

2005 Analyst Meeting

Wim Roelandts, Chairman and CEO

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During the course of this presentation, we may provide projections or other forward-looking statements regarding future events and/or future financial performance. We wish to caution you that such statements are just predictions and that actual events or results may differ materially. We refer you to the documents the Company files from time to time with the Securities and Exchange Commission. Specifically, the Company's last filed Form 10-K for the fiscal year ending April 2, 2005. These documents contain and identify important factors that could cause the actual results to differ materially from those contained in our projections and other forward-looking statements.



Agenda

Xilinx Analyst Meeting 2005

Wim RoelandtsChairman & CEOSandeep VijVice President, Worldwide MarketingOmid TaherniaVice President and General Manager, DSP DivisionRich SevcikExecutive Vice President, Programmable Logic Systems GroupSteve HaynesSenior Vice President, Worldwide Sales & ServicesRoy ValleeCEO & Chairman, Avnet, Inc.Kris ChellamSenior Vice President, Corporate & Enterprise Services

Q&A

Cocktail reception



Programmable Solutions Applications



XILINX



Xilinx Well Positioned for Industry Leading Growth

Sandeep Vij Vice President, Worldwide Marketing



Market Dynamics



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Xilinx FPGA Business Dynamics



PLD Market Share Trends



Source: Company Reports "Others" category includes QuickLogic and Atmel



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PLD End Market Segments



Source: Company Reports (LSCC, ALTR, ACTL, XLNX)

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Semiconductor Market Segments





Source: WSTS, Inc., Dataquest/Gartner, Forward Concepts

Redefining





Engaging at the Architectural Level



- DSP, Embedded Processing, Back Plane decisions made early in the System Architecture design cycle
- Requires unique infrastructure:
 - System Architects that understand the customer's architectural dilemmas
 - DSP, Embedded, High-Speed I/O FAE Specialists
 - Rocket I/O Labs
 - Support infrastructure in DSP / Embedded / High-Speed I/O
 - I.P. and Design Flows



Virtex[™]-4 FPGAs



- Competitive advantages in performance, power & signal integrity
- World's highest density FPGA
- Fourteen 90nm family members shipping



Advanced Capability Traction % Share Cumulative PLD Units



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Source: Company Reports & Xilinx Estimates – Through March 2005

Performance Leadership Across Diverse Capabilities



Note: Based on competitor's published data sheet numbers, with fair benchmarking Virtex-4 performance figures generated with ISE™ 7.1, Synplify 8.0 Stratix II performance figures generated with Quartus 4.2, SP1

Industry-Leading Capabilities

- **Domain-optimized platforms** greatest selection, lowest cost
- Lowest power reduced thermal and power supply cost
- Leading signal integrity highest performance & reliability
- ChipSync circuitry cut design time for parallel interfaces
- **10 Gbps transceivers** leading performance for serial interfaces
- **PowerPC core** hardware acceleration for highest performance
- *XtremeDSP resources* unmatched DSP performance/cost ratio
- *PlanAhead tool* floorplanning for highest system performance
- ChipScope Pro up to 50% less time for verification



3G Wireless Base Station



Communication Switches & Routers



V-4 FX DSP & high-speed serial links

Xilinx enables

- Implementation of flexible telecomm infrastructure via usage of integrated multirate SerDes
- Cost-effective in-field upgrades using pluggable optical modules





Source: iSuppli & Xilinx estimates 2005 Analyst Meeting 18

Leveraging **Lower Costs** to Increase **Unit Volumes**



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Price Reduction Through Technology Migration and Architectural Streamlining



Spartan Success Across Technology Nodes



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Source: Company Reports & Xilinx Estimates – Cumulative Revenue

Xilinx CPLD Market Share Gains



Source: Company Reports



Digital Video Displays



2008 - \$250N

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Xilinx enables

- Enable card standardization through the use of programmable I/Os
- Support for a plethora of video interfaces available today
- · Ability to address future interfacing requirements

Source: Gartner Group / Dataquest & Xilinx estimates

Handheld Devices



Xilinx enables

- Interfacing to many different external memory card and drive interfaces via programmable I/Os
- Longer battery life through use of low-power CPLD devices

