

Three Decades of Internationalization

The future of the information society lies in Electronics and Energy—having the electronics technology necessary to support society's advance and the energy to meet its electricity needs.

Toshiba's internationally active president, Shoichi Saba, discusses Toshiba's "E&E" concept and its practical implementation through international cooperation in new fields.

Question: *For a Japanese businessman you are extremely active internationally; you are one of the non-executive directors of ICI (Imperial Chemical Industries), a member of the Swedish Royal Science Academy and a member of CIGRE (Conférence Internationale des Grands Réseaux Electriques). How did you come to be associated with these organizations?*

Saba: The CIGRE is an international organization concerned with electric power technology and since I am a specialist in this field, I've always been associated with it. Because ICI wants candid opinions representing various viewpoints, its outside directors represent various fields. Chemistry is a field most electricians shun, but since I've been associated with ICI, I've been studying chemicals.

**Interview with
Toshiba Corp.
President Shoichi Saba
by Toru Kojima**



Shoichi Saba

Toru Kojima is an associate economic news editor for the Mainichi Shimbun who specializes in financial, monetary, industrial and technological affairs.

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Q: *Foreign countries are very critical of Japan with respect to its trade surplus and policies. Since you are so active internationally, aren't you often subjected to a barrage of questions regarding such issues?*

Saba: Not at the ICI board meetings or at official gatherings. But when I met the chairmen of General Electric, Allied Corporation and AT&T on a recent business trip to the United States, I discovered mounting concern about the Japan-U.S. trade imbalance. The problem is no longer confined to Congress.

Q: *You seem to be quite at ease with English. Did you live in the United States when you were young?*

Saba: In 1956, when I was 37, I lived for about a year in Schenectady, a small town with a population of about 100,000 near Albany, the capital of New York State. GE's largest plant was located there. Toshiba and GE had extremely close relations involving technological exchanges, and I had the title of liaison engineer. There were no other Japanese, and I was Toshiba's sole representative and errand boy. I even acted as travel guide for Japanese visitors.

Q: *Toshiba seems to be expanding overseas in production as well as sales. Is Toshiba establishing manufacturing plants abroad with the aim of easing trade friction?*

Saba: That's not the only objective. In the past, we developed products for sale in Japan and exported those which could also be sold abroad. That was the way we started our exports. But the situation has gradually changed: now, we develop products that meet the needs of foreign markets simultaneously with domestic items, or in advance, and export them. Merely establishing overseas offices or locally incorporated companies to facilitate exports is insufficient; the work of the latter is to feed back information on the evaluation of our export products and market needs to Toshiba's research center and plants in Japan, and on the basis of such feedback, appropriate products are developed. But now we feel that direct local manufacture is more effective so we can develop, design and produce items near the market for which they are intended.

Q: *Wasn't it just recently that Toshiba first established a plant in the United States?*

Saba: We first started production of motors in Houston, Texas in 1980. There are a lot of problems in selling motors in the United States. Today, Japan is being criticized for its non-tariff barriers, but a similar situation exists in the United States. When selling motors in the United States, those which conform to Japanese or international standards are not accepted. The Americans have special NEMA (National Electrical Manufacturers Association) standards that exist only in the United States. Recently, our U.S. subsidiary became a member of NEMA, but it took a long time to become accepted. Home appliances have to conform to UL (Underwriters Laboratories Inc.) standards and it takes six months to a year to obtain approval after submitting an application.

After motors, we started producing color TVs and electronic ovens in Lebanon, Tennessee, near Nashville. We also manufacture semiconductors in Silicon Valley, California and we're doing preparation for the manufacture of medical electronic equipment.

Q: *How about Europe?*

Saba: We have plants in Britain and West Germany. In Britain, we are manufacturing color TVs, electronic ovens and videotape recorders in Plymouth, Devon. In 1982 we established the Toshiba Semiconductor GmbH., capitalized at DM10 million (about \$3.5 million at the exchange rate of DM2.82/\$1), in the city of Braunschweig in the state of Niedersachsen, West Germany. Toshiba put up the entire equity. We moved into West Germany after noting that one-third of Europe's entire demand is concentrated there. The plant assembles, tests and inspects 16K bit SRAM (CMOS and NMOS types) and also produces sophisticated products such as 64K DRAM and 256K DRAM. It is the fifth overseas Toshiba semiconductor manufacturing firm, following Industrial Mexicana Toshiba, S.A. (established 1966), Korea Electronics Co., Ltd. (1970), Toshiba Electronics Malaysia SDN. BHD. (1974) and Toshiba Semiconductor (U.S.A.) Inc. (1980).

Q: *Recently, I note that Toshiba is forming joint ventures abroad in partnership with major overseas business enterprises rather than establishing plants with 100 percent capital investments.*

Saba: Many of the joint ventures are in new fields. For example, in January we established a plant for manufacturing color display tubes and color TV Braun tubes jointly with Westinghouse Electric in Horseheads, New York. Called Toshiba Westinghouse Electronics Co., it is capitalized at \$40 million on a fifty-fifty basis. World demand for color display tubes used in computers and OA (office automation) equipment is expected to register an annual growth of 30%, with the U.S. the largest market.

