

Times People

Kano on R&D alliances: It's a cultural thing

Gota Kano takes a worldly view of the role of Matsushita Electronic Corp.'s R&D effort—very worldly. Speaking in metaphors that bring rarified R&D concepts down to earth, Kano says the technological equivalents of forest and desert cultures—that is, Japan and the United States—should work together, leveraging their complementary strengths to commercialize products that truly benefit humanity.

BY YOSHIKO HARA

Kano last week retired as an adviser to Matsushita Electronic's R&D effort, a role in which he served for roughly a year after having left his post as the group's managing director. He has long been a champion of the notion that complementary collaboration between Japan and the United States is a sound route to innovative products that create value. Leveraging his belief that Western cultures excel at conceptualizing technologies and the Japanese at turning concepts into manufacturable products, Kano spearheaded a number of seminal joint projects during his tenure that paired Matsushita with U.S. universities and their commercial spinoffs. Those alliances yielded innovations in such areas as plasma display panels (PDPs), ferroelectric memory and blue lasers.

Borrowing from an ethnologist who theorizes on the differences between desert and forest cultures, Kano describes the Japanese as belonging to "the forest culture, which is superior [in its observational skills] and in the analysis of the changes in nature from season to season." Those skills, he says, are essential to manufacturing prowess.

On the other hand, Western societies are large-

ly influenced by the desert culture where Christianity originated. Desert cultures, Kano said, value logical thought and the ability to build a concept on a limited base of information.

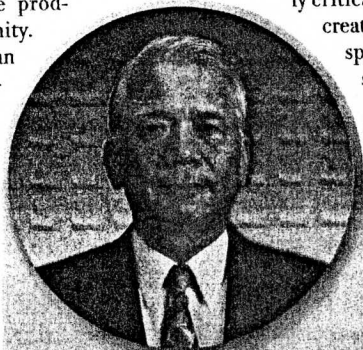
Kano's philosophy may be viewed as fostering the politically incorrect notion that Japan has taken a free ride on U.S. creativity. But he points out that "what to make" and "how to make [it]" are equally critical elements in the process of creating value. And Kano, who spent nearly 39 years at Matsushita Electronic Corp.'s Semiconductor and Device Manufacturing Co., is no stranger to value creation.

Kano continues to advocate technology exchange between Japan and the United States in his academic work with two universities on either side of the Pacific. At the electrical and computer engineering department of the University of Colorado's College of Engineering and Applied Science (Colorado Springs), Kano is affiliated with an effort to promote overseas collaborations.

The graduate school of the Kochi University of Technology (Tosayamada, Kochi, Japan), where Kano is a professor and has pioneered an entrepreneurs' course, is a partner in that effort.

Kano acknowledged that Japan, with the financial support of the government, has worked to cultivate an environment that fosters creativity within its universities and labs. But he said those attempts are not yet tuned to enterprises' desperate efforts to create new value, new business and new employment.

He noted that the United States was the incubator for such critical technological innovations as the DRAM, the LCD, the



Has Japan taken a free ride on U.S. creativity? Retired Matsushita Electronic R&D chief Gota Kano asserts that knowing 'what to make' and knowing 'how to make' it are equal halves of the value-creation equation. He advocates U.S.-Japan collaborations that tap each culture's strengths.



THE PROFESSION

BY TERRY COSTLOW

Is everything old new again?

As the curtain closes on the 20th century, all eyes are facing forward, in hopes of getting a fresh start in the 21st. Change is the watchword, and has been one for the electronics industry pretty much for the entire post-World War II era. The electronics industry is *about* change. Sports and fashion change, too, and so does the pop culture.

So why does it often seem that *plus ça change, plus c'est la même chose*? Outside the electronics world, seeing the Yankees once again dominate baseball reminds us why "*déjà vu* all over again" has become a popular cliché. Electronics too has recurring issues, even though things have changed phenomenally since the pre-PC era.

One big bombshell of a couple of decades ago came when Hewlett-Packard announced that chip quality wasn't really up to snuff. That's starting to become an issue again, though the system-on-chip and huge ICs being built today are vastly different from their counterparts of the early 1980s.

It seems almost unreal that a chip could be the root of problems in new systems. After all, device designers have never had to build in something like control-alt-delete. It was quite a sur-

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