Tekweek

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Gotcha

A survey on employee attitudes about quality spells "responsible" without the letter "o".□

400 attend the forum

Some 400 Tek people gathered at Portland's Marriott Hotel yesterday for the company's second annual Engineering Excellence Forum. The theme this year: design economics.

Key speakers at the two-day forum include Norbett Kaupp of the Xerox Corp. (on the industry view); Ram Banin of CodeSmith Technology, Inc. (on "managing a software business"); and Executive VP Wim Velsink, whose presentation was entitled, "Design Economics: Key to Profitability."

Also scheduled: a panel discussion on engineering excellence initiatives; several sessions devoted to software engineering; Tek case studies (liquid crystal shutter, Kaleidoscope and CAE Systems), and a product fair.

VP Kevin Considine (Tek Labs) emceed the forum and moderated the panel discussion.

Other presenters include VPs Dave Friedley, Tom Long, Fred Hanson and Jon Reed; Rick LeFaivre, Ward Cunningham, David Stubbs and Peter Turney.

Virtually all of this afternoon is devoted to concurrent sessions on design economics.

The forum is one of three held annually. The others are on marketing excellence and manufacturing excellence. Together, they comprise Tek's three major thrusts toward global business excellence.□

Art Metz is company's 1st-ever winner of Howard Vollum Engineering Award

Art with award: A dozen patents for Tek, and 10 more pending.

Arthur J. Metz is Tek's first winner of the Howard Vollum Award for Engineering Excellence. The award was presented at Portland's Marriott Hotel last night, at the company's annual Engineering Excellence Forum.

Arthur's "innovating IC and product designs" have set standards for the industry, said Executive VP Wim Velsink, and "helped our products get market leadership."

Art receives a commemorative sculpture (photo), a work-related research grant, and $1,000.

The award honors cofounder Howard Vollum's ideals and achievements by recognizing Tek people "whose contributions clearly exemplify engineering excellence in his tradition."

The major decision criteria were contributions to Tek, technical merit, customer needs understanding, and ability to champion . . . to act as a role model.

Art, 45, is a Chief Engineer in Lab Instruments (one of only 11 Tek people who've been given that title). He joined Tek in 1968, and has made significant contributions to some of the most successful products in company history, including the 7000 and 2400 oscilloscope series.

He holds 12 patents, and 10 more are pending.

If the IRS had used Art Metz's talent for straightforward design, that W-4 tax form would not be so mindbending. Like tax codes, IC technologies are complex—and often morasses of potential troubles. That's why Art thinks and plans things out before tackling a design. In this thinking he can call on a lot of circuit design experience, and an intimacy with the way semiconductor materials are actually processed. This enables him not only to create good designs, but also enables him to do something that is increasingly important—complete designs on time.

He's also good at helping other designers solve their problems.

You just can't tackle a tough IC-design task without running into some trouble. Any stage from concept to fabrication can produce real headaches. If you are an IC designer, you solve most problems yourself. But when a really tough one has you stymied, you go looking for help. In the Lab Instruments Division, IC

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Winner Art Metz: Thinker, planner, doer

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designers see Art Metz.

Art's insights often solve the problem directly. Or he may just suggest a way around the problem. This former midwestern farm boy not only knows how to plow a straight row, he knows when to go around obstacles.

Thinking ahead of the need is another thing he has proven to be good at. Anticipating what circuitry a measurement or application will need requires the very best in a designer. Being one of the best is why Art Metz is a Chief Engineer.

Designers still need to know a lot

Powerful computer programs assist designers today, but the job still isn't easy. A deeper knowledge must often be applied. This is particularly so when you are designing very fast IC's.

It's akin to the kind of knowledge that brewmasters have, how to work with the fundamentals of hops, malt, time, and temperature to create something special. Tek's IC brewery is Bldg 59. Art knows his way around here. He can anticipate what, in an IC design, will sour the brew.

It's a knowledge that produces results, fast IC's for example—like Art's recent track-and-hold circuit. It's a kind of knowledge you can't afford to let slip into a competitor's arsenal. So you lock it up in trade secrets rather than going for patents. Sometimes patents reveal too much about the underlying technology.

Art Metz has created many trade secrets.

Avoiding the critical-path

Just as no one in the IRS brags that s/he designed the W-4, no IC designer brags when his or her design has gone "critical path." That's project-management jargon for that part of the project that is most likely to delay, even sink the whole effort.

