

# **Semiconductor Business Meeting**

**Wednesday, December 14<sup>th</sup>, 2005**

**Kenshi Manabe Unit President  
Semiconductor Business Unit  
Sony Corporation**

## **Semiconductor Business Unit "Mission"**

- 1. Utilize the highest level of technology and manufacturing within the industry to enhance Sony product differentiation and contribute to greater competitiveness**
- 2. Secure profit through external sales  
Contribute to raising Sony's corporate value**

# Sony Semiconductor Business Unit Organization

## Semiconductor Business Unit

**President** K. Manabe  
**Deputy President** T. Saito

### Imaging Device Business Group

President T. Suzuki

### System LSI Business Group

President T. Shimizu

### Semiconductor Technology Development Group

President Y. Okamoto

### Research & Development Group

President N. Shirota

### Sony Semiconductor Kyushu Corp.

President K. Okubo

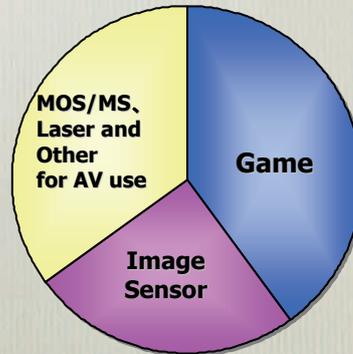
### Sony LSI Design Inc.

President K. Manabe

As of Dec 1, 2005

## Sony's Semiconductor Business: Overview

### 1. Sales Composition (based on FY2005 forecasts)



# Sony's Semiconductor Business: Overview

## 2. Sales Revenue Growth



## Semiconductor Business Unit "Focus Areas"

### <Focus Area>

### <Differentiated Devices>

#### Game



- LSI (Cell/RX etc) for use in "PS3"
- LSI for use in "PSP"

#### Mobile



- CCD/CMOS sensor
- Audio Codec (Low Power Consumption)

#### TV



- LCD TV Driver
- Tuner (UFE)
- TV Processor
- Graphics

# Game Business

## Key Factors

- Supply of Core Chip based on most advanced technology
- Achieve cost reductions through shrinking chip size and adoption of cutting-edge technology
- Reduce costs by maintaining high levels of utilization



*Support high profitability in the Game Business*

# Evolution of the main chips in "PS2"



Launched in March, 2000

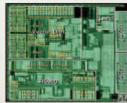


Launched in Nov. 2004

FY99	FY00	FY01	FY02	FY03
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### 「Emotion Engine」(EE)

※Managed to shrink the size 3 times in 3 years, 7 months



CMOS1S

1



CMOS2



CMOS3P

Approx. 0.4

### 「EE+GS」



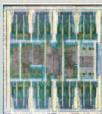
CMOS4

Approx. 0.2

Surface area ratio

### 「Graphic Synthesizer」(GS)

※Managed to shrink the size 3 times in 3 years, 7 months and shrank the design size 2 times



