

Commerce Commission

Study into Next Generation Network issues

1. Commencement of study

The Telecommunications Act 2001 (“the Act”) as amended in December 2006 empowers the Commerce Commission (“the Commission”) to proactively conduct inquiries, reviews, and studies into any matter relating to the telecommunications industry or the long-term benefit of end-users of telecommunications services within New Zealand¹.

This power enables the Commission to take a strategic view of any matter which relates to the telecommunications industry.

The Commission has determined to commence a study under section 9A of the Telecommunication Act into Next Generation Network issues. The focus will be on raising the level of understanding of the Commission, industry and the wider community of key technological developments that will emerge during the next five years, and their impact on the commercial and competitive environment for telecommunications services.

All interested persons will have an opportunity to contribute to the study.

The Commission will publish a report at the conclusion of the study.

2. Next Generation Network study definition

The Commission proposes to use the International Telecommunications Union definition of Next Generation Networks:

A Next Generation Network (NGN) is a packet-based network able to provide Telecommunication Services to users and able to make use of multiple broadband, QoS-enabled transport technologies and in which service-related functions are independent of the underlying transport-related technologies. It enables unfettered access for users to networks and to competing service providers and services of their choice. It supports generalised mobility which will allow consistent and ubiquitous provision of services to users. [ITU-T Recommendation Y.2001 (12/2004) - General overview of NGN]

The NGN is characterised by the following fundamental aspects:

- *Packet-based transfer*
- *Separation of control functions among bearer capabilities, call/session, and application/service*

¹ Section 9A(1)(b)

- *Decoupling of service provision from transport, and provision of open interfaces*
- *Support for a wide range of services, applications and mechanisms based on service building blocks (including real time/streaming/non-real time services and multi-media)*
- *Broadband capabilities with end-to-end QoS and transparency*
- *Interworking with legacy networks via open interfaces*
- *Generalised mobility*
- *Unfettered access by users to different service providers*
- *A variety of identification schemes which can be resolved to IP addresses for the purposes of routing in IP networks*
- *Unified service characteristics for the same service as perceived by the user*
- *Converged services between Fixed and Mobile networks*
- *Independence of service-related functions from underlying transport technologies*
- *Support of multiple last mile technologies*
- *Compliant with all Regulatory requirements, for example concerning emergency communications and security/privacy, etc.*

The study will consider the issues relating to both the IP based core networks and their interconnection (NGN) and the issues relating to the IP based Next Generation Access Networks (NGANs) connecting end users to the NGNs.

3. Scope of study

Transition from the existing mixed PSTN and IP environment to a full NGN environment gives rise to issues relating to:

- service design and delivery
- investment, efficiencies and cost savings
- technical architecture and network operations
- regulatory and competition frameworks.

Some of these issues have been reflected in industry response to Telecom's cabinetisation plans.

The study will include discussion on:

- interconnection and peering requirements in an NGN environment;
- market and technology trends and developments, highlighting the effect these may have on industry and network structures
- the likely access products and services that will be available in an NGN environment
- the applicability or otherwise of legacy commercial and regulatory models in the new NGN environment
- other areas that may raise future competition and regulatory issues.

4. Aims of the study

The overall aim of the study is to develop a strategic view on NGN issues.

The Commission is entering into this process with no assumptions about the requirement for, or scope of likely regulation, and will be guided by information and submissions that arise during the process.

The Commission expects to the study will:

- Clearly identify the issues where there is consensus, and where and how views diverge
- Provide a strategic assessment of the likely impact of technological change on market structure and competition
- Provide guidance as to where regulatory intervention is unlikely to be warranted and circumstances where regulation may be considered.

5. Interaction with key stakeholders and other processes

In undertaking this study the Commission is mindful of the other processes in which industry is engaged. The Commission wishes to conduct its study in an efficient way to minimise workloads and avoid duplication.

There are three key NGN processes currently underway:

5.1 Telecom Operational Separation undertakings

The undertakings between the Minister and Telecom require Telecom to consult on, as a minimum:

- the transition of PSTN interconnection for voice services to IP interconnection for voice services
- the introduction of IP interconnection for virtual private networks

and requires Telecom Wholesale's establishment of a comprehensive industry-wide NGN consultation programme.

5.2 The Telecommunications Carriers' Forum (TCF)

The TCF has established a Working Group to consider NGN issues. As with all TCF Working Groups, the Commission has been invited to participate as an observer in this process.

5.3 InternetNZ

InternetNZ has set up the InternetNZ External Peering Group to work on issues relating to internet peering and interconnection in New Zealand.

5.4 The Commission's Study

The Commission will take account of the work done by each of the above groups, all of which involve public consultation in their own right.

The Commission's study will take a broader view of NGN developments than these three processes. In addition, there are other interested parties who are not involved in these existing processes. The Commission's study will ensure that the full range of views and issues are taken into account.

6. Proposed phases

The Commission proposes the following phases to its study and indicative timelines:

Proposed Phase	Activity	Timelines
Phase One	<ul style="list-style-type: none">▪ Issue draft Commission Terms of Reference▪ Industry written responses▪ Release of Terms of Reference	6 March 2008 29 March 2008 May 2008
Phase Two	Set up <ul style="list-style-type: none">▪ Consultation, research and information gathering▪ Workshops▪ Conference	May to Oct 2008 Sept, Oct 2008
Phase Three	Draft report, consultation	December 2008 to Feb 2009
Phase Four	Preparation of final Commission report	Mar 2009
Phase Five	Release of final Commission report	April 2009

Dated: 9 May 2008

Dr Ross Patterson
Telecommunications Commissioner