DFM data partners named

Alliance shares process data to improve DFM in leading edge processes. **Paul Dempsey** reports.

IBM, Samsung and Chartered Semiconductor have announced the first raft of eda partners with whom they are sharing process data for their common manufacturing platform.

The tools suppliers include the 'big three' – Cadence, Mentor and Synopsys – as well as Clear Shape Technologies and Ponte Solutions.

The three companies said last month they were preparing to release process data to selected vendors so that they could develop more intelligent design for manufacturing (DFM) flows (NE March 14, 2006). These first deals target the companies' 65nm process.

Kevin Meyer, Chartered's vice president of worldwide marketing, said: "The net result is a further enhancement of the flexibility and accessibility benefits of the common platform for leading edge manufacturing."

Areas covered by the data release include: DFM checking decks and input for lithography simulators; yield sensitivity analysis; chemical mechanical polishing analysis tools; chip level shape simulation and DFM checks; and additions to place and route reference flows.

IBM-Chartered-Samsung says that design for yield support will soon be added in cooperation with an as yet unnamed partner.

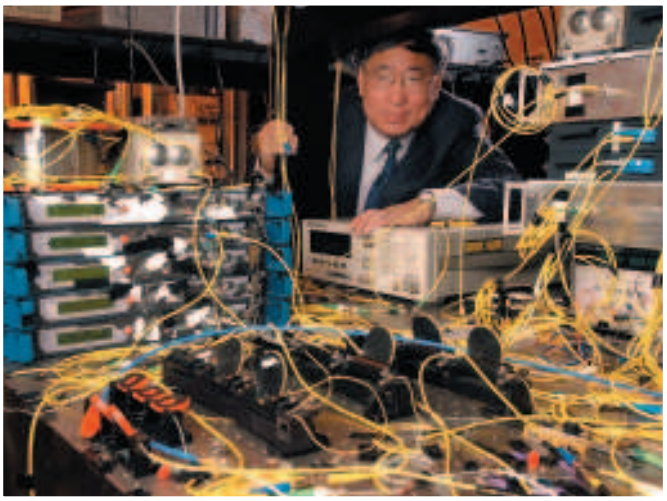
The announcement gives the IBM-Chartered foundry alliance an initial, but perhaps shortlived, advantage over rival and market leader TSMC, which is expected to disclose similar agreements soon.

Merger may fall foul of Senator

Washington politicians could challenge Alcatel's planned $14.1bn acquisition of telecoms technology group Lucent, even though both companies' boards have backed the deal.

The sale must clear the Committee on Foreign Investments in the United States, which has a history of intervening in European acquisitions of US technology for reasons of 'national security'.

Senator Frank Lautenberg, pictured, who represents Lucent's home state of New Jersey, said: "I want to see whether there is classified material, sensitive material from a defence standpoint, that is going to be transferred," he said last week. "I am not at this point saying that it shouldn't go through, but I want to learn a lot more about the details."



All optical access network

Georgia Institute of Technology professor Gee-Kung Chang has outlined a hybrid optical-wireless access network with performance 100 times faster than those in use today.

Before entering a building, signals from optical fibre would be up converted optically from IR wavelengths to the millimeter wave spectrum. Using a technique developed at Georgia Tech, wireless and baseband signals carried by multiple wavelengths would be converted onto the millimeter wave carrier simultaneously.

The conversion would be done using all optical techniques, such as external modulator, four wave mixing or cross phase modulation, removing the need for expensive high frequency electronics. The resulting signal would be split into two components and be carried by a passive optical network into the building.

One component of the signal would be detected by high speed receivers built into ceilings, then amplified for short range wireless transmission at 40 to 60GHz. The other component – carrying identical information – would be accessible through wall outlets.

Optical translator maintains integrity

Researchers at the University of California, San Diego, have developed an optical communications translator that can switch between the traditional IR band and other bands of light.

Stojan Radic, professor of electrical and computer engineering at UCSD's Jacobs School, said: "The translator means mature [IR] telecoms technology can be applied to any other wavelength, permitting development of new applications at various bands without requiring huge investment in new infrastructure."

The UCSD technique uses a parametric process to change the wavelengths of modulated optical channels from 1.55µm to up as 0.5µm. Previously, no difference of this size has been achieved without losing content integrity.

Better than 'tree hugging'

Power Integrations is arguing that its power conversion products will enable designers to do 'way more than hugging a tree'.

Speaking at the recent Globalpress Summit, Doug Bailey, the company's vice president for marketing, said: "One of the wonderful things about being an engineer is that you can affect change. If you save 1W on a design and that design is for 100million parts, you've just saved 100MW."