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## **IBM, Sony, SCE and Toshiba to Jointly Develop Chip-Making Process Technology**

*Powerful alliance is formed for semiconductor processes*

**TOKYO, JAPAN and EAST FISHKILL, N.Y., April 2, 2002** -- In a unique collaboration, IBM, Sony Corporation, Sony Computer Entertainment Inc. and Toshiba Corporation have signed a multi-year agreement to jointly develop advanced semiconductor technologies based on silicon-on-insulator (SOI) and other IBM materials advances. This will lead to the development of high-performance, low-power chips necessary for a wide range of future electronic products - from digital consumer applications to supercomputers.

The team will spend several hundred million dollars over four years to develop new process technologies for building chips with features as small as 50 nanometers on 300 mm wafers. Smaller features mean more can be packed on a single chip. The parties plan to use this technology to create system-on-chip (SoC) designs, integrating processor, memory and communications functions, which normally are found on separate chips within a device.

The new processes are expected to be the world's most sophisticated, incorporating advanced chip-making materials pioneered by IBM, such as copper wiring, silicon-on-insulator (SOI) transistors and "low-k" insulation. The use of new designs and materials will be guided by the applications requirements of Sony, one of the world's largest consumers of semiconductors. Toshiba will contribute its high-volume manufacturing capability and SoC technology expertise to meet targeted performance and quality levels.

"The PC is no longer the driving force in semiconductor innovation," said John Kelly, senior vice president and group executive for the IBM Technology Group. "Networking and consumer electronics applications are driving the evolution of a new semiconductor industry -- one based on closer collaboration with customers. This alliance is powerful because of the talents and technologies involved; it is unique in the depth to which the customer is involved, not just in the design of chips for their products, but in the very way they are manufactured."

"Having IBM and Toshiba's technologies with Sony's vast experience and knowledge of the consumer market, truly makes this alliance a winning combination," said Ken Kutaragi, president and CEO, Sony Computer Entertainment and director, Sony Corporation. "Incorporation of these cutting-edge process technologies into various audio, visual and IT products as well as to the computer entertainment system, is expected to bring even higher competitive power to the entire Sony Group."

“Technologies like SOI are essential for high-end and low-power SoC,” said Takeshi Nakagawa, corporate senior vice president of Toshiba Corporation and president of Toshiba's Semiconductor Company. “We expect collaboration on SOI process technology to advance joint-development of the next generation broadband processor, and to provide a strong underpinning to our development of leading-edge products. We will apply SOI process technology to broadband processor-based LSI for such applications as a high-speed home gateway and future low-power mobile products.”

In a separate agreement, IBM will transfer the latest SOI technologies to Sony and Toshiba. The development work will be conducted by a team of scientists and engineers from all parties at the IBM Semiconductor Research and Development Center (SRDC) in East Fishkill, N.Y. Each party then will have the ability to build the advanced chips in its own manufacturing facilities, products and applications, and for its own semiconductor business customers. A significant portion of IBM's soon-to-be-completed, 300 mm wafer manufacturing facility in East Fishkill will be dedicated to these new processes.

The new alliance framework enhances Sony and IBM's existing collaborative structure by adding the strengths of Toshiba's versatile manufacturing expertise, as the second largest in the semiconductor industry. Integration of the strengths of the parties will facilitate achievement of advanced process technologies for a broad range of products and applications.

#### About IBM

IBM Microelectronics is a key contributor to IBM's role as the world's premier information technology supplier. IBM Microelectronics develops, manufactures and markets state-of-the-art semiconductor and interconnect technologies, products and services. IBM makes chips for a wide range of devices from the world's most powerful computers to the smallest cell phones. Its superior integrated solutions can be found in many of the world's best-known electronic brands. More information about IBM Microelectronics can be found at: [www.chips.ibm.com](http://www.chips.ibm.com).

#### About Sony

Sony Corporation is a leading manufacturer of audio, video, game, communications and information technology products for the consumer and professional markets. With its music, pictures, computer entertainment and on-line businesses, Sony is uniquely positioned to be a leading personal broadband entertainment company in the world. Sony recorded consolidated annual sales of nearly \$60 billion for the fiscal year ended March 31, 2001. Sony's Home Page URL: [www.world.sony.com](http://www.world.sony.com).

#### About Sony Computer Entertainment Inc.

Recognized as the global leader and company responsible for the progression of consumer-based computer entertainment, Sony Computer Entertainment Inc. (SCEI) manufactures, distributes and markets the PlayStation® game console and PlayStation®2 computer entertainment system. SCEI, along with its subsidiary divisions Sony Computer Entertainment America Inc., Sony Computer Entertainment Europe Ltd. and Sony Computer Entertainment Korea Inc., develops, publishes, markets and distributes software, and manages the third party licensing programs for

these two platforms in the respective markets worldwide. Headquartered in Tokyo, Japan, Sony Computer Entertainment Inc. is an independent business unit of the Sony Group.

About Toshiba

Toshiba Corporation is a leader in information and communications systems, electronic components, consumer products, and power systems. The company's integration of these wide-ranging capabilities assures its position as a leading company in semiconductors, LCDs and other electronic devices. Toshiba has 188,000 employees worldwide and annual sales of over US\$47 billion. Visit Toshiba's website at <http://www.toshiba.co.jp/index.htm>

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