

High Hopes for Digital CS Broadcasts

Substantial growth in the mobile telecommunications sector buoyed the entire telecommunications market, which maintained a solid overall expansion. First-tier telecom firms are forecast to have surpassed the previous fiscal year by approximately 13% with total earnings of about ¥8.5 trillion in fiscal 1995. Within the mobile telecommunications market, cellular and car phone subscribership showed especially remarkable growth, with an aggregate 4.33 million subscribers as of the end of March 1995 representing double the total for all of fiscal 1994, and at the beginning of the 1995 fiscal year subscribers continued to sign up at twice the pace of fiscal 1994 (see graph). Declining handset prices and usage fees, along with diversification in fee systems and an increasing familiarity with mobile phone services, could be cited as reasons for this. In July 1995 a new, more inexpensive mobile phone service, called Personal Handy-phone System (PHS), was launched in Tokyo and Sapporo. Developments to date indicate that the introduction of PHS services has sparked demand, partly due to its appeal, spurring growth in the mobile communications market.

Forecasts call for a continued significant expansion in the mobile telecom sector that should underpin future growth in the market as a whole. As cellular and car phone subscriber fees and handset prices come down, demand should expand from business to individual users. As deeper inroads are made into the youth market, it is possible that, similar to pocket beepers, acceptance will accelerate in the future. PHS can now only be used in limited areas, but service providers are all moving ahead with the installation of more base stations, stepping up their initial plans, and expectations are that full market acceptance will come in 1996 when service areas become more fully available. Although more extensive use for data transmission, utilizing PHS' broader

bandwidth, is anticipated over the near term, interim demand is to center on vocal input so that expanded functionality in the form of improved ease of use, responding to such needs as call forwarding and answering machine functions, will be an important issue linked to expansion of the market.

A lively debate has arisen over the form that NTT's corporate configuration should take and the additional possibility that the existing framework of the telecommunications industry might change significantly based on the outcome of discussions that have attracted interest in the eventual decision. There is unanimous recognition, not only in Japan, but also in Europe and the U.S., that deregulation must be promoted to provide competitive conditions, encouraging competition in the telecommunications market to stimulate the market and strengthen telecom firms' competitiveness. From this perspective, the question of how to achieve open access to NTT's local circuit networks, which are monopolized for the most part by NTT, to provide fair competition between NTT and other phone companies has attracted the most attention. Connection to NTT's local circuit networks is essential for new common carriers, which do not have their own subscriber networks to serve as access routes to customers, but since the parties that have direct interests are said to have a tremendous number of practical issues to resolve in their discussions, it would be preferable to have unaffiliated parties establish access rules and create a framework to ensure compliance as quickly as possible.

While the ground-based broadcast industry's results indicate a recovery, cable TV (CATV), satellite broadcasters, and other media companies still face a difficult earnings situation; however, the number of subscribers is steadily rising. Progress in promoting digitalization in the broadcast sector has had a great impact on the broadcasting industry. A



Hope for mobile telephones as rates drop, users increase.

report from a March 1995 Ministry of Posts and Telecommunications round table on broadcasting possibilities in an age of multimedia, indicated that Japan's broadcast sector would move toward digitalization. In response, requisite preparations are now underway for digital broadcasts using communication satellites (CS) and the digitalization of CATV, with service to commence this year. Further, deregulation in 1993 permitting large-scale capitalization to manage multiple cable operations has been followed by the establishment of joint ventures in the cable industry between leading trading companies and TCI and Time-Warner of the U.S. These respective joint venture multiple systems operators (MSO) have begun to establish large cable operations.

Digitalization is expected to be achieved in the broadcast sector in fiscal 1996, but most attention has been attracted by digital communications satellite broadcasts. Digital CS broadcasting is distinguished by the ability to provide programming over multiple channels, making it easier to broadcast programming designed to reach segmented markets. Because digital CS broadcasts employ compression technology to multiplex, bundling transmissions of multiple signals on one carrier wave, a single transponder is able to handle four to eight channels. Per channel costs are consequently much lower compared to analog satellite broadcasts, enabling the provision of programming to a smaller than existing number of subscribers. This is expected to lead to the supply of programming software in

a variety of categories and an upswing for the program content industry.

Over the medium to long term it is believed that the advent of digital CS broadcasting will have various repercussions not only on analog satellite transmissions, but the industry as a whole. Naturally, in comparison to ground-based stations that broadcast to 65 million households nationwide, digital satellite transmission represents "narrowcasting" to segmented audiences and, although it is difficult to

envision how the imminent arrival of digital CS broadcasts will transform the existing industry structure, the consequences of this first step toward digitalization in the field of broadcasting will be closely scrutinized.

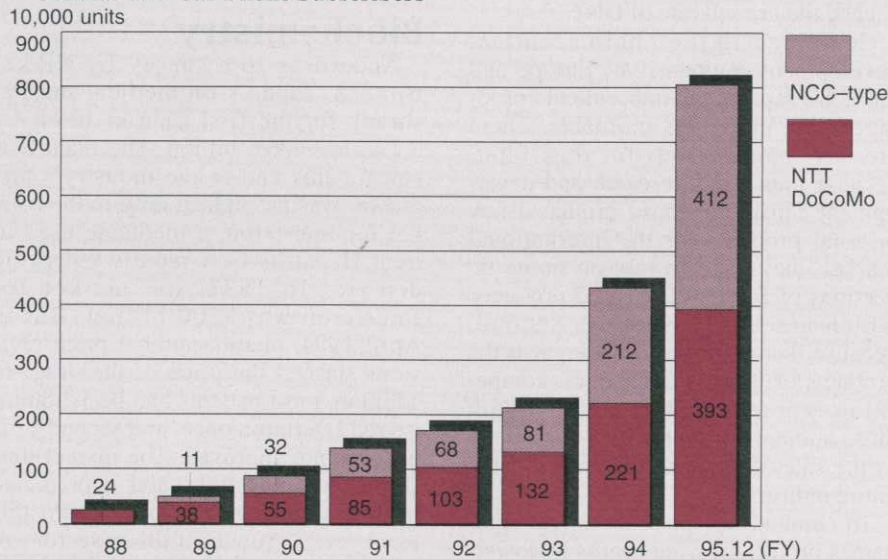
In step with the growing market for personal computers, 1995 was marked by a rapid rise in computer network communications subscribers and Internet users. The use of personal computers for obtaining information from Internet connections, and the exchange

of electronic mail, were factors in the upsurge in the number of subscribers, but a shift from the provision of information using traditional text-based formats to graphical user interfaces (GUI), enabling more ease of use, could also be pointed out. Networking has also picked up in corporate activities. Specifically, companies have used the introduction of personal computers as an opportunity to install local area networks (LAN) and have begun promoting business process reengineering (BPR), focusing on improving the productivity of white-collar workers. Moreover, attention has been drawn to increasing efforts to implement electronic data interchanges (EDI) that commence at light speed (CALS) into inter-company networks in an attempt to improve operational efficiency and precision, and cut costs.

The type of networking in corporate activities represented by EDI and CALS has the potential impact to alter existing organizations and the outline of the industry. Signs have begun to appear that the assembly industry and other companies have begun to rethink existing parts procurement systems and other *keiretsu* structures in conjunction with networking. Progress in corporate networking will bear watching for its potential impact on a variety of industry sectors.

(Yoshida Kentaro, senior economist)

Cellular and Car Phone Subscribers



Source: Ministry of Posts and Telecommunications