

Chapter VII

Structural Changes and Regulatory Challenges in the Japanese Telecommunications Industry

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ABSTRACT

The structure of the telecommunications industry in Japan has been changing revolutionarily. The changes are observed in five phases: (1) development of competition into the local call market, (2) diffusion of broadband Internet and development of inter-platform competition, (3) rapid growth of cellular services and Internet access via cellular, (4) decline of POTS (plain old telephone service), and (5) structural changes from vertical integration to layered structure and development of media convergence. These changes require total review of the regulatory framework that was formed in the POTS era. In this chapter, I propose to review: (a) essential facilities regulation, (b) a universal service system, and (c) a flat-rate pricing system of the Internet to solve problems that are likely to distort the new industry structure and would stress the importance of a regulatory system that is competition, technology, and content neutral.

INTRODUCTION

The structure of the telecommunications industry in Japan has been changing revolutionarily. Competition has developed from the long distance call market into the local call market. New competitive carriers started to offer subscriber telephone services by leasing dry copper from NTT-East and NTT-West (hereafter called ‘NTT local companies’) that was mainly used for DSL

(digital subscriber line) services. The diffusion of the broadband Internet is impressive. FTTH (Fiber to the Home) has started to grow following spectacular growth of DSL. According to a 2005 International Telecommunication Union (ITU) report, Japanese broadband Internet service is the fastest and cheapest in the world. The changes are not limited to quantity. The nature of competition is changing from intra-platform to inter-platform as the broadband Internet is offered on various

platforms. The diffusion of cellular services, especially Internet access via cellular and 3G (third-generation) services, has been remarkable. Cellular carriers are competing to offer various services on terminals including IC card functions, music distribution functions, and digital TV. With the rapid growth of broadband Internet, IP telephony has diffused.

The diffusion of broadband Internet accompanying the deployment of IP telephony and cellular services has been drastically decreasing POTS (plain old telephone service) carriers' revenues. It has become clear that the universal service system based on POTS is no longer sustainable. However, Internet traffic has been continuing to increase due to the diffusion of IP broadcasting services and peer-to-peer exchange of moving pictures between users. It has also become clear that the present simple flat-rate pricing system of the Internet is no longer sustainable due to rapid increase in Internet traffic.

With the diffusion of the Internet, especially that of the broadband Internet, the structure of the information-communications industry is changing from vertical integration to a layered structure. Telecommunications and broadcasting, which have developed as separate industries, are converging.

These changes require urgent reform of regulatory systems that were designed in the POTS era. This chapter focuses on three matters that risk distortion in industry structure in the near future. They are: (a) essential facilities regulations designed for POTS, (b) a universal service system for POTS, and (c) a flat-rate pricing system for broadband Internet. Although reform of regulations—including the copyright system that has discouraged the development of IP broadcasting to respond to the development of media convergence—is also urgently required, reform involves not only economic and legal aspects but also cultural discussions. Therefore, I will focus on the above three topics in this chapter.

This chapter is organized as follows. First, a brief history of Japanese telecommunications regulatory reform is given as background information. Second, the Japanese telecommunications market

is analyzed to throw structural changes into relief. Third, viability of the application to the broadband Internet market of the essential facilities regulation to promote competition in the POTS market is discussed. I will argue that the imposition of an obligation to offer dark fiber only on incumbent NTT local companies will distort competition in the broadband Internet market and retard the development of facilities-based competition. Fourth, the recent reform of the Japanese universal service system is analyzed, and I will propose the reform of the present universal service that ensures only POTS to a new system that ensures access to voice communications services regardless of the technologies deployed. Fifth, the 'tragedy of the commons' on the Internet is analyzed, and the introduction of a new charging system based on the quality guarantee and transmission speed is proposed. Finally, as concluding remarks, the importance of designing a new regulatory system that is neutral to competition, technology, and content is emphasized by briefly touching upon the copyright problem.

BACKGROUND

The telecommunications industry is going through drastic structural changes with the rapid diffusion of the Internet and mobile services. Regulations of POTS assume that physical, service, and content layers are closely associated and competition is basically within the metallic subscriber line platform. Contrary to this, regulation of the Internet and 3G mobile services should be based on a layered approach, as links between layers are cut off and inter-platform competition becomes significant. Past regulation that mainly focused on the control of market power of incumbent carriers in local access markets should be restructured to accommodate the new structure. Most regulations in the telecommunications industry were basically justified by the existence of market failure. There are three main reasons behind market failure in the telecommunications industry¹:

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