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PM to open 1st Silicon wafer fabrication plant

SARAWAK will get a slice of the global semiconductor industry estimated to be worth about US\$282 billion (RM1.07 trillion) this year through 1st Silicon (M) Sdn Bhd, the country's first 200mm wafer foundry.

The trade in semiconductors is expected to grow to US\$320 billion in 2004.

Prime Minister Datuk Seri Dr Mahathir Mohamad will declare open 1st Silicon's US\$1.7 billion state-of-the-art facility at the Sama Jaya Free Industrial Zone, a short ride from the Kuching city centre today.

1st Silicon was founded in January 1998 with its head office in Kuching and a US office in San Jose, California. Its main partner in technology and wafer supply is Sharp Corporation of Japan.

Besides funding from the Federal and Sarawak Governments, it also has the support of investors from Europe, the United States and Japan.

Its site of 39 hectares in the State's only hi-tech park is big enough for three wafer fabrication plants. Plans are afoot to build two more fabrication plants in the near future.

(Wafers are mirror-like disk of silicon onto which complex circuits, such as microprocessor chips, are built. Silicon is a natural semiconductor and is the main ingredient of common beach sand and is one of the most abundant elements on earth).

1st Silicon's facilities feature a state-of-the-art 200mm wafer fabrication operation with 126,000 sq feet of manufacturing clean-room, including 92,000 sq feet of production space capable of producing more than 30,000 wafers per month at full ramp with 0.25um to 0.15um geometries. (One um (micron) is one millionth of a metre and is equivalent to 1/300 of the thickness of a human hair.)

This wafer plant became operational in the third quarter of last year and will commence volume production sometime in the first quarter of this year with 0.25 um digital and mixed signal CMOS technology. The company will introduce 0.18um and other technologies into production by the end of this year.

1st Silicon's goal is to continuously expand its process offerings by providing SRAM, embedded Flash, RF and BICMOS technology and to progressively increase the foundry capabilities.

The company offers a full range of support services, such as mask tooling, wafer sort, assembly and final test. Its on-site wafer sort facility of about 6,500 sq ft is operated by ASE Electronics Malaysia, a wholly-owned company of Nasdaq-listed ASE Test Limited, one of the world's largest independent providers of semiconductor testing services, including front-end engineering testing, wafer probing and final testing services.

1st Silicon's suppliers of semiconductor manufacturing equipment, such as Applied Materials, Asyst, Dainippon Screen Singapore Pte Ltd, FSI International, KEM, KLA-Tencor, Nikon, Novellus, TEL, and Varian have all committed special teams to the fabrication plant.

Also available is a comprehensive set of libraries including standard cells, IOs and memories for customer design and product development for the 0.25um major foundry compatible process.

1st Silicon has a workforce of more than 600 from different parts of the world. At full operational strength, the company will have more than 1,000 employees at its present wafer fabrication complex, with smaller complements based in the US, Japan, Taiwan and Europe.

The company plans to get listed on the New York Stock Exchange.
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