Smart Handhelds – Multi-Function Mobiles SAM 2005 - \$25M 2008 - \$100M

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Strength in New Products

New Products +22%

- New Products represented 27% of total Xilinx sales, up from 11% a year ago
- Spartan-3 sales nearly doubled sequentially
- Virtex-4 sales more than doubled sequentially
- Virtex-II Pro sales now largest 130nm product family
 - 14% of Xilinx revenues



Summary

- Change in PLD end market profile necessitates new approaches to revenue growth
- Strong value proposition for integrating logic, processor, DSP and high-speed I/O in high-end applications
- Significant Xilinx infrastructure investment in new technology solutions
- PLDs being used increasingly in higher-volume digital consumer applications
- New product growth rates very encouraging





Becoming a DSP Leader

Omid Tahernia VP & General Manager DSP Division

A Unique Opportunity

- Time-to-market, cost, power, size and software tools are driving silicon platform decisions
- Technology & applications evolving rapidly
- OEM consolidation, new OEMs emerging
- ASICs becoming obsolete
- GPP/DSP limited in high-end (performance and power)
- ASSPs vying for ASIC replacement (addressing cost, flexibility)
- Multi-processor architectures (Intel, AMD, ADI)



The DSP Performance Gap



* Source: Jan Rabaey, BWRC

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Market Segment Challenges

- High performance digital communication and video imaging designs challenge existing DSP solutions
 - Time to market
 - Need higher performance
 - Need lower costs
 - Need lower power
- Compromises are often made...
 - Performance is sacrificed
 - Time is spent designing substitute implementations





DSP – A Big Growth Market





Source: Forward Concepts, 7/13/05; High Performance = >1000MMACs

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Why FPGAs for DSP?

High Computational Workloads

256-tap Filter Example



Xilinx Next Generation XtremeDSP



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V4 SX Provides Up to 10X Higher MACs per second per \$



XtremeDSP Software: From Algorithms to DSP Systems



DSPs vs. FPGAs

DSP Processors Strengths and Weaknesses

- ↑ Signal processing performance and efficiency strong vs. other types of instruction-set processors
- ↓ But may not be adequate for demanding tasks
 - ↓ Fixed architectures limit efficiency, algorithm flexibility
- ↑ Strong signal-processing-oriented tools and infrastructure
 - ↓ Sometimes, poor compiler quality
- ↑ Stable, mature technology and vendors
- ↑ Relatively low development cost, risk
- ↓ Relatively limited selection of chips for some families
 - $\uparrow~$ But chips off strong, relevant integration



DSP
DSPs vs. FPGAs

FPGAs Strengths and Weaknesses

- ↑ Massive performance gains over instruction set processors on some DSP tasks
 - ↑ Huge throughput, cost/performance advantages over DSP, general-purpose processors in some applications
 - ↑ Architectural flexibility can yield efficiency
 - ↑ Adjust data widths throughout algorithm
 - ↑ Parallelism where you need it; distributed storage
 - Dynamic reconfigurability
- ↓ High development effort compared to instruction-set processors
 - ↓ Complex design flow is unfamiliar to most signal
 - processing engineers
- Suitability for single-channel, low-power, costsensitive signal-processing applications not proven





DSP

FPGA



High Performance DSP Target Markets Segments





Source: Xilinx, iSuppli, 2004 2005 Analyst Meeting 38

Digital Communications

System Technologies Devices: Virtex-4, Virtex-II, Spartan-3, Next Gen XDSP
 Tools: System Generator, ISE, Compilers
 IP: OFDM, MIMO, DPD, CFR, FEC, ...





Xilinx DSP in Digital Comms





Multimedia, Video and Imaging

System Technologies Devices: Virtex-4, Virtex-II, Spartan-3, Next Gen XDSP
 Tools: System Generator, ISE, DSP Compilers
 IP: Video codecs, 2-D filters, DCT, Wavelet transform, ...

S. XILIN



Xilinx DSP in Video/Digital Communications



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Defense Systems





Xilinx Major DSP Alliances





Xilinx FPGAs: The ideal complement to TI DSPs.



