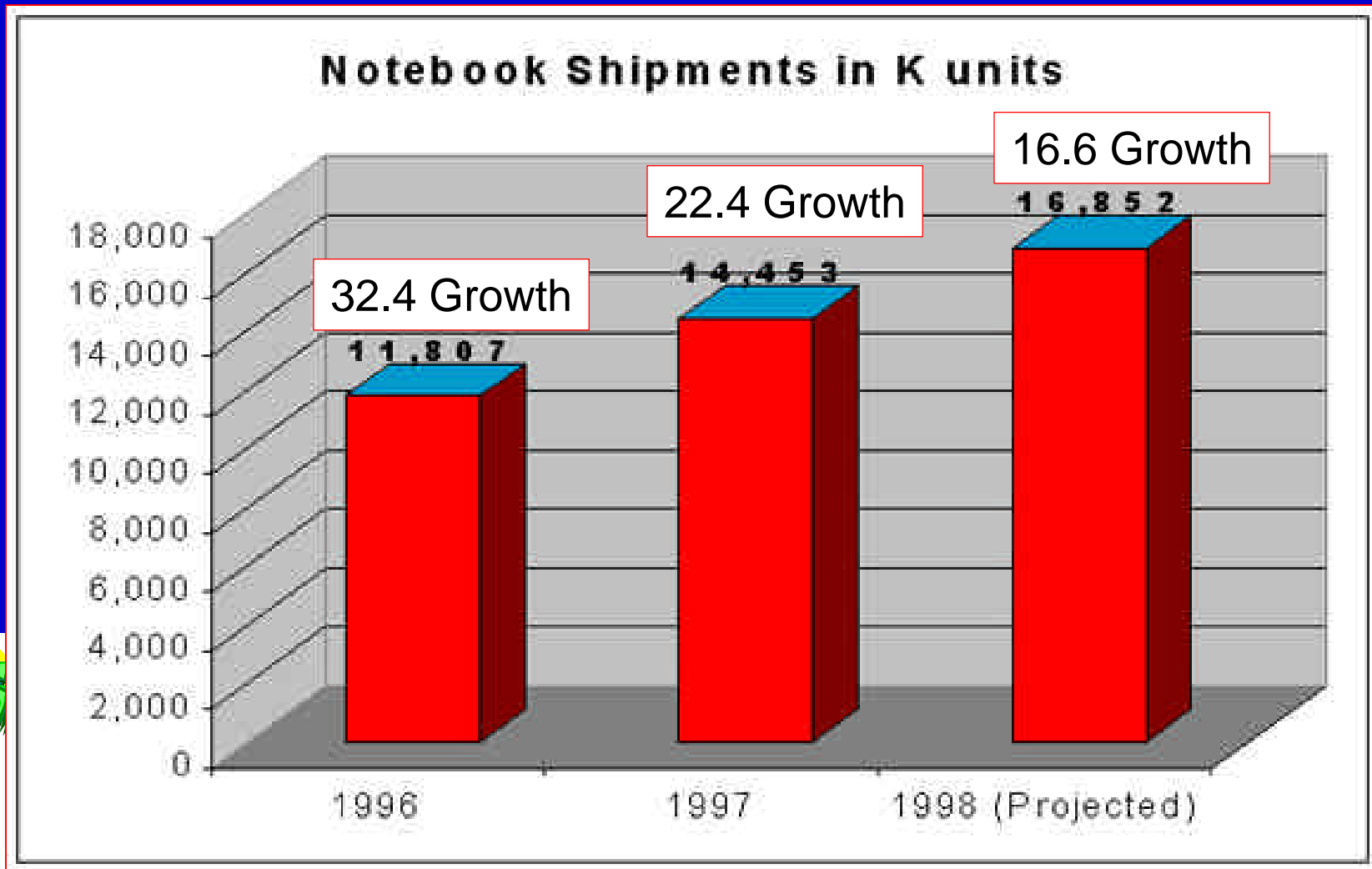


# Desktop Marketing Trend



*Notebook OEM Expectations for SBS Technology- Fujitsu*

# Notebook Marketing Trend

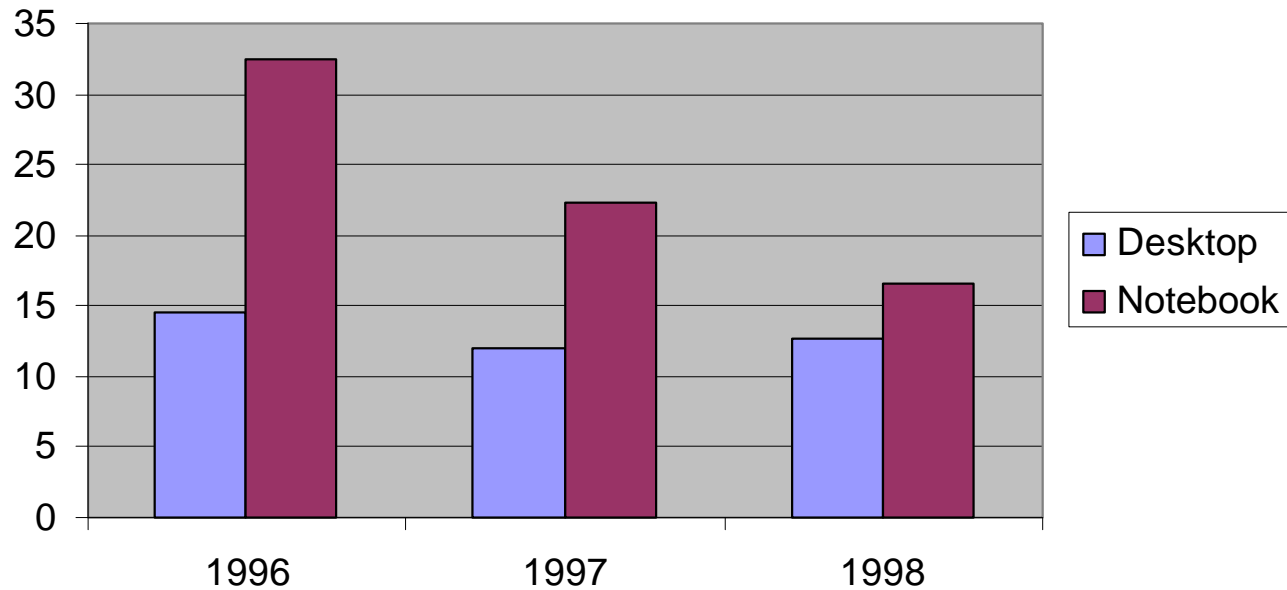


*Notebook OEM Expectations for SBS Technology- Fujitsu*



# Growth Compared

**Desktop/Laptop Growth Rate Comparison**



*Notebook OEM Expectations for SBS Technology- Fujitsu*

