Altera Technical Solutions Seminar 2000

MJL

ALTERA®

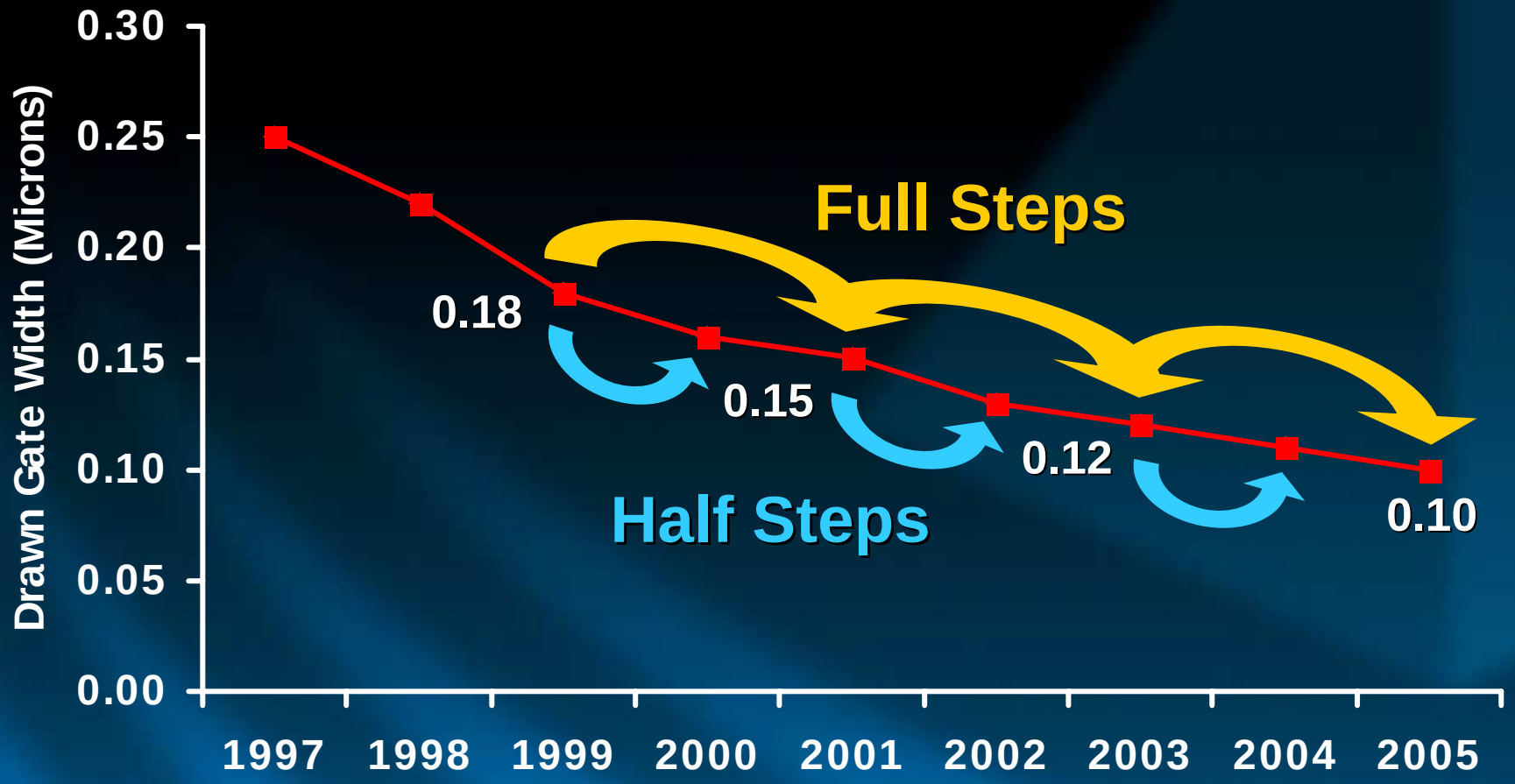
Schedule

- Opening
- Introduction
- FLEX® 10KE Devices
- APEX™ 20K & Quartus™ Overview
- Design Integration
- EDA Integration
- Intellectual Property
- Design Iteration
- Design Optimization
- Internet Interface
- Roadmap
- Quartus Demo