Growing Xilinx DSP Ecosystem



Complete DSP Design Solutions



New DSP Division, Partnerships, Specialists

- Design Services, Education & Support
- System Generator for DSP, Accelchip, Synplicity, Mentor Graphics
- Development Platforms, Starter Kits
- Nallatech, Lyrtech, Sundance
- RACH Rx, Searcher, Digital up/down conversion, FEC cores, MPEG4
- •Optimized Next Generation XDSP •Co-processing interfaces (e.g. EMIF, LVDS for Texas instruments chips)

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Becoming the Embedded Leader

Rich Sevcik, Executive VP, Programmable Logic Solutions

Estimated Worldwide FPGA/PLD Design Starts by Product Type



MPU = Microprocessor unit Source: Gartner Dataquest (December 2004) **EXILINX**

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Embedded: Core to our Future

- 40% of FPGA users in 2010 expected to use Embedded technology
- Significant opportunity, Broad customer base
- Changes affecting the entire Embedded Industry:

Rocketing IC development costs & new design requirements, **Create an opportunity for Xilinx with Embedded Customers**



Rocketing IC Dev Costs

Theo Claussen, CTO Philips Semiconductor -

"All processor based systems will have some form of reconfigurable fabric. Design costs are close to \$50M for each SoC. Processor companies must deploy re-use and configurable elements to reach more sockets."

IBS: MS-FSA3.35 -

Costs for a 90nm IC development average \$25M!





Thousands of Embedded Markets



Example Xilinx Advantage Applications

- Industrial motor control
 - Pulse width modulation
 - Proportional integral and derivative
- Enclosure Management
 - Fan control, temperature sensing
 - Diverse multi-market requirements
- Near-professional audio solution
 - High-end flat panel "TV's"
 - Diverse manufacturer's "secret sauce"



Complete Range of Embedded Processor Solutions

Features



Performance



Integrated Software Environment





3rd Party Ecosystem





Embedded Commitment



Factors for Embedded Design Success

- Flexible architecture
 - Optimized design partitions
- Extensive IP library
 - Pre-verified, industry standard support
- Robust tools
 - Integrated development environment
- Rapid prototypes
 - System verification platform



Embedded System Design Challenges

- System architecture definition
 - HW/SW tradeoffs
 - Performance vs. cost
 - Discrete vs. integrated
- Early software development
 - Integrated HW/SW debug
- Early system verification
 Rapid prototyping
- Fast time to production





New Design Requirements

PCI Express, HyperTransport, Serial ATA, SATA2, SAS, SPI3, SPI4.2, EtherCat, CAN, MOST, Serial Rapid I/O, ATCA, 10/100, 1G & 10G Ethernet, XAUI, XGMII, NextCard, PCI-X mode 1, Generic Framing Procedure, Fibre Channel, Vlynq, 1588, JTRS, SDR, 802.11a/b/g, MIMO...the list goes on and on and on...

The acceleration of new design requirements our customers deal with has never been greater...

...And it's only accelerating faster



Current FPGA Customer

- Buys FPGAs today, comfortable with pricing
- CPU cost is a percentage of the FPGA price
- Understands FPGA design & tools
- Serviced by our sales channel
- Accepts FPGA bitstream configuration





Current Customer Requirements

- Improved Ease of Use of the Tools and IP
- More & Better IP
- 3rd party tool support
- Ready to use design kits
- Appnotes / reference designs





New Xilinx Embedded Customer

- Timing closure? Just get me the MHz I need!
- Bitstreams? Why can't "firmware" be preflashed!
- Change the HW system? Where do I get the new "firmware"!
- Eclipse is nice, but we use WindRiver or Greenhills or Lauterbach or CodeWarrior or...
- Single board computer? I don't buy just the chip!





New Customer Requirements

- Price Performance is a major driver
- Embedded Tools and operating systems are major drivers
- Customer is typically a software engineer
- Xilinx Tools must offer "Extreme Ease of Use"
- Looking to reduce BoM





Virtex-II Pro Adoption Wide Acceptance of the Embedded System Features





CoreConnect IP Licensing Quarterly Trend

Before Virtex-II Pro

 IBM had minimal number of licensees

After Virtex-II Pro

- Xilinx has enabled >95%
 CoreConnect licenses
- New licenses added weekly (July update over 1800!)





