Chapter VI

Global Service Provider Strategies and Networking Alternatives

Ron Landi
WorldCom, USA

Mahesh S. Raisinghani
University of Dallas, USA

ABSTRACT

Deregulation and liberalization of the telecommunications markets has led to tough international competition. This chapter presents well-established approaches used by large telecom service providers in assessing the technical and market forces impacting their network planning and strategies. This paper, in the form of a tutorial, takes the reader through the assessment and analysis processes dealing with the requirements, design and implementation issues facing global communications carriers today. Four generic telecommunication network models (varying based on the degree of capital intensity required) are presented to demonstrate that a strategy of employing these generic models to appropriate settings generates cost savings and network efficiencies. A specific case analysis conducted by the global communications carrier for a regional network in Italy is included that discusses strategic planning for the provision of new data and Internet services, and assesses alternative network designs and technologies to provide optimized solutions and service delivery.

INTRODUCTION

The deregulation in the European telecommunication markets since the beginning of the 1990s and the liberalization of telecommunication deals across state boundaries has brought about significant changes in the communications industry. On February 15, 1997, in a resolution of the 68 countries of the World Trade Organisation (WTO), it was decided to prepare the ground for global competition gradually. (Kollmann, 2000). This is similar to the competitive situation in other countries where deregulation and other telecom-focused government actions are rapidly changing the industry landscapes and extending key aspects of telecommunications beyond regional and national boundaries into the global arena. The boundaries that have previously defined the telecom competitive landscape in the recent past, such as long-distance or toll-service provider vs. incumbent local (PTT) service provider vs. competitive service provider (see Appendix A for list of acronyms), are blurring in a market being defined by mergers, acquisitions and joint ventures (Martin, Deskey, and Pihl, 1999). In addition, distinctions between local and long-distance services, LATAs, and voice and data services are gradually breaking down. At the same time, there is a growing trend away from traditional voice services to data-centric IP-based services. The communications customer is also becoming more sophisticated with new technical and service requirements, while the traditional markets and segments are fast changing. Telecommunications end users are increasingly savvy, gaining insight into provider capabilities and raising their expectations of provider performance as a result (Martin et al., 1999). Customer satisfaction and loyalty depend more than ever on the carrier's ability to understand and meet these changing requirements. This tutorial describes some industry-established processes and presents a structure used by global service providers to assess and analyze their telecommunications networking require-ments and alternatives. Large telecom carriers, due to the inherent technical and market forces they work in, often use the approaches outlined and presented in this article. The processes and structures are very important because they help the carrier identify and understand regional characteristics of a given locality (i.e., country or state). It also helps in assessing city types, which may vary by functionality and market potential. The carrier needs to consider other key attributes such as: demand for voice and data services; volume of traffic staying and leaving varied parts of the country network; geometry of network elements and facilities; and competition. As the global carrier considers entry into new markets, its strategic planning should include: analysis of target countries; assessment of regional transport networks connecting targeted cities; and assessments of the metropolitan (metro) transport and local loop network requirements within targeted cities. These requirements will be driven by the local market conditions, and the carrier's requirements for network build and deployment.

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