

Business Planning and Migration to 3G

Abstract

O. Gonzalez Soto

- Within the current expansion of technologies and Telecom solutions, a variety of requirements are posed to the network planners and designers that expand their traditional requirements. Paper analyzes those requirements for the today competitive environments in the decision making process for network solutions and services and in particular the evolution from existing mobile networks towards 3G with the corresponding dimensioning and business modeling to compare alternatives and optimize evolution in a competitive environment.

- When a wide variety of voice, data and multimedia services is introduced in the network, a key issue in the resources dimensioning is the proper modeling for the radio access as a function of the coverage by frequency, voice traffic capacity, service data rates and sustained bandwidth rate demand as all those factors will determine not only the equipment sizing but also the cell design structure as obtained from the multi-criteria design. Those dimensioning factors have different effects in the urban, suburban, rural and hotspot scenarios. Also for the IP traffic flows, a new dimensioning through the radio and core network segments should be considered in order to assure a given GoS.

Architectures and migration paths are modeled in order to evaluate costs, revenues, cash flows, Net Present Value of the network and financial ratios due to voice and data services for different migration alternatives and paces. Illustrations cases are given for the type of business results that are to be evaluated in the case studies as a function of the different geo-scenarios and conclusions are derived on the business scenarios in order to support the definition of an adequate migration strategy.