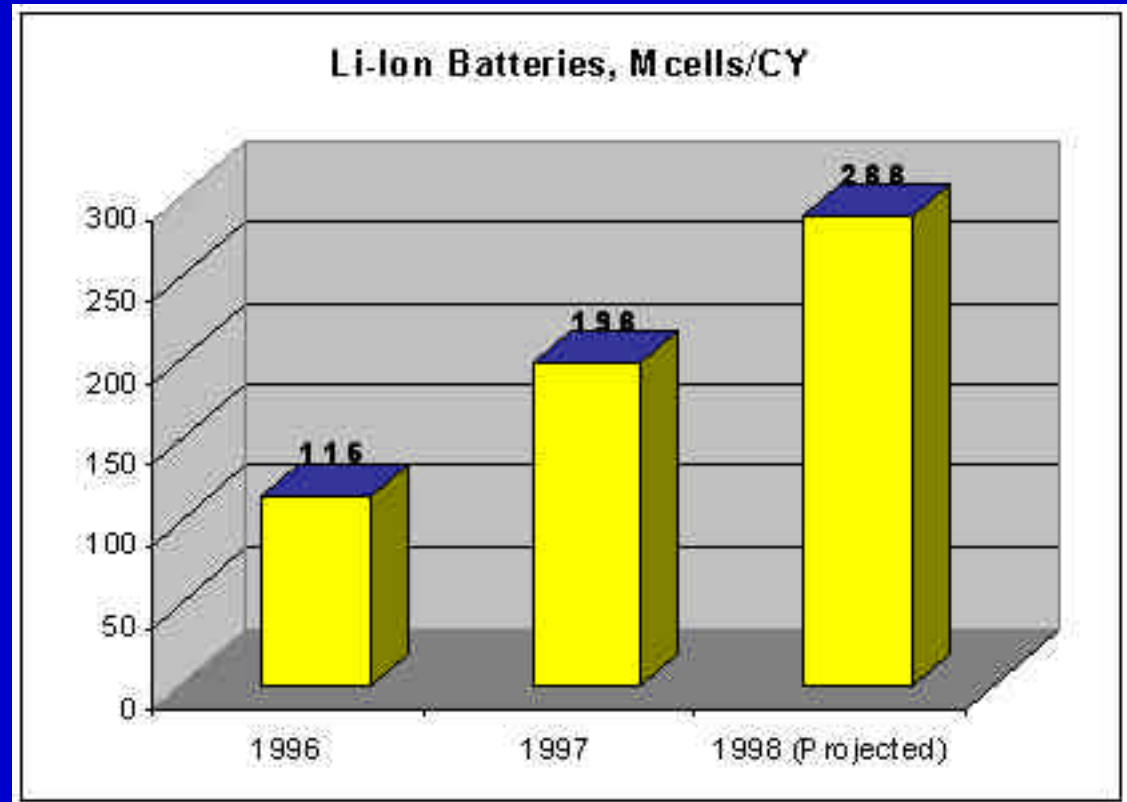
# Important Notebook Characteristics

- Lightweight
- Large Screen
- Thermal Management
- Power Management
- Battery Technology
- Etc.



# Battery Market Trend

- Li-Ion - fast growth segment
- Companies:  
NA - 280  
Europe - 50  
Asia - 79



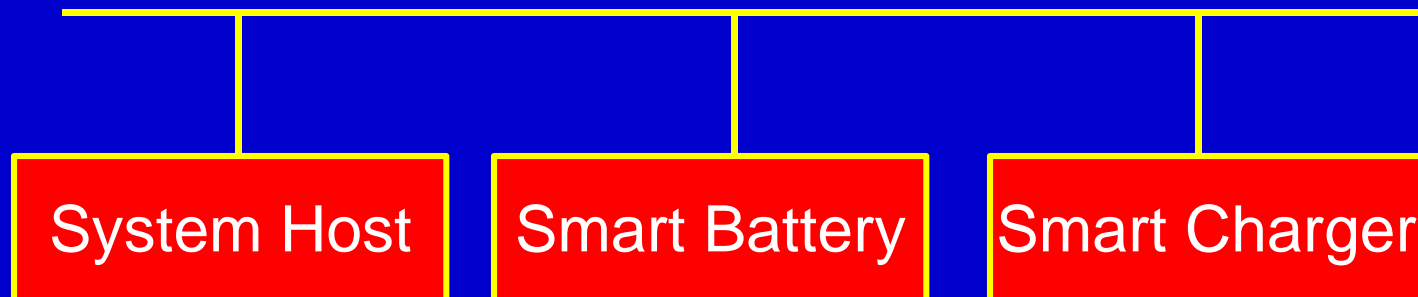
# Battery Requirements

- Large Capacity and Cycle Life
- Longer System Run-Time