ASC6



ASC7



ASC7

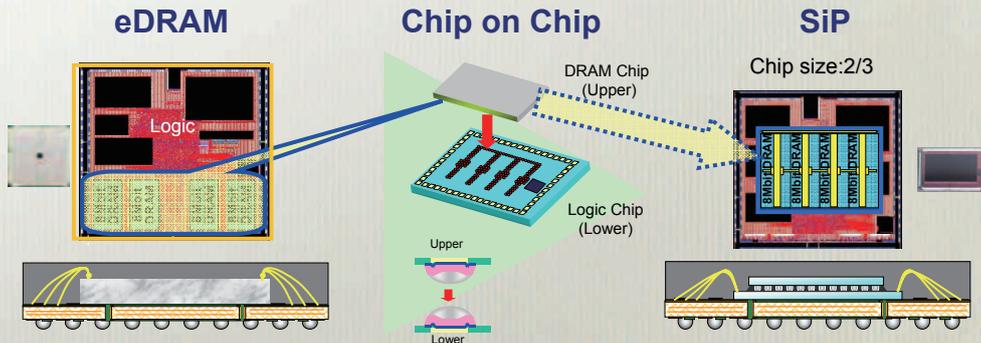


ASC7Shrink

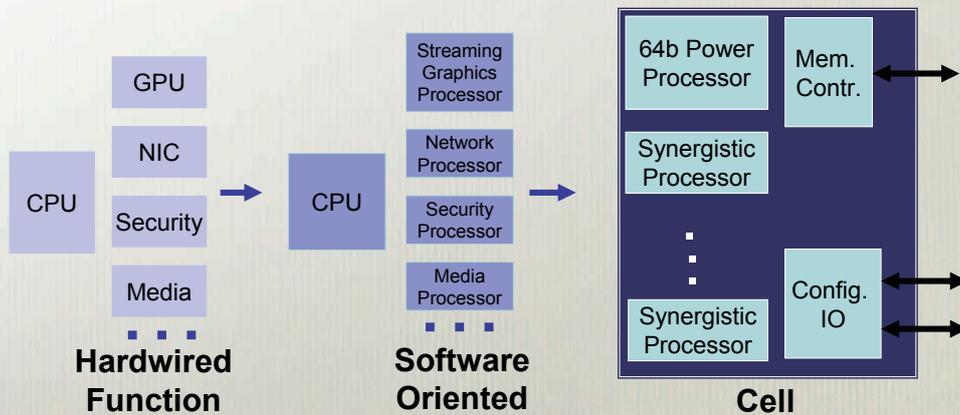


ASC7Shrink

## Initiatives to Reduce Costs ~System in Package~

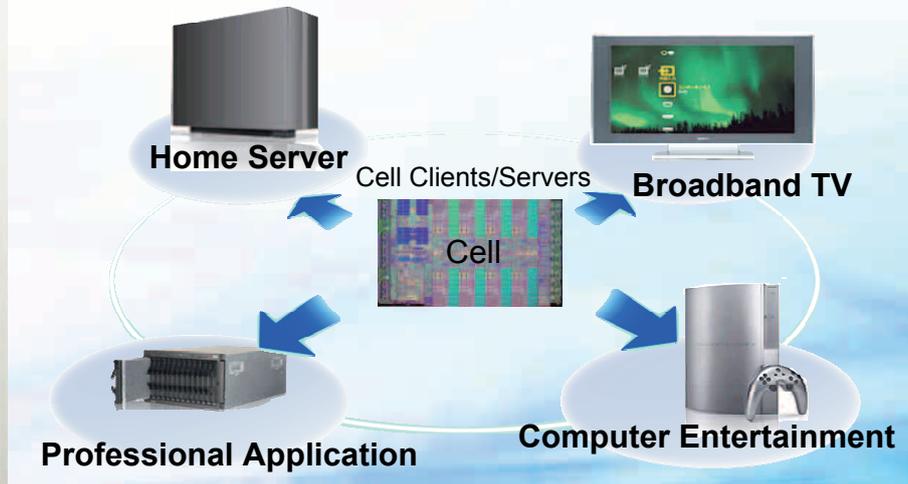


## Microprocessor Architecture Trends



From material announced on February, 2005 at ISSCC

## Plans for the utilization of "Cell"



## Image Sensor Business

### Key Factors

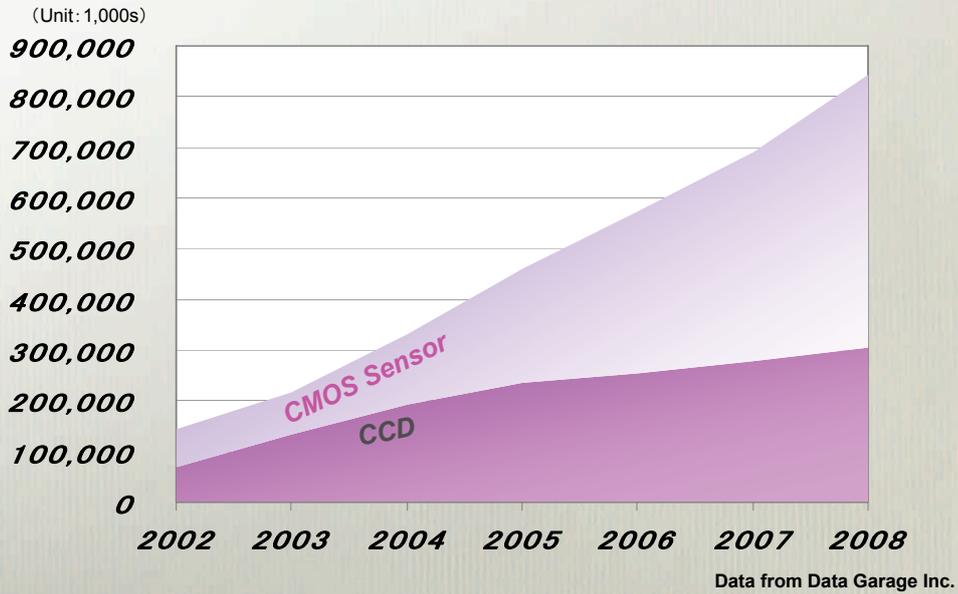
- **Maintain profitability in the expanding market for security systems, in-vehicle systems and Digital cameras where the CCD excels**
- **Secure #1 in the market for CMOS sensors, where rapid growth is anticipated**
- **Meet market demand with increased capacity**