Summary

- Embedded market: large and growing opportunity
- Customer requirements evolving
- Hard AND soft processor implementations critical to FPGA success
 - Xilinx is the only PLD Company to offer both





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Steve Haynes, Senior Vice President Worldwide Sales & Services

Market Segmentation Strategy

- Market segmentation and account focus
- Applications expertise and resources
- Global scaling
- Direct and rep sales alignment



Direct/Channel Strategy

Top accounts in each market segment covered by direct and rep sales



Consumer & Automotive Consumer Automotive Audio/Video/Broadcast



Industrial & Other Industrial/Scientific/Medical Aerospace/Defense



Storage & Servers



Communications Wireless Wireline

- Xilinx technical support focused on direct accounts
- Avnet and other distributors focus on the rest



Comprehensive Support & Services Portfolio

A Key Part of the Complete Xilinx Ecosystem





Avnet/Memec Acquisition

- Consolidation trend
- Complementary: Avnet known for superior logistics, Memec excels in demand creation
- Greater mindshare: Xilinx will be >10% customer
- Acquisition gives Avnet direct presence in every global market (including Japan)
- Consolidates inventory points





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Roy Vallee, CEO & Chairman – Avnet, Inc. July 26, 2005
Avnet = Global Scale & Scope

Provides local touch through more than 275 locations worldwide

- Does business in 69 countries
- Serves more than 100,000 customers
- Manages more than 300 franchised supplier relationships
- Delivers more than 28,000 line items per day
- Actively manages more than 300,000 product SKUs

CY 2004 Revenue - \$13.1B



Electronics Marketing -Focused Xilinx Support

Xilinx % Revenue

	Avnet/EM	Memec	Total	
Demand Creation	35%	59%	51%	
Fulfillment	65%	41%	49%	

- Combination creates a more balanced business model
- Combined company will have 250 FAEs focused on Xilinx products
- More than 1,600 employees calling on customers
- Additional 1,600 inside sales and marketing employees supporting the selling efforts



Memec Integration Plan

- Regional structure has been finalized
- Customer and supplier reaction has been favorable
- Low levels of Memec employee attrition
- Integration worldwide will be completed by the end of fiscal year 2006



Benefits for Xilinx

- Global coverage with highly focused and specialized work force
- World class design and supply chain services
- Greater efficiencies Xilinx/Avnet Supply Chain
 - Collective inventory
 - Cost of doing business
- Focused distributor partnership





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Kris Chellam Senior Vice President, Corporate and Enterprise Services July 26, 2005

PLD Market Segment Share Gains7th Year of Gain



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NRE/Mask Costs Double at Every Node; Probability of Re-spin Increases



Mask Costs

Re-spin Probability

With NREs increasing by 100% on each node and almost guaranteed re-spin, ASIC users are confronted with a double-edged sword



Programmability Adoption is Expanding

ASIC/PLD Vendor Rankings											
	<u>1999</u>	S.	2000	e.,	<u>2001</u>		<u>2002</u>		<u>2003</u>		<u>2004</u>
1.	IBM	1.	IBM	1	IBM	1.	IBM	1.	IBM	1.	IBM
2.	Lucent	2.	Lucent	2.	Agere	2.	NEC	2.	🗶 XILIND	2.	🔀 XILINX
3.	NEC	3.	LSI Logic	3.	LSI Logic	3.	XILIN.	X			-
4.	LSI Logic	4.	NEC	4.	NEC	4	V	-	52		
5.	Fujitsu	5.	XILINX"	5.	XILINX"	17		1	17		9131/1
6.	XILINK"					3					

Source: Gartner Dataquest (1998-2001 rankings), iSuppli (2002-2004 rankings) Note: Lucent spun-off their semiconductor division in 2001 creating Agere Systems



PLD Growth Dynamics

- Rapid logic cell growth driven by Moore's Law and wafer transitions (6"-8"-12")
- Price elasticity has driven growth in consumer, automotive and other applications
- Price per logic cell not expected to decline as rapidly with 12" transition mainly completed

Conclusion: PLD Revenue growth expected to re-accelerate



End Market Revenue Growth (FY99-FY05)





Programmable Solutions Applications



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Summary

- PLD industry continues to offer attractive growth opportunities
 - Gaining at expense of ASICs
 - Logic cell growth demonstrates price elasticity
- Xilinx is executing
 - Robust new product growth
 - Strong 90nm design win momentum
- DSP and Embedded Processing offer incremental growth opportunity
 - Xilinx investing to expand into these market segments