- Long Term Reliability
- Inter-Operability
- Etc.



# SBS 1.0 Specification

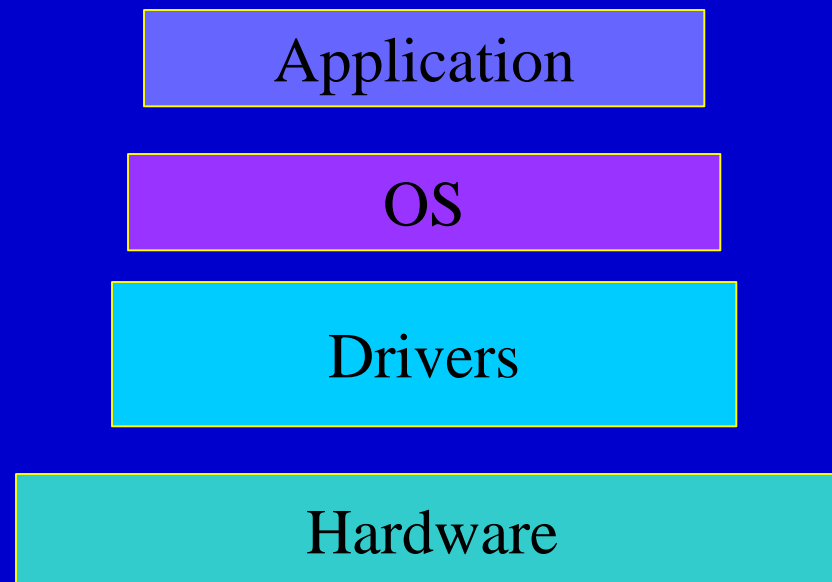
- Defined and Released on January 6, 1997
- SBS Architecture





# Architecture of SB System

- Under Windows 98 and NT 5.0
- SBS Architecture



# New Technology Challenge in case of FUJITSU

- What have we done?
- What can we improve?
- What is the goal for tomorrow?



