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Chartered licenses IBM's 90nm SoI technology

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Dedicated semiconductor foundry Chartered Semiconductor Manufacturing said that it has licensed IBM's 90nm silicon-on-insulator (SoI) technology that allows Chartered customers to use the technology in applications for consumer, multi-media, communications, automotive and industrial.

SoI places a thin layer of silicon on top of an insulator, such as silicon oxide or glass. The transistors - switches that are used in microprocessors - are then built on top of this thin layer, thereby reducing the capacitance of the switch, allowing it to operate faster.

This follows a separate announcement Chartered made that allows Chartered to use the IBM SoI technology to manufacture Microsoft's CPU products at 65nm.

IBM says its SoI technology is production-proven, and has been used in a range of high-volume applications such as consumer-market games and enterprise information solutions, and has demonstrated extremely low defect densities.

The agreement follows an initial outsourcing arrangement between the two companies announced in January 2004, under which Chartered implemented the IBM technology in its Singapore-based Fab 7 and manufactured CPU products for Microsoft's Xbox 360 game console.

"The licensing agreement allows us to open new markets for SoI technology and continue to reap the benefits of a common platform approach. It positions us to better serve the increasingly demanding power and performance requirements of a variety of products, as well as expand our market reach and client base," said Kevin Meyer, v-p of worldwide marketing and platform alliances at Chartered in a statement.

"As advanced process technology for semiconductors expands from primarily performance-driven applications to performance and low power, SoI technology is becoming an increasingly critical capability for foundries to offer. Over the next five years, Semico projects SoI wafer production to increase at a CAGR of over 40 per cent," said Joanne Itow, managing director at Semico Research.

"Today's agreement with Chartered is a significant step forward in driving adoption of IBM process technology around the world," said Walter Lange, field executive for IBM's systems and technology group. "Along with the innovative Common Platform strategy, IBM and Chartered continue to re-define the traditional semiconductor supply chain model."