

# New Tek Fellow Is A Problem-Solver



Jay Prasad

We have a new Tektronix Fellow, the company's senior engineering designation for those key technical contributors whose work the company wishes to recognize and facilitate. The latest is Jay Prasad, Principal Engineer of Semiconductor Technology, and manager of the Heterojunction Bipolar Technology (HBT) program at the Tektronix Laboratories' Electronic Research Lab.

Jay has been with Tektronix for ten years, and received his Ph.D. degree at Oregon State University after completing masters work at the Indian Institute of Technology, in Madras. He considers the honor bestowed upon him as largely the result of hard work. "There's not a single weekend where I haven't worked either at home or at the Lab," he says. "I spend most of my time thinking of the problems which need to be solved."

His research specialty is HBT. "We started at Tek from ground zero in this field," he says, "and though we have fewer resources and a smaller financial investment than our larger competitors, we're matching their work." One of the advantages of HBT is a wider bandgap emitter, which results in higher speed devices. Jay observes that "industry people who've seen our work understand that Tektronix is a serious technology contributor and that we're solving important problems."

Jay believes that it is critical to transform HBT from a showcase technology to one that's profitably incorporated within Tektronix products: "It's not enough to develop the technology, we also have to be able to manufacture it in required amounts and at acceptable cost."

He further believes that even in research, customers drive technology. "Optical and fiber communications operate at increasingly higher speeds," he says, "and instruments

need to run faster to capture these signals."

Having worked at other companies prior to his tenure at Tek, Jay considers Tektronix to be special for a variety of reasons, including its ability to offer engineers the satisfaction of fashioning finished products and systems instead of only components; it's also an employee-oriented company: "Tek is people-friendly — engineers can freely solicit help from within the company without worrying that their ideas will be stolen from them. This friendliness even extends to animals. I've never before seen a duck crossing sign at any other high tech facility."

Jay's interest in electronics began at age ten when he watched his uncle plug a flashlight battery into a household socket for recharging. "I wondered how AC could be turned to DC and began reading books about copper oxide rectifiers used for such conversions," he recalls. Jay then began construction of rectifiers made of copper sheets and household chemicals, teaching himself the chemistry required for fabrication. "When I put the first device in a wood stove to fuse the layers," he recalls, "the carbon in the smoke altered the copper oxide interface and smelled up the whole house." And since each subsequent modification required new chemistry, his orbit of self-taught knowledge grew steadily wider.

"I took a bachelor's degree in physics," notes Jay, "since I wanted to understand the fundamentals of semiconductor devices. But with physics I got too much theory and too little practice." He subsequently switched to engineering where he began building germanium transistors, followed by increasingly more complex devices. "When developing such technologies," he observes, "one really needs to understand Mother Nature. You cannot simply place one material on another and expect results. You have to understand Mother Nature's laws and be friendly and coax her into making things work for you."

In addition to his responsibilities at Tektronix, Jay serves as an adjunct professor at Oregon State University, and as a research advisor at the universities of Illinois and Washington. He is the holder of numerous patents and has published dozens of papers and made numerous scientific presentations.

As a Tektronix Fellow, Jay's charter has been expanded. Beyond developing high speed technologies, he is to act as an advanced semiconductor "watchdog" and gain access to other technologies required by Tektronix for its future products. "I'll be looking outside Tek to satisfy the

semiconductor and circuit architecture needs of the various IBDs," he says.

Jay considers his principle strength to be his ability to set a goal and to achieve it regardless of obstacles: "In technology, clear goals indicate that you've thought your plan through and that you know where you want to go. Unrealized

goals are most often in conflict with Mother Nature. Step back and reconsider each premise."

On his resume, Jay's description of himself perhaps reflects the qualities of all Tektronix Fellows: "Willing to work hard, learn new things and take on responsibility for new projects and programs."



## QUESTIONS & ANSWERS

*As part of our continuing efforts to improve communication at Tektronix, Tekweek is continuing this question & answer column. As space permits, we will answer questions of a corporate nature which are of interest to large numbers of employees. We will also attempt to provide answers directly to those individuals who's questions are not printed in Tekweek, providing they give us their name and mail stop. Thanks for your questions. Keep them coming.*

**Q1.** Is it possible that as new IBDs are formed these could be headquartered at locations other than Beaverton/Wilsonville, particularly if an international acquisition formed the basis of that new business? (Submitted by Brian Currie, Tek/Australia).

**A.** Yes, that's the purpose of the new IBD organizational structure. The flexibility of the new structure enables this kind of spontaneous growth to occur.