# Companies We Worked With

**TOSHIBA**

**Microsoft®**

**O<sub>2</sub>Micro**  
*Breathing Life into Computing*

 **MITSUBISHI  
ELECTRIC**

**intel.**

**Panasonic**

 **USAR**

*Phoenix*  
Phoenix Technologies Ltd.



*Notebook OEM Expectations for SBS Technology- Fujitsu*

# Demo

- What have we done so far?



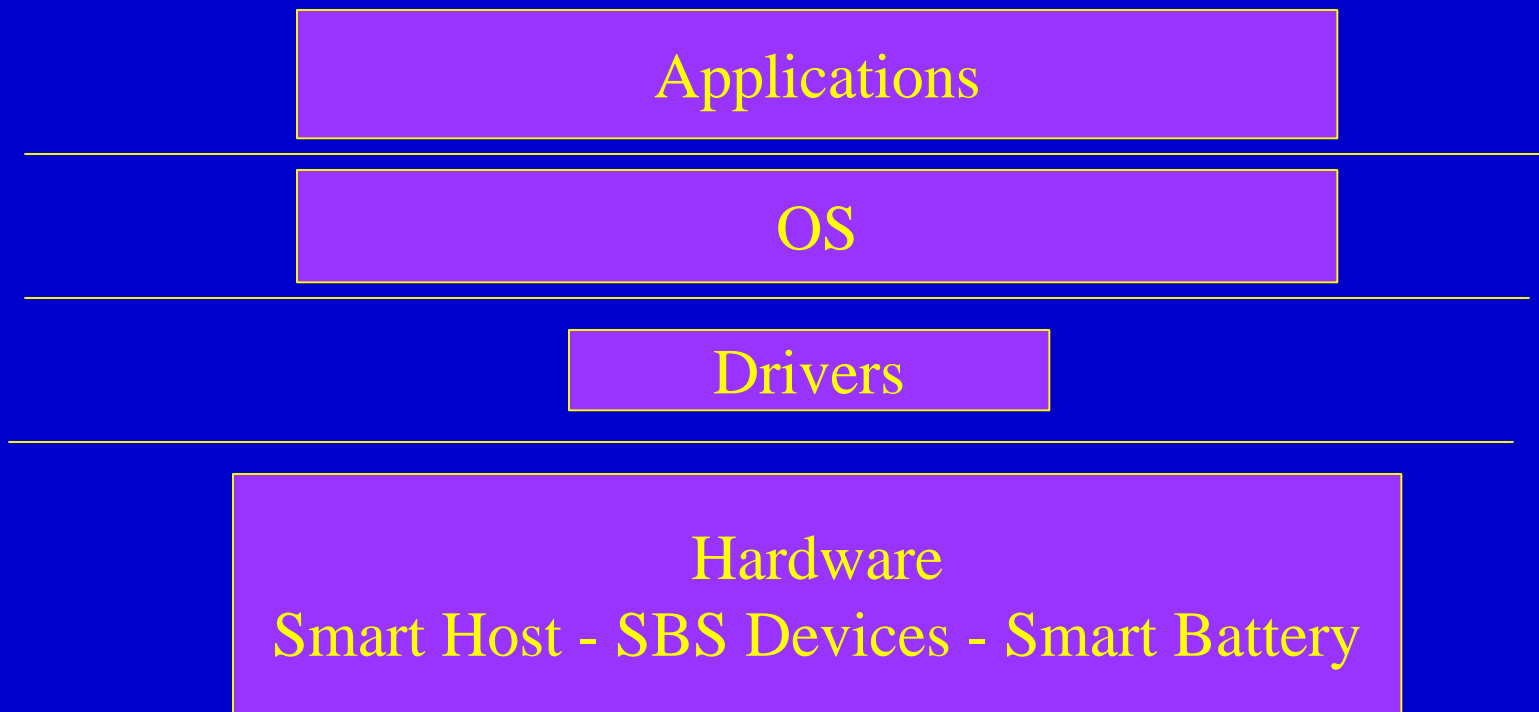
# Further Expectations on SBS Specification