*Support the high profitability of digital imaging products*

*Secure profit through external sales*

## Size of the Image Sensor Market



## Sony's Image Sensor

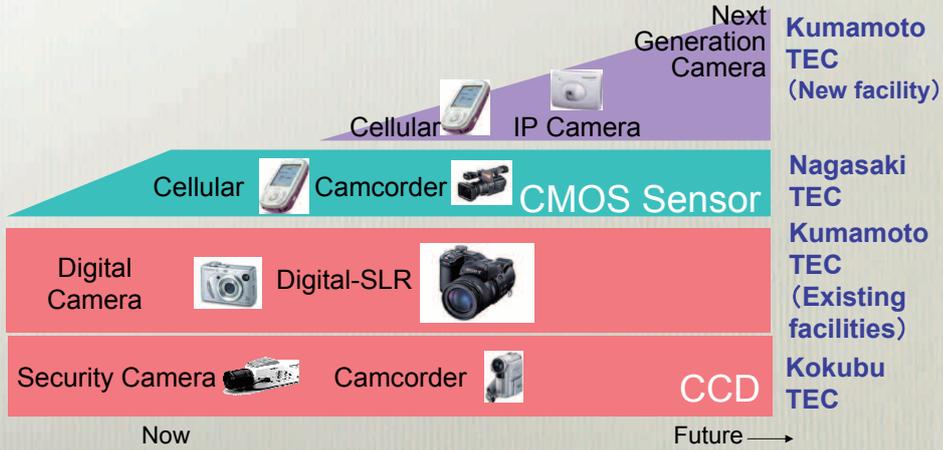
**Camcorder**  
HDR-HC1 "High-vision"  
CMOS Sensor (3M)

**High-end Digital Camera**  
DSC-R1  
CMOS Sensor (10M)

**Digital Camera**  
DSC-T9  
CCD (6M)

**Mobile**  
CMOS Sensor (2M)

# CCD, CMOS Sensor Capacity Plan



## Sony Semiconductor Kyushu Corp. Kumamoto TEC new facility

( Construction scheduled to be completed in May, 2006 )



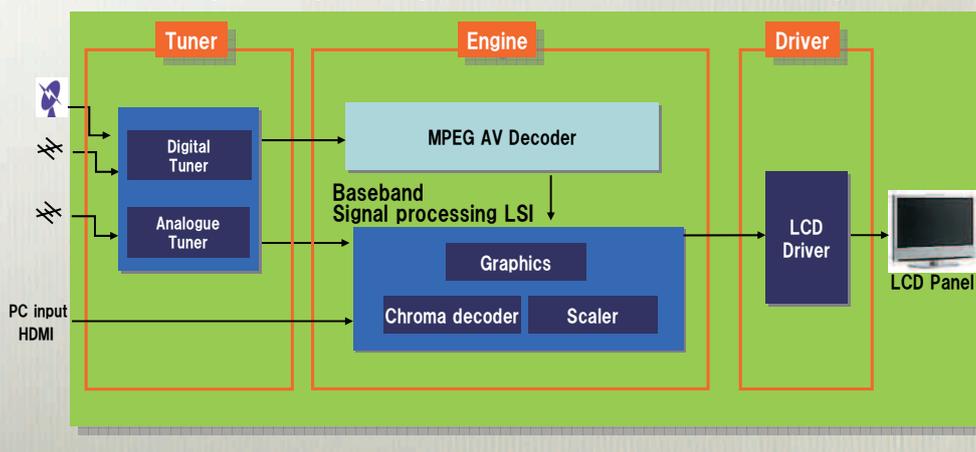
### Overview of New Facility

■ Production Facility	62,000m <sup>2</sup>
■ Clean Room	10,000m <sup>2</sup> × 2 floors

Picture taken at end of November, 2005

## About Digital TV Business

From Tuner to Driver, Develop Business as a Complete System (for internal & external sales)



## Capital Expenditures Plan

- In the 3 years from FY05-07, Approx 500 bln yen of Capex planned
- Key investment areas include, CMOS Image Sensor  
Advanced MOS (300mm wafer, 90-65nm process)

\*Other areas for investment include mixed signal, advanced package etc.

## Return on Investment: Fundamental Concepts

- 1. Utilizing the Game business, as a stimulus for technology development, to maintain demand for cutting-edge process technology**
- 2. Utilize depreciated Fabs for image sensors, mixed signal processors etc.**  
(“Waterfall” strategy)
- 3. Utilize Foundries and internal demand to minimize risk**  
(Aim to achieve full capacity at all times)

## Investment in Advanced Process Technologies: Model

