

SUBMISSION to: Commerce Commission

From: *Local Government New Zealand*

Subject: Discussion Paper on Next Generation Networks

16 February 2009

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## INTRODUCTION

1. *Local Government New Zealand* appreciates the opportunity to comment on the Discussion Paper into Next Generation Networks (NGN). This submission outlines a general local government view based on the questions provided in the document. We also request the right to review positions stated and to add additional information into this review process following the NGN Forum 26/27 February.
2. Local Government New Zealand makes this submission on behalf of local government and representing the interests of 12 regional councils and 73 territorial authorities of New Zealand. Councils have significant interest and involvement in various aspects of the telecommunications network and its access including regulatory functions, infrastructure investment, community participation and the application of digital technologies.
3. This submission has been prepared on the basis of providing comment on particular aspects of the NGN with an emphasis on the layers 0 and 1 infrastructure and those components that manifest themselves above ground in the form of cabinets and masts for example.
4. Local Government New Zealand's submission was prepared from knowledge gained and involvement with council interests on the following:
  - The work of the local government ICT Advisory Group
  - Findings from the local government Broadband Forum in February 2008
  - Findings from regional broadband workshops in August 2008 and the BIF process
  - Development of a Rural Broadband Strategy framework
  - Development of the Digital Communities Action Plan
  - Membership on the Digital Strategy Steering Group and Digital Development Council
  - Participation in ICT and Geospatial strategy and project groups of relevance to local government

There has been no formal membership endorsement of this submission.

5. Local Government New Zealand acknowledges that individual councils and local government associations such as ALGIM (Local Government Information Managers) and LGOL (Local Government On Line) are likely to have particular views also. Local Government New Zealand encourages the Commerce Commission to carefully consider all council related submissions.

#### Question 1

What are your views on the approach to development of the market framework and industry consultation that should be considered in New Zealand?

*Local Government New Zealand* supports a collaborative industry-government stakeholder group to develop and facilitate a deployment framework for NGN.

Such a group would include relevant government agencies, local government, user group interests, utilities associations and the telecommunications sector. The stakeholder group would agree on issues and solutions related to access, technical requirements, interconnectivity, cost sharing and other business considerations. Regulation would be limited to addressing areas where there was not stakeholder agreement and commitment to NGN deployment and access; and where the economic and social interests of New Zealand were deemed paramount.

#### Question 2

Do these core principles provide a useful underpinning for considering NGN issues, or whether they should be modified or supplemented?

These core principles are supported. The principles of "equity of access" should be added however. Whilst a focus on industry self regulation and incentivising investment is desirable, international experience demonstrates that there needs to be recognition of all New Zealanders having access to NGN.

Where there is no business case for the deployment of such networks, the economic and social benefits derived from rural New Zealand should be considered and public investment to NGN access incentivised.

#### Question 3

Are there additional elements that have to be taken into account when defining NGN? If so, what are the additional elements, why should they be taken into account and what impact do they have?

N/C

#### Question 4

What do you think IMS fulfils? Is it necessary, or are there other ways of fulfilling its function? What are the implications of this layer for the future of NGNs?

N/C

#### Question 5

Where and how should the balance between coverage and speed be struck?

Communities generally accept that equity of access does not translate to equity of pricing and speeds. Commercial models will determine where NGN roll out is less viable and consideration to reduced speeds and alternative solutions will be required.

*Local Government New Zealand* believes that there is sufficient information available to undertake analysis of underserved areas in New Zealand which would form the basis of any compromise between coverage and speed. Information sources include the State Services Broadband Map and Broadband Investment Fund applications.

Although determination of a minimum speed for NGN is supported, this should not be prescriptive to the extent that communities should not accept higher speeds. Indeed communities should be given the option of meeting cost differences between a commercial, low speed solution and a much higher speed deployment.

Also there will be instances where there is “inactive” Telecom fibre in the ground in remote areas that is awaiting a demand threshold before services are provided. Incentivising or regulating access to this fibre network should reduce the scale of the coverage area that might have to accept a lower speed:- obviously subject to a party wishing to provide services over this network.