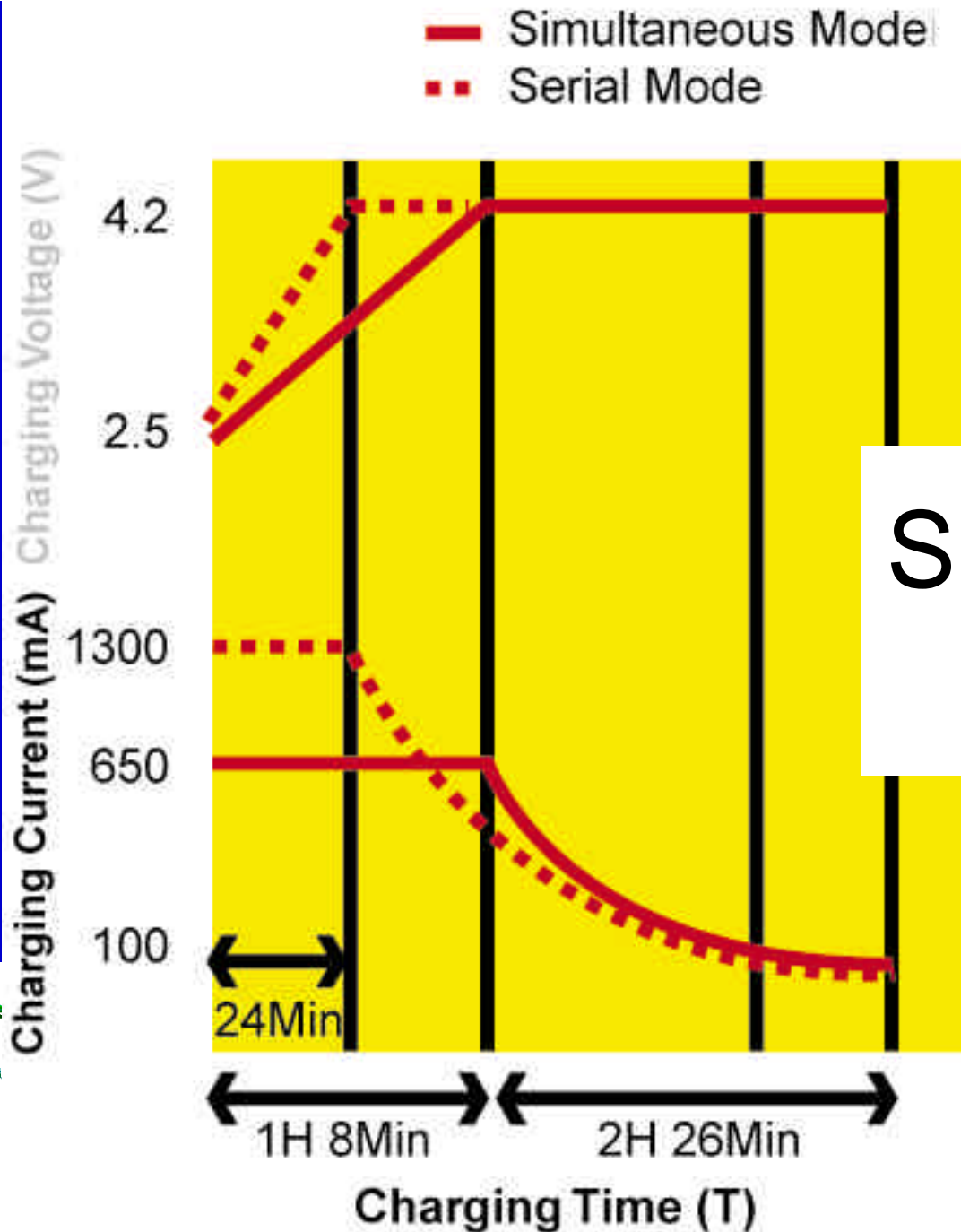
- Version 1.0 - January 6, 1997
- Version 2.0 - due in September 1998
- Open Software Architecture - every level
- Simultaneous Charging/Discharging



