

Common Platform vs. Single Foundry

By Ed Sperling -- 9/22/2005

Electronic News

<http://www.reed-electronics.com/electronicnews/article/CA6259368.html?industryid=21365>

IBM, Chartered Semiconductor Manufacturing, and Samsung Electronics are rolling out what, on paper, appears to be a picture-perfect replica model for foundry services, allowing the players to boost available capacity whenever necessary with no change in process technology.

The Common Platform does for the ecosystem what integrated device manufacturers such as Intel have been doing for years, namely creating an exact duplicate of fabs so that capacity can be increased or reallocated as needed on a just-in-time basis.

Dean Freeman, a Gartner Research analyst, said the move is a major advantage for the players involved because it gives them geographical redundancy. For example, an earthquake in one area could easily shut down or limit manufacturing, but with exactly the same process technology available on another continent manufacturers can continue their operations with minimal impact.

"IBM, Samsung, Chartered and Toshiba all have 300mm wafers with a copy smartly process," Freeman said. "This is redundancy in manufacturing."

Analysts noted the design kits created by IBM, Chartered and Samsung also pool expertise that is beyond the capability of any single company to develop. Joanne Itow, analyst at Semico Research, said the consortium of Philips, STMicroelectronics and Freescale has the same intent. "There are heavy hitters on both sides," she said, noting that the big question is how that plays out against a foundry such as TSMC, the industry's reigning giant, which has a single process.

Nevertheless, the collaborative approach won strong praise across the EDA community, where leading CEOs said the combination of leading-edge technology plus an economic model to make it work are essential.

"We've seen disaggregation and reaggregation in this industry," said Chartered president and CEO Chia Song Hwee. "This will enable sourcing at multiple facilities. It is reaggregation and re-integration on a common platform. We have changed the rules of foundry competitiveness."

Steve Longoria, VP of semiconductor technology platforms in IBM's Systems and Technology Group, said the Samsung, IBM and Chartered deal is just one of several big ones in the works. Sony, Toshiba, AMD and Chartered have an alliance on SOI process technology, and IBM, Infineon, Chartered and Samsung are working on common design kits. "We see tremendous synergy with innovation."

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