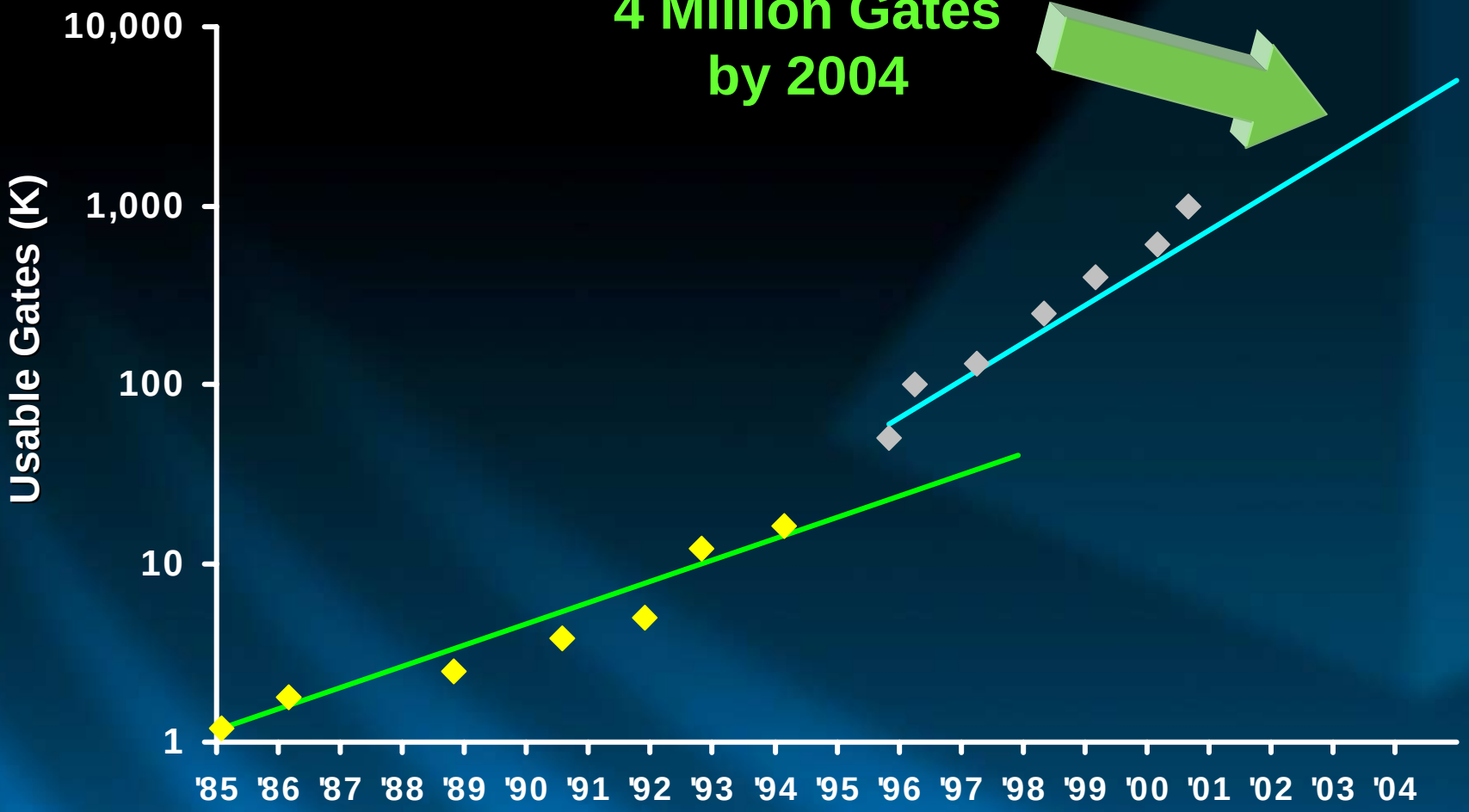
Agenda

- Introduction
- FLEX® 10KE Devices
- APEX™ 20K & Quartus™ Overview
- Design Integration
- EDA Integration
- Intellectual Property
- Design Iteration
- Design Optimization
- Internet Interface
- **Roadmap**

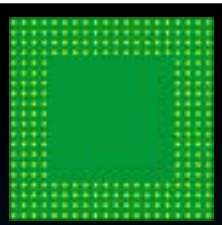
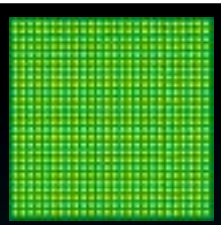
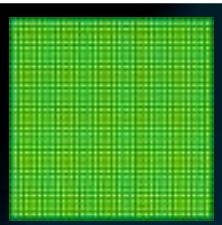
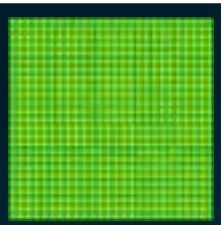
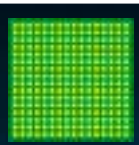
Process Dimensions Trend



Gate Count Roadmap



BGA Package Roadmap

Size \ Pitch	1.27 mm	1.0 mm	0.8 mm	0.5 mm
27 mm	 256 Balls	 676 Balls	 1,024 Balls	 2,500 Balls
17 mm		 256 Balls		
13 mm			 256 Balls	
9 mm				 256 Balls

Summary

- System Integration Places New Demands on PLDs
  - Millions of Gates
  - Performance Measured in Hundreds of MHz
  - Shorter Time-to-Market
- Altera First to Address True System-Level Needs
  - FLEX 10KE
  - APEX 20K
  - Quartus
  - Megafunctions

MJL

ALTERA®

FLEX 10KE Devices

FLEX 10KE

- Driving FLEX 10K Technology
- 115-MHz Performance
- 64-Bit, 66-MHz PCI Compliance
- Dual-Port RAM
- Performance Tuning Via PLLs
- Board Savings with FineLine BGAs
- SameFrame Capability for Design Flexibility
- 2.5-V Reduces Power Consumption

MJL

ALTERA

APEX 20K Family

APEX™

- A Million Gates
- 125-MHz
  - 64-Bit, 66-MHz PCI Compliance
- System-Level Capabilities
  - Optimized Logic Implementations
    - LUT-Based Logic
    - Product-Term-Based Logic
    - DPRAM
    - CAM
  - ClockLock, ClockBoost PLLs
  - Multiple I/O Standards

MJL

ALTERA®

Quartus Development System

- Million-Gate Designs
- Fits into Third-Party Design Flows
  - NativeLink™ Integration
  - VB and TCL/TK Scripting
- Design Teams
- Faster Compiles
- Incremental Compilation
- SignalTap™ Logic Analysis
- Logic in LUTs and Product-Terms
- Internet Interface

MJL

ALTERA®

Intellectual Property

- Altera Provides MegaCore Functions
- AMPP Partners Offer Wide Array of Functions
- OpenCore Evaluation Provides Risk-Free Trial
- MegaWizard Plug-Ins for Easy Implementation

www.alterakorea.com

Now coming!

MJL

ALTERA®

Altera Enables a System-on-a Programmable-Chip Solution

Altera Technical Solutions Seminar 2000

MJL

ALTERA®