Thus *Local Government New Zealand*'s current assessment is that with incentives and/or regulation, compromise on coverage and speed would only need to apply to very remote locations where the cost effective technology solutions had physical speed limitations. eg. satellite

Question 6

Is industry consultation necessary on network design for NGN?

Industry consultation on network design is supported per considerations in *Question 1*.

However network design should be driven by economic and social objectives for New Zealand, and a principled approach rather than what the industry deems appropriate to deliver. There are increasing examples of collaboration with and between the private sector interests. Examples include the Broadband Friendly protocols agreed between local government and TCF and the ICT Industry Group.

Sector agreement on what the NGN will deliver and to whom and how, will determine the network design. Industry needs to be party to this process.

Question 7

- i. How does the deployment of NGN change bottleneck characteristics?

N/C

- ii. Is access to the infrastructure still an issue? If not, what other elements could become important?

Whilst regions continue to develop alternate broadband networks rather than access existing infrastructure, one has to assume that access to existing infrastructure is challenging, whether from a technology or cost perspective. In terms of layer 1, local government supports an open access approach to help reduce access to the road corridor and promote competition over the network, not competition for the network.

Question 8

Part of the BIF is targeted at deploying open access urban fibre networks and the Government has indicated that it will set aside \$1.5 billion for open access FTTH rollout that will reach 75% of the population. What is your understanding about what is meant by open access?

Local government's primary interest in telecommunications networks is at Layers 0 and 1 (i.e. ducting and dark fibre in the ground) and masts. Thus open access definitions will tend to be confined to ducting and dark fibre.

#### Question 9

What are the areas that are not likely to be commercially funded?

Identifying specific areas that are unlikely to be commercially funded will be difficult because:

- Agreed speeds and technical solutions are unknown at present, therefore businesses cases unable to be accurately assessed
- Infrastructure deployment may involve different funding models eg. traditional telco vs lines company models. Thus the degree of area penetration may differ across regions
- Some remote locations may have already invested in suitable fibre technology
- Terrain may pose difficulties in addition to low demand for services

It is generally accepted however that there is no business case for private investment in broadband/NGN for rural and some outlying provincial centres of New Zealand. Such areas should be readily identified based on the levels of service available to these communities, higher usage costs and access rates.

#### Question 10

- i. What do you believe is needed to drive broadband penetration and speed in the future in New Zealand?

N/C

- ii. Do you agree that cost savings are one of the core drivers for NGN deployment in New Zealand?

Yes, both from a demand and supply side.

Demand side - there are currently pricing and usage barriers that will impact on the need to deploy NGN if current models are to be retained. For example the use of capping assumes that broadband is a finite resource like water. Clearly this is not the case. The removal of caps will drive usage, innovative solutions, greater content and ultimately demand.

Supply Side - reducing the cost of deployment is acknowledged as promoting a better case for infrastructure investment over a greater area. Deployment costs over which councils have interest and influence include:

- Microtrenching using new techniques and reduced size of conduit and cable
- Requirement to have open access ducting in all new land developments
- Requirement to include network conduit in all future buildings
- Ability for property owners to install their own cable from roadside connection points to buildings

At present there is some reluctance by the local government sector to become too prescriptive in their broadband deployment activities. One reason is that the activities of councils are largely determined through the Local Government Act (LGA 2002) where the definition of infrastructure excludes telecommunications. If NGN is to be treated as core infrastructure alongside roads, energy and water, then amendments to the LGA2002 would be helpful in mandating councils to take greater account for NGN deployment and ease the path for installations. This would remove much of the need for national legislation relating to utilities.

iii. How will competition enable innovation?

N/C

Question 11

Many are of the view that the pipes should be built first and services will then follow. Others believe that a lack of services and demand for broadband services are an issue. What is your view?