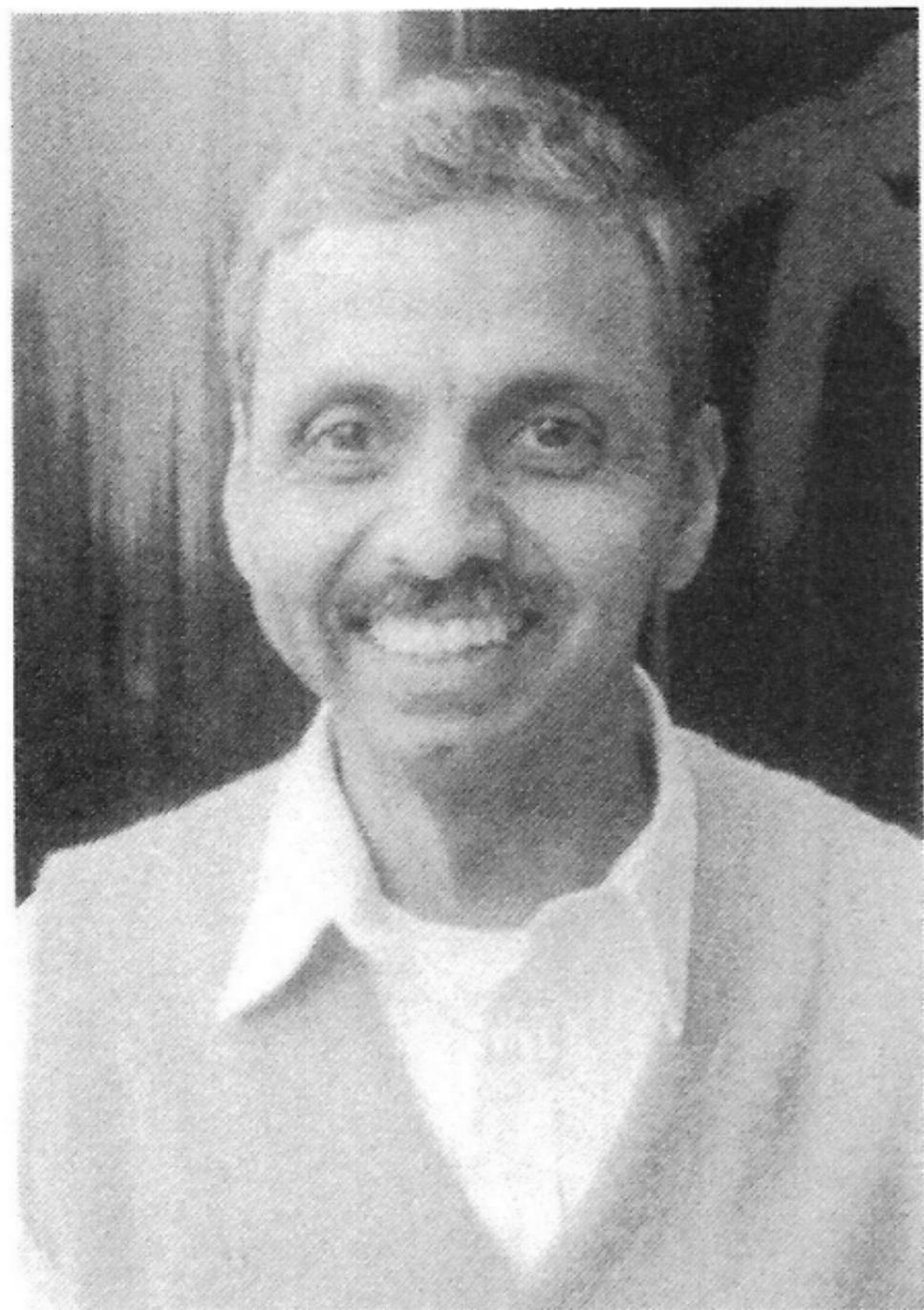
**Q2.** For some U.S. employees, income in 1992 was less than it would normally have been because shutdown days exceeded their Flexible-Time Off (FTO) days. Because Results Share is paid as a percentage of employee income for the quarter, these same employees received less Results Share than they would have otherwise received. Shouldn't we alter the basis upon which Results Share is paid, so that Results Share payouts are not impacted by potential income reductions due to shutdowns? If so, will employees affected in 1992 receive a reimbursement? (Question submitted by an employee at Del Yocam's live broadcast, and answered by Dave Buchanan, manager of the payroll department).

**A.** The question/suggestion is a good one. We didn't consider the

potential impact of a shutdown when we crafted the details of the plan, but it's obvious in retrospect that we should have. Starting Q1 FY400 (May 31, 1993), the company will change the basis upon which Results Share is paid. As of that date, shutdowns will not impact the amount of Results Share paid. Due to the programming complexities involved with making the change retroactive, the company is unable to reverse the impact to employees impacted in 1992.

**Q3.** What steps are Sony/Tek taking to react to Japan's economic downturn? (Submitted by an employee at Del Yocam's live broadcast, and answered by David Dowell, International Operations).

**A.** Sony/Tek is restructuring to reduce expenses by \$4.8 million per year. This is eight percent of total operating expenses. A number of actions Sony/Tek plans to take are "firsts" in terms of expense reduction, and reflect a cultural change for a Japanese electronics company. Overall, the objective is to enable Sony/Tek to break even in terms of income at about \$200 million of sales. Actions Sony/Tek will take to achieve this are: 1. Move out of Osaka New City leased space, saving \$1.6 million per year. This space, a five-minute walk from Sony/Tek's main Tokyo office, has been the location for all GPID and NWD staff who will move to the Tokyo main office. The move will be complete in February. 2. Downsize computer facilities, saving \$240,000 per year. 3. Miscellaneous additional expense reductions targeted at improving the "run-rate" by \$3 million per year. In addition to the expense cuts, through a combination of price increases and lower cost of sales due to the stronger yen, Sony/Tek plans to increase its gross margins, realizing a target of \$3 million per year.



***Jay Prasad***