

the move toward utilizing local and wide area networks.

Some software piracy does exist, but the Indonesian government, along with the Software Association, have been working very hard to reduce its existence. The best protection tends to be customization and the utilization of a local partner.

As IT opportunities for foreign firms are primarily in the area of high end design and development, the risks are diminished. The utilization of a local partner for production and localization has been a very successful way of combating piracy.

**ASEAN energy demand is doubling every 12 years.**

## Power: 14,000 Megawatts a Year!

Since 1972, PLN, the Indonesian state electricity company, has experienced an average growth in energy demand of 16 per cent per annum, while its installed capacity has increased from 776 MW to 14,000 MW in 1993/94. In spite of this enormous increase in capacity, PLN is still unable to meet current demand.

Although PLN expects growth in demand to slow to around 13 per cent in the 1990s, in order to keep pace with growing demand PLN calculates its investment requirements to be U.S.\$40 billion between 1992 and 1999. Major funding will be applied to expand its generating capacity to over 18,000 MW, with the remainder spent on transmission and on distribution. This will expand considerably PLN's current annual development expenditures and make for one of the most ambitious energy programs in Asia.

The types of generation slated for greatest growth by PLN in the next decade are steam-coal (a 44 per cent increase in capacity with 6175 MW earmarked for the private sector), gas-fired combined cycle (a 26 per cent increase in capacity), and hydropower (a 20 per cent increase in capacity). Approximately half of this capacity expansion will be through private power projects.

The Indonesian government is investigating the utilization of nuclear power for early in the next century. Units (2x 600 MW) for installation in East Java are being considered. CANDU technology will be assessed during the course of feasibility analysis. A call for tender, in the event this option is pursued, could come in early 1995.

## Telecommunications: A Million Lines a Year!

The Indonesian government has recognized that the demand for telecommunications services greatly exceeds the existing network capacity and that the resulting shortage in supply is hindering economic development.

Currently, the phone density in Indonesia is only .77 lines per 100 people. Under Indonesia's new Five Year Plan, *Replita VI 1994-1999*, the target for telephone

development is set at 5 million lines, 1.2 million of which are expected to be provided by the private sector.

The government also intends to introduce competition. Competition has already been introduced in value-added services, the provision of network equipment, telecommunications service retail shops and the supply of customer premise terminal equipment.

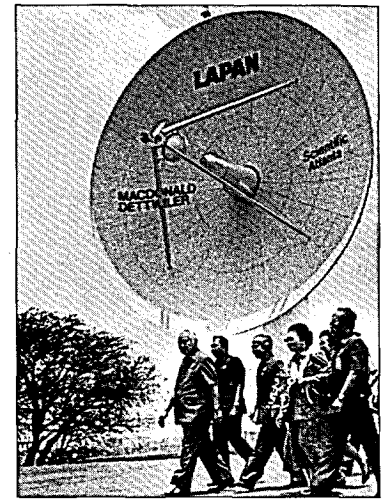
A new satellite communications company, PT Satelindo, was recently established with majority private sector equity to provide cellular and international services in competition with the public operators.

The one area that is still under consideration is the restructuring of PT Telkom. There are several different possibilities being considered. The result of the restructuring process will likely include deregulation reforms to allow competition in basic services and the issuance of PT Telkom bonds on the domestic capital market.

## Transportation: 13,000 Islands

Because Indonesia's land area is spread over a vast archipelago, many forms of transport are necessary.

While shipping remains important for inter-island transport, with 88 per cent of the population living on 66



*Indonesian President and Mrs. Soeharto at the new MacDonalD Dettwiler-built earth station in Pare-Pare, Indonesia.*

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