How does Art Metz avoid the critical path? He shrugs and says, "I've been lucky." Then he goes on to tell how he discovered how to be lucky more often. It's got something to do with how you schedule your efforts and how you chose where to put those efforts. It is the kind of luck you can make, mostly.

He learned something about bettering his luck at the DeVry Institute in Chicago. It was here that Art got his first formal training in electronics. He worked his way, handling produce mornings to pay tuition, room and board. Afternoons and evenings he attended classes and completed lab work. Weekends were tied up studying. And still he couldn't get everything done. He decided then to plan out and schedule his efforts more thoroughly.

At DeVry, planning worked for Art. He finished first in his class of 92. It works for him at Tektronix too: "It's essential to plan. Successful designs don't just happen."

But some luck does just happen. Like back in 1968, when a Tek engineer saw something beyond Art's lack of ideal credentials, and his technician title.

Credentials

After completing his studies at the DeVry Institute and before joining Tektronix, Art worked at The Argonne National Laboratories just outside Chicago. As a technician developing nuclear-research instrumentation, he discovered that he needed to learn more about math and physics. Methodically, he set about rectifying this problem by taking both undergraduate and graduate courses at the University of Illinois.

Art has since taken other courses, as needed. He has some regrets about not following the more formal routes in engineering education. But then he reflects, "I seem to be able to understand a lot of things intuitively where my math may be weak."

At Argonne he did a lot of work in fast counting, gating, and timing circuitry. It was that work that attracted the Tek engineer who interviewed Art back in 1968. Art—who had co-authored papers on event gates, zero-crossing timers, random-rate meters, tunnel diodes and the like—just had to have something useful for oscilloscope circuitry. And he did. Twelve patents and a lot of patent applications and trade secrets prove it.

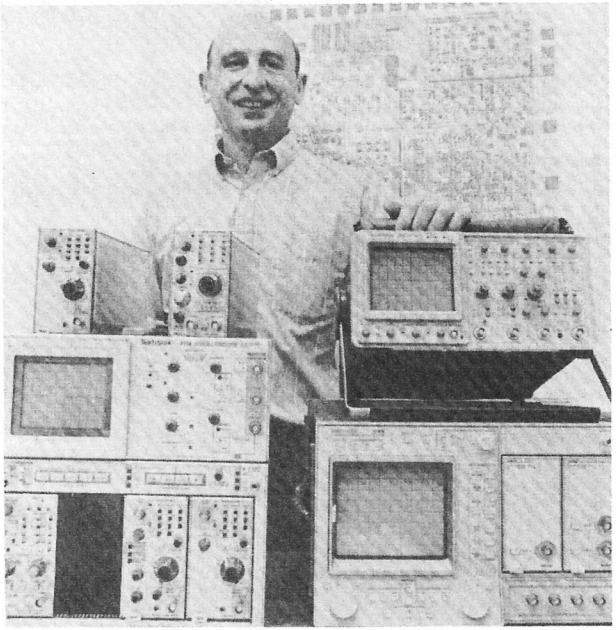
Eighty miles a day

In getting back and forth to work, Art does a lot of driving. To the Metzes, the 14-acre "farm" they own near Woodburn is worth the commute. Art says the place is more parklike than a farm. "We have woods, a pond...and some creek bottom land." Art and Betty Metz are farm-raised people who couldn't buy something livable like this around Chicago. That's one of the reasons the Metzes were attracted to Oregon. The other reason was Tektronix and its people.

On the farm, the Metzes are raising five kids—the oldest is 20, the youngest 12. Just a few acres are in formal agriculture now. They used to raise sheep and cattle, but now they just rent part of the place to a berry grower.

Art Metz says that he has been lucky—most Chiefs seem to say this. If that's all there is to success, then Tek's been lucky too. Starting a little more than 40 years ago, Tek's founders had the right idea, at the right time, and in the right place. They also hired some lucky people; people who, like Art Metz, continue to make their luck.□

—Art Andersen



Some of the products that have felt the soft Art Metz touch.

People to emulate

Chiefs are supposed to be people to emulate. Gene Andrews, Art's manager, lauds him as "a powerful example."

A fellow designer, somewhat awed by that really difficult track-and-hold design Art created, said, "It looks easy now only because it's working." Engineers resurrect this cliche whenever someone pulls off a really tough one.□