The production of American manufacturers is small; over 90% of the color display tubes are supplied by Japan. Toshiba is the largest Japanese manufacturer of color TV Braun tubes, but it decided to tie up with Westinghouse by taking into account the future market prospects. Historically, Toshiba has had close ties with GE, so business circles were surprised when it joined hands with Westinghouse. We intend to pursue not only bilateral, but also multilateral relations, with foreign manufacturers.

In April we made a joint venture with United Technologies Corp. (UTC) for the development, manufacture and sale of fuel cells for power plants. Called International Fuel Cells Corp., it is capitalized at \$82 million, also on a fifty-fifty basis, and is located in South Windsor, Connecticut. Fuel cells are being heralded as a new energy source, and UTC's technology in this field is advanced. As for Toshiba, we have many years of accumulated technological experience in thermal and nuclear energy generation. By combining the two companies' technologies, we

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hope to commercialize a new energy source.

Q: *Toshiba also appears to be strengthening its cooperative relations with foreign enterprises in research and development...*

Saba: It's mostly in the field of high technology. For example, Toshiba is jointly developing with GE an advanced boiling water reactor and related safety techniques for nuclear power plants. We've also concluded contracts with Zilog Inc. and LSI Logic Co. on the exchange of VLSI advanced technology, and a similar contract recently with Siemens of West Germany on semiconductor technology centered on VLSIs.

Toshiba is conducting joint research with the University of Arizona in medical electronics. In the past, our relations with foreign firms, as in the case of GE, were one-way: we merely obtained manufacturing licenses. Today, we exchange patents and know-how. Our IC designing centers in Boston and Sunnyvale were established to design ICs that meet the needs of U.S. customers. Having offices close to the market enables us to learn its needs quickly.

As for research exchange with foreign countries, we established a Toshiba Fellowship Program in London two years ago. Each year, two scholarship scientists are recruited for two-year research stints in semiconductor research at Toshiba's R&D Center. The program is aimed not only at raising Toshiba's profile in Britain but also at stimulating Japanese research by exposure to foreign researchers and their ideas. Raising the technological level of electronics in the country will also be to Britain's advantage.

Q: *When it comes to overseas relations, the Japanese tend to think of going out—that is to export and to establish plants abroad. What are your views concerning the purchase of foreign products?*

Saba: Trade friction cannot be solved overnight. There is no miraculous remedy; the friction can only be eased through long-term effort. Expanding imports would be one way. Toshiba recently established within the company an Import Promotion Committee and has adopted the policy of giving preference to the purchase of foreign goods if the conditions are the same. Excluding subcontract orders, Toshiba purchases about ¥550-¥560 billion (nearly \$2.3 billion) worth of materials from outside sources annually. Of that amount, imports during the last fiscal year accounted for 11%, or approximately ¥60 billion (\$250 million). Twenty percent of the ICs used by Toshiba are imports, and recently the company also purchased a large machine tool from West Germany. I believe the percentage of imports will grow larger in the future.

Q: *So far, my questions have dealt with Toshiba's activities in the Western countries, but haven't Japanese companies been showing considerable interest in the Chinese market over the past several years?*

Saba: Since Toshiba is a general electrical equipment manufacturer, its economic relations with China are extremely wide-ranging. Last year, home appliance exports to China boomed.

Naturally, Toshiba exports finished products bearing the Toshiba trademark, but overshadowing these are exports of plant and technology required for the modernization of China's manufacturing facilities as well as the parts required by the plants. Much of the cooperation with China is in the goods manufacturing area. With the increase in Chinese productive activity, there is a greater need for electric power, and just recently Toshiba received an inquiry for a large power plant. Several months ago, it received an order for the installation of a power plant at Shenzhen.

Q: *I understand Toshiba will hold a technology exhibition in Beijing this coming November.*

Saba: Under its corporate identity program, Toshiba has adopted the slogan "E&E"—Electronics and Energy. We believe that we can cooperate with China within the broad scope of E&E. In the past, Toshiba has sponsored separate exhibitions on measuring equipment, medical instruments and home appliances. This time, however, it will be a comprehensive Toshiba technology exhibition. We hope that the Chinese will look at and evaluate Toshiba's overall capabilities.

Q: *You mentioned the slogan "E&E." Will you elaborate on that and tell us what you believe are the future prospects for electricity and electronics?*

Saba: Electricity is a useful form of energy because it can be easily controlled and transmitted over long distances. It also transmits information well. The electric and electronic industries have great potential for long-term development in this century and the next, and new methods of electric power generation, such as fuel and solar cells, are being developed. Development potential is there for both the industry as a whole as well as for individual enterprises.

Information and communications is another promising sector and the star performer there will be semiconductor-based electronics. Information groups of varying scale will develop throughout the country—among people at plants, companies and households. The growth prospects for the electric and electronics industries are bright in the next century.

Q: *How do you regard the recent decline in the U.S. computer manufacturers' earnings and the somewhat clouded prospects facing the semiconductor industry?*

Saba: Basically, it is a temporary phenomenon. However, the development of technology is so rapid, as are the manufacturing and merchandising of products, that users are unable to keep abreast. The number of users has increased because of the big publicity given to personal computers, but they are used principally for games; development of new usages is at an impasse. Computers are steadily becoming more sophisticated, but they are not being fully utilized. The situation is temporarily out of balance. But since human beings are resourceful and will come up with innovative ideas and uses, the electronics industry will continue to develop, although in a somewhat seesaw-like manner. ●

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