There are sufficient international example where early investment in high speed broadband has driven innovation, productivity gains and wider economic benefits. Analysis of such good practice would indicate that the case for investment in the base infrastructure is warranted given:

1. the lead time required to build the infrastructure - generally years
2. rapid technology and use applications requiring "bigger pipes"

If New Zealand wishes to maintain its reputation and an early adopter of technology and innovative in commercial areas, then having the core infrastructure for rapid advancements to new technology is essential.

Question 12

Is content ownership or access to content a hindrance to the development of broadband in the New Zealand market?

N/C

Question 13

How is the nature of New Zealand's subscription TV market likely to impact the development and take up of NGN in New Zealand?

N/C

Question 14

Is the service scenario approach seen as a useful one for the purpose of studying the New Zealand NGN market, and if so what would be the elements of practical and relevant scenarios?

There are lessons to be learnt from submissions to Digital Strategy 2.0 where there was criticism of goals not being aspirational enough. Based on the scale and scope of applications to public broadband investment programmes, many communities have formed a view that the market is unlikely to meet their future requirements within the immediate term either. Councils too have to plan for future proofed infrastructure and migration to new infrastructure often requires major investment rather than a staged progression.

Thus a migration to NGN services may require a significant step change in investment and rollout to accelerate to Scenario 3 as presented.

Question 15

What other implications for the value chain of traditional operators and suppliers can be expected when moving towards an all-IP environment?

N/C

Question 16

What other effects on the competitive environment could be expected when rolling out next generation networks?

An additional effect that potentially increases competition is the reduction of infrastructure deployment costs through overhead and microtrenching techniques.

Question 17

How do these effects influence the roll out of next generation networks and innovative services?

Reduced deployment costs changes the business model in terms of coverage and therefore customers accessed. Focus would shift to the promotion of services rather than investment in the layer 1 network.

Question 18

To what extent is symmetric speed or capacity necessary to provide future services to customers?

N/C

Question 19

What are the most important and significant drivers of bandwidth demand?

Question 20

Is a differentiation of classes of services an appropriate approach for solving QoS degradation for end-to-end services?

N/C

Question 21

What issues and effects could possibly arise due to a differentiation of services classes?

N/C

Question 22

Will the approaches to pricing change for NGN, particularly where different classes of service are offered?

N/C

Question 23

Beyond the costs for NGN core, access, CPE and drop lead, are there additional costing elements to be taken into account? If so, what is their likely impact?

N/C

Question 24

Do you agree that in an NGN environment, a higher proportion of cost of the network is shared in common cost? What in your view is the best method for allocating costs, i.e., should it be based on volume, minutes or new drivers such as capacity?

Local Government is in the relatively early stages of determining cost sharing practices for utilities networks. Although the issue of cost sharing has been raised in work related to NES (Telecommunications) and the Road Opening Notice for utilities companies, councils have generally been reluctant to take on any facilitation role for cost sharing. This is particularly the case in the absence of regulatory guidelines or an industry agreement.

Where councils own and/or manage the duct as a result of public investment in open access infrastructure, any cost sharing arrangements would need to be included in regulatory requirements to use existing ducting. At present there is no requirement for a provider to use existing open access infrastructure so cost sharing arrangements would tend to be by negotiation at a regional or local level. Clearly some industry costing norm is required for NGN if one of the deployment cost strategies is to share network infrastructure.

Question 25

What is your view on the benefits and constraints of PON (Passive Optical Network) and P2P (Point to Point)?

N/C

Question 26

Do you agree with the generic definition of the terms interconnection and access? If not, what would be the alternative definitions?

N/C

Question 27

Do you agree with the pricing concepts outlined for NGN? What other pricing mechanisms could be applied?

N/C

Question 28

What additional factors have to be taken into account with regards to point of interconnection in an NGN environment and what is their effect?

N/C

Question 29

What are the implications for these issues in New Zealand? Are there specific regulatory issues anticipated?

Question 30

What additional factors have to be taken into account and what is their effect?