

Chandler lands \$3 billion Intel plant

By Ed Taylor, Tribune

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Governor Janet Napolitano listens to Tom Franz, vice president and general manager at Intel, as he officially announces Intel's intent to trigger a sales factor legislation by building a new \$3 billion manufacturing plant in Chandler.

Intel Corp.'s choice of Chandler for a \$3 billion plant shows the Valley still commands plenty of respect in the semiconductor industry. Analysts said the project is likely to spur expansion of businesses that supply semiconductor producers and could signal to other manufacturers that the Valley is a good place for their future expansions.



Intel officials said Monday they have chosen their Ocotillo campus in south Chandler over "a handful" of other contenders worldwide for the massive investment.

The plant will make the latest state-of-the-art microprocessors to run most of the world's personal computers. In fact, the chips to be made by the plant are so advanced they haven't been designed yet, Intel spokeswoman Jeanne Forbis-Amend said.

The company, which plans to break ground on the plant Aug. 2, cited a reduction in state income taxes approved by the Arizona Legislature and signed by Gov. Janet Napolitano this year as a major reason for choosing Chandler.

Landing the plant strengthens the Valley's status in the industry, which was shaken by Motorola's cutbacks during the early-2000s, said Dave Cavanaugh, director of manufacturing for Semico Research, a Phoenix based market analysis firm.

He said the tax incentives approved by the state Legislature show the Valley is serious about continuing as a high-tech player.

"This says the state has recognized that we need to court high-tech businesses and resurrect the semiconductor side of high tech," he said.

Known as a "fab" in industry terminology, the factory will be designated as Intel's Fab 32, and will join the existing Fab 12 and Fab 22 plants at the 700-acre Ocotillo complex, 4500 S. Dobson Road. The plant will create 3,000 construction jobs and 1,000 permanent jobs. It is scheduled to open in the second half of 2007.

"This new fab signals Intel's continued investment in state-of-the-art technology and its continued investment in Arizona. Arizona remains an important, strategic location for manufacturing the most advanced Intel products," said John Pemberton, Fab 32 plant manager.

"Intel is a tremendously important player in the Arizona economy," Napolitano said. "I'm delighted that the hard work of this past legislative session has paid off, and on behalf of Arizona I'm grateful for Intel's commitment to growth in our state."

In addition to the tax break, Intel selected Chandler because company officials believe the company will be able to recruit skilled workers here, and infrastructure was already in place to support the factory, Forbis-Amend said.

"And we have a great relationship with the city of Chandler," she said.

The plant will produce microchips of mind-numbing complexity. They will contain transistors that are only 45 nanometers in size — about 1/ 2000th the width of a human hair and small enough for more than 50 to fit inside a human red-blood cell. A nanometer is one-billionth of a meter.

The current industry standard is 65 nanometers, but the industry continues to reduce the size of the integrated circuits and pack more transistors onto a single chip in conformance with Moore's Law — named after one of Intel's founders — that the processing power of chips will double every 18 months.

The transistors, devices that regulate the flow of electric current, are becoming so small that engineers are working at the level of molecules and even single atoms. They also are having to develop technologies to deal with such problems such as overheating of the chips as the circuit lines become more compact.

In another advance, the new plant will be capable of etching circuitry on silicon wafers 12 inches in diameter instead of the current widely used 8-inch standard. The larger wafer size increases the efficiency of the manufacturing process, which holds down the cost per chip.

When completed, Fab 32 will be Intel's sixth plant capable of processing 12-inch wafers. The others are in Oregon, New Mexico and Ireland. Also, Fab 12 in Chandler is being upgraded in a \$2 billion project to process the 12-inch silicon disks.

Intel may not be finished with its investments at the Ocotillo campus. The company still has the potential to upgrade Fab 22 to the latest standards, including the 12-inch wafer size, Forbis-Amend said. But she said no decision has been made on when the company will do that.

The jobs available at the new fab will include manufacturing technicians and process, automation and yield engineers. Salaries will start at \$40,000 annually for manufacturing technicians and range upward to \$100,000. The average Arizona salary for Intel employees is \$66,000.

Will Strauss, a Tempe-based market analyst, said the new plant will expand the network of local suppliers and support businesses for the semiconductor industry.

"There is an ecosystem around any major facility, and that ecosystem will be enlarged," he said.

Jim Rounds, senior economist for Elliott D. Pollack and Co. in Scottsdale, estimated the 1,000 new jobs will have an annual economic impact of \$400 million, including salaries for new workers. But he said he Valley has not yet made up all of the job losses recorded during the semiconductor slide.

"When the recession occurred, we lost manufacturing jobs in chips and aerospace," he said. "We're probably getting back the higher-tech aerospace jobs, but the lower-level chip production jobs — we may not get all of that back."

In a separate announcement Monday, Intel said it also will spend \$105 million to convert an inactive wafer fab in New Mexico into a center for testing microchips, a project that will add 300 jobs.

Intel, based in Santa Clara, Calif., is the world's largest semiconductor company, with annual sales of more than \$34 billion. It is the major producer of microprocessors that run a great majority of the world's personal computers. Its market domination is so strong that it is the target of antitrust investigations and a lawsuit filed by Advanced Micro Devices, its largest competitor.

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