

REGULATION OF NGN AND BROADBAND COMMUNICATIONS

The traditional fixed telephone networks of public electronic communications network and service providers from the Republic of Moldova are based on circuit switching (also known as TDM-Time Division Multiplexing transmission) between subscriber lines and on a hierarchic structure of switches according to different call zones. This telephone network co-exists concomitantly with one or more data transport networks (such as the network used for DSL broadband service provision).

The issues related with the transition to an NGN (Next Generation Network) architecture of the fixed network core is part of the cost reduction, by transition to a single IP-based infrastructure for transportation of any type of flux, voice or data and for any access technology (DSL, FTTH, RTC, WiFi etc.). The major impact of the transition to an NGN architecture for switched telephone networks consists in the fact that the traditional switch is split up into two distinct logical elements: one called media gateway meant to ensure the transportation and another called soft switch for ensuring call control. This evolution will produce gains in terms of performance and cost optimization, moreover it will enable the provision of new services.

A number of providers in the Republic of Moldova, including S.A. „Moldtelecom” have already tested and started to introduce NGN architectures.

The providers that have launched the migration to NGN architectures or are just about to implement NGN solutions in their networks are subject to the regulatory framework developed by the National Regulatory Agency for Electronic Communications and Information Technology (the Agency).

After the Law on Electronic Communications entered into force on 14.03.2008, the Agency worked out and published the Regulations on Interconnection which includes conditions and obligations of interconnection and access to the local loop.

The currently existing regulatory environment is influenced by the fact that many providers migrate to IP voice interconnection.

With the view of enhancing the development of IP-based electronic communications services, the Agency proposed modifications to the National Numbering Plan, consisting in establishing certain blocks of location-independent numbers and elaborated special license conditions with reference to the use of such numbers in electronic

communications networks for the provision of voice services. The conditions also specifically provide for network interconnection.

The interconnection environment must be associated with rules of security in the traffic exchange between different providers, rules that are currently guaranteed by the use of advanced protocols, including the SS7 protocol. In this respect, the Agency, by its Decision, required that providers of public fixed electronic communications services, starting with 01.01.2010, proceed from DSS1 to SS7 signaling or another more advanced system, accepted by the providers participating in the interconnection.

The use of SS7 signaling protocol also enables the provision of both value-added „Premium rate“ and „Freephone“ services. In order to give impetus to the development of these services the Agency worked out, approved and made publicly available the Decision on regulating the provision of services via access numbers free of charge for callers (Freephone) in public electronic communications networks and special license conditions for the use of such numbers. Also, the Agency approved and made publicly available special license conditions for the use of numbers for special tariff services (Premium rate) and issued the Decision on regulating the access to special tariff services (Premium rate), provided in public electronic communications networks. These Regulations also contain special provisions pertaining to the use of SS7 Protocol.

Together with the evolution to IP technologies, the current regulatory environment may be significantly influenced by numerous factors, including service quality.

An interconnected provider must require a quality level of the service provided by the interconnecting provider. In this respect and also being guided by the international and European standards and recommendations, the Agency established minimal quality indicators and considerations regarding the measurement of their quality parameters for public electronic communications services, provided via IP networks and broadband Internet access services.

For the purpose of broadband service development, the Agency, in 2008, issued 3 licenses for the use of radio frequencies and channels in the provision of 3G electronic communications networks and services and respectively, developed and issued license conditions regarding the use of frequencies and service provision, which also include interconnection obligations.