# SBS Architecture

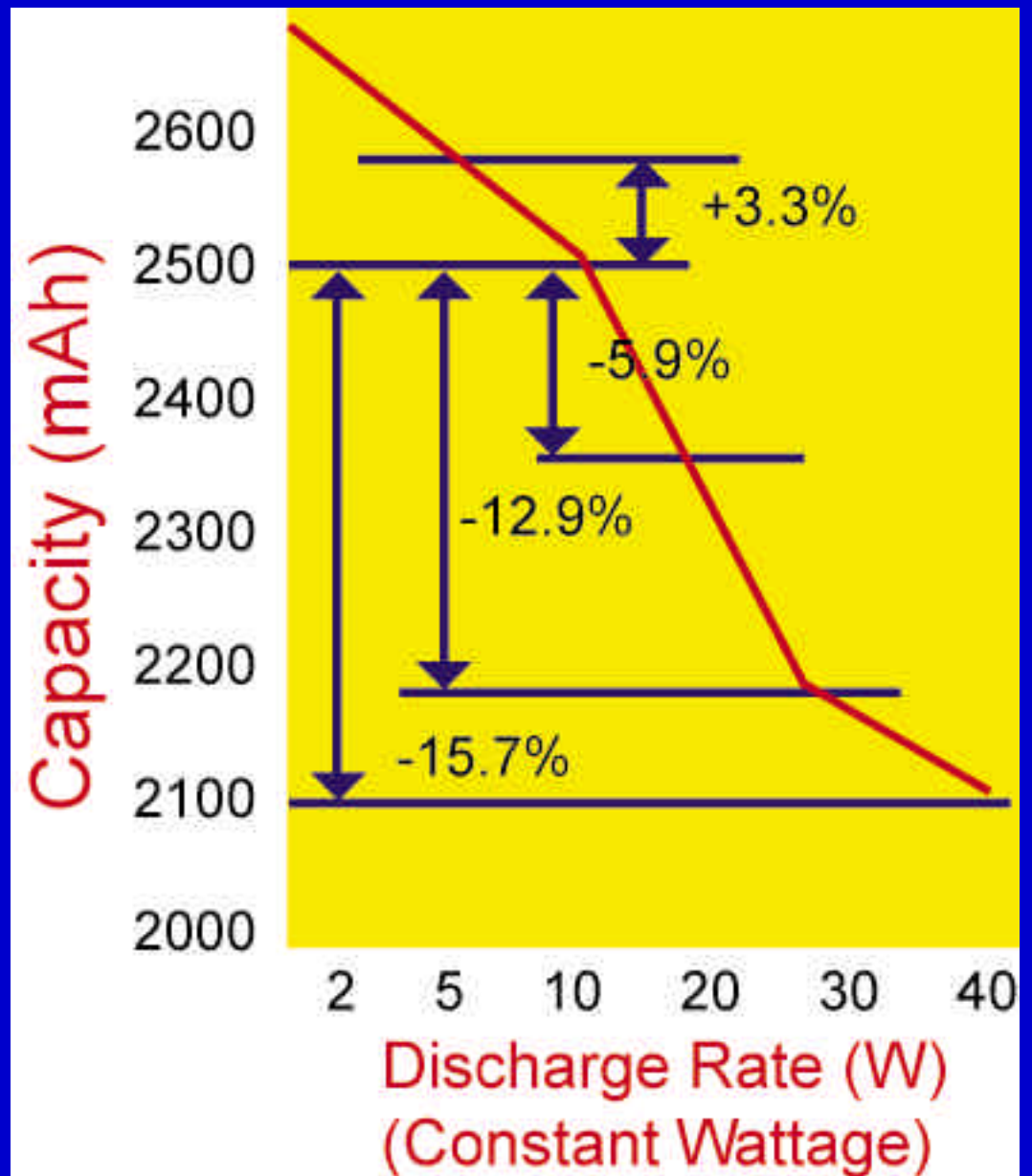
- Total System Definition





# Simultaneous Charging

# Simultaneous Discharging





# Further Improvement

- Effectively Charging while using notebook computer - called Differential Charging Circuit



# Conclusion

- SBS 1.0 Specification - Released
- Production Stage
- Need more OEM's Cooperation
- SBS 2.0 Specification - Due in September, 1998

