Hewlett Packard: Market leader for systems integration of semiconductor fabs

Often what happens behind the scenes and beneath the surface is even more critical to a successful fab operation than what meets the eye. Thus, meeting customer requirement in terms of business results with integrity as a true partner is the key criterion for selecting a technology and service provider. This is the approach that Hewlett Packard Services-Consulting and Integration takes, and it has made the company the number one systems integrator (in terms of market share, according to Gartner/Dataquest) in semiconductor fabs for five years running.

“Almost 62% of the world’s semiconductor fabs run on HP technology,” said Dinesh Maheshwary, global director and managing principal for the high-tech and electronics industry practice at HP Services-Consulting and Integration. “We have the largest market share in the world in terms of computer hardware, infrastructure and services from a systems integration perspective.”

The company’s focus is to provide a complete line of servers, storage, access devices, networks, infrastructure and support this with services such as systems integration, customer support, and data center management across the enterprise. According to Maheshwary, not only does the company have the ability to go in and implement various types of software applications but also design an architecture for complete automation of a semiconductor manufacturing process and link multiple facilities—an increasingly important capability as the industry consolidates and relies more on outsourcing to offshore foundries.

“We provide solutions not just for the single plant, but for the entire enterprise and corporate environment,” he said. “The range of our solutions is from the four-wall plant, integrated with the enterprise and the enterprise reaching beyond to its customers and suppliers, in terms of supply chain and new emerging discipline of demand chain. We are a full-fledged IT company that develops and provides IT solutions and services oriented to semiconductor manufacturing.”

As the industry moves increasingly toward a more broadly integrated, multi-facility model, there is a growing need to have an advanced IT infrastructure to support not only day-to-day operations but the management of critical information throughout product development, manufacturing, and marketing.

“If you are a company in the semiconductor business, you design chips, manufacture them, and distribute product,” Maheshwary said. “So you need to have different types of systems to design a chip, then take it into manufacturing and manage it throughout the entire life cycle—which means not only to produce it, but to coordinate with manufacturers and suppliers. HP can provide a complete CIM system—design it, implement it, and even provide operational support for it from a data center perspective—and provide solutions for product management, customer relationship management, supply chain—whatever the customer needs.”

“Right now the industry is in down cycle, but as it goes back into up cycle it is going to present newer challenges in terms of increasing productivity of existing 200mm fabs and new investments in 300mm technology,” he said. “One of the key things from an IT perspective is that a lot of data is generated and created in the fab as part of the manufacturing process, and we have a unique capability to harness this data for decision making for the fab. Unless the data is harnessed, managed, and channeled, it goes to waste, and more of our customers are taking advantage of this.”

For example, HP has introduced SemiconView, which is tailored towards managing fab data. Maheshwary believes this capability is becoming an important differentiator by harnessing data to stay ahead of competition. According to Maheshwary, in addition to its experience in automating semiconductor fabs, another feature that sets HP apart from its competitors is its ability to offer its customers the best available technologies and solutions in the marketplace.

“We use the best available technologies in the marketplace by developing partnerships with industry leaders vs., say, IBM, which means you would go with all IBM products,” he said. “We will work with partners like Applied Materials, Brooks Automation, etc. to assemble the best apps available in the marketplace and be the integrator and implementor of those applications in the fab. We have also just entered into a partnership with Agile Software, the leading provider of PLM solutions for the electronics industry, to architect and deliver solutions to our semiconductor customers.”