

From Simple Economization to the Quest for Simple and Easy-to-Use

Hiroimichi Shinohara

Director of NTT Access Network Service Systems Laboratories

The access network has been undergoing huge changes since around the time of NTT's privatization in 1985. Our business environment has changed from the days when NTT had a monopoly on Japan's telephone business to the current competitive market for high-speed Internet access services. This change has led to changes in the requirements for the access network. We used to plan renovation to handle estimated requests, but now we must rapidly respond to consumers' sophisticated demands of the moment. Previously we focused on the stable supply of services, but now we must constantly create new services.

These days, the hot topic is high-speed Internet access. NTT started to provide high-speed Internet access services extensively in mid 2000. ADSL (asymmetric digital subscriber line) has been playing the main role in delivering this so far, but recently FTTH (fiber to the home) has come into the spotlight, driven by the growing demand for even faster services. The main competition is shifting from ADSL to FTTH. The success of FTTH is based on cost reductions in the optical access system. It is no exaggeration to say that our enduring efforts to cut costs have led to this boom in FTTH.

Our mission for the future is to be capable of providing services economically and promptly to meet customers' demands. From the technical viewpoint, I feel the need to shift our R&D emphasis from reducing costs of products to facilitating service provisioning, which will have the knock-on effect of reducing the total cost and providing services promptly. Cost reductions to date have been achieved based on techniques developed for the trunk system. However, I don't think service provisioning can be facilitated adequately using the same techniques. We must develop new techniques that suit this new access net-

work, aiming at "simple and easy-to-use". Just as metallic cable used to be, optical fiber should be a long-lasting infrastructure. We must also develop techniques for responding to evolutionary changes in services and networks based on the already introduced optical fibers.

The amount of equipment in the access network is enormous. The access network consists of equipment such as ducts, tunnels, and poles, which are utilized commonly for all telecommunication services, plus metallic and optical cables, which are service dependent. Recent competition in the access network cannot be pursued without this infrastructure. It is our great duty to operate this enormous infrastructure at a lower cost.

In the old days of our monopoly, our excellent technology let us provide better services and construct an economical network. Now, however, competitive predominance is also essential. It is our task to keep the infrastructure healthy and improve NTT's competitiveness and enhance the future expandability of our services. We will vigorously pursue our research on access technology to achieve simple and easy-to-use access for the booming market for FTTH.

H. Shinohara

