

AT&T Comments on the European Regulators Group Consultation Document on Regulatory Principles of IP-IC/NGN Core

AT&T Inc. and its affiliates that provide communications services to, from and within European Union ("EU") Member States (collectively "AT&T"), are pleased to provide the following comments on the "*ERG Consultation Document on Regulatory Principles of IP-IC/NGN Core*," ¹ issued by the European Regulators Group ("ERG") on 3 June 2008 (the "*Consultation*").

As a competitive provider of business connectivity and managed network services in EU Member States, and as a leading provider of bilateral connectivity services between the US and all the Member States, AT&T has a strong interest in policy results that maximise investment, innovation and customer benefit. In this submission, AT&T is limiting its comments to the ERG's statements regarding quality of service (QoS), as well as the specific questions on QoS that are raised by the ERG in section C.4.2 of the *Consultation*.

The ERG states that National Regulatory Authorities (NRAs) should have the authority to recommend or even set minimum levels of quality of service if this is unavoidable to achieve sufficient end user service quality.² The ERG therefore supports the European Commission's proposal, in the context of the current Review of the EU regulatory framework for electronic communications, to amend the Universal Service Directive (2002/22/EC) by including a new provision (Article 22, new paragraph 3) that would allow the Commission to adopt technical implementing measures concerning minimum quality of service requirements to be set by the NRA on undertakings providing public communications networks. Unlike the Commission proposal, the ERG believes that this power should be entrusted directly to NRAs and should not be dependent on the Commission first adopting technical implementing measures.³

 $^{^{1}}$ (ERG (08) 26rev1)

² Consultation at page 14.

 $^{^{3}}$ Id. at page 16



1. A New Power for NRAs to Impose Minimum Quality of Service <u>Requirements is Not Justified</u>

AT&T does not support the proposed new power for NRAs and asserts that open and competitive markets are the best way to ensure quality of service. The quality of Internet network transmission inherently is highly variable and depends on several factors not entirely within the control of an individual operator. Internet traffic traditionally has been delivered on a "best efforts" basis that deliberately avoids any minimum guaranteed level of service, and ensures mutual cooperation among many actors in the Internet ecosystem. An effort to enforce minimum quality levels for Internet transmission not only would be a virtually impossible task for any regulator, but also likely would entail huge and costly service provider reporting burdens that would outweigh any resulting benefit. The requirement also may disrupt the existing market based model of mutual cooperation on the Internet by placing the entire burden of ensuring QoS on network operators, while shifting responsibility away from other parties within the Internet ecosystem whose behavior also can impact QoS. NRAs rather should prefer the market-based approach in place now that optimises service quality by encouraging consumers to make price and quality trade-offs among competing service providers.

The global Internet is an interconnected "network of networks," a complex combination of over 200,000 individual IP networks that may use multiple routes to deliver the multiple packets comprising a single VoIP call, telemedicine consultation, email, or video download to their ultimate destination. The NGN core networks currently being constructed by carriers around the world are a part of that ecosystem. The wide variation in the quality of Internet transmission – familiar to any Internet user – may result from, among other things, limited network capacity in the local access, regional or core backbone portions of the Internet, the ongoing explosive growth in Internet traffic, and the increasing use of real-time, interactive services like VoIP and on-line gaming that are much less tolerant of delay and jitter (*i.e.*, variations in delay), or video streaming and Internet TV that require much greater Internet bandwidth.



The application of any minimum QoS requirement to these previously unregulated Internet traffic arrangements would entail significant practical difficulties for any regulator. This applies equally to carriers' new NGN core networks as it does to traditional networks. As noted above, the traditional basis of Internet traffic delivery is "best efforts" service with no guarantee of service levels. Packet-loss, jitter and delay resulting from network congestion can be common Internet occurrences when there is a spike in traffic that exceeds available network capacity, and that overwhelms the delay/jitter sensitivity of an application. In view of the global scope of the Internet, the nature of its underlying technology and the highly dynamic, constantly evolving Internet environment with growing numbers of users, applications and services with increasing performance requirements, any attempt to apply minimum quality levels to Internet traffic would be a monumentally complicated, protracted and likely ultimately fruitless undertaking.

There are a multitude of factors that impact upon the customer experience, including, but not limited to:

- The processing power/speed (both in terms of hardware and freedom from viruses and other malware) of the end user PC;
- The quality of the in-home physical connection between the PC/router and the ISP access modem ;
- Whether or not a router is operating and whether there is in-home contention for use of the access line and, in the case of wireless routers, whether there is signal interference affecting throughput;
- Performance of the access connection between the customer premises and the edge of the Internet. This is a shared resource that is engineered to handle a particular maximum combined load. If usage temporarily exceeds that maximum -- whether from too many simultaneous attempts or from continuous heavy usage by particular subscribers -- performance will degrade;
- The instantaneous load on the local/regional ISP and the ability of that network to handle the load presented;
- The instantaneous load of the backbone ISP and its ability to handle the level of load presented ;



- The adequacy of the content provider's connection to the Internet;
- The performance of the content provider's hosting infrastructure.

It is hard to conceive how QoS obligations could be imposed on all these components, while placing requirements on only certain elements, such as the NGN core networks, will not improve performance for the end user. It will only raise cost and limit innovation. The service provider reporting requirements alone would be hugely burdensome and would adversely impact the growth of this critical global resource.⁴ And even if NRAs managed to exert some control over quality of service on the NGN core networks within their jurisdiction, this could not address the quality of communications that pass on to other networks across the globe. Rather than attempt to address service quality issues by authorizing burdensome regulation, NRAs should continue to promote market-based approaches by encouraging increased competition among Internet providers.

2. <u>Existing Measures Are Sufficient to Address Potential Anticompetitive</u> <u>Behaviour</u>

The European Commission has concluded that the existing provisions of the EU regulatory framework could be used to prevent any blocking or degradation of services and to impose interoperability requirements.⁵ The Commission properly concluded that competitive market forces are sufficient to protect these principles, together with existing regulatory tools and remedies, and there is no evidence of a need for new legislative requirements concerning this topic. In the *Consultation*, the ERG also appears to acknowledge that existing tools are sufficient to prevent any anticompetitive behaviour:

⁴ The U.S. Federal Communications Commission declined in 1997 to impose quality of service biterror reporting requirements for U.S. local exchange carrier high speed data networks because of concerns that the carrier costs to undertake such reporting would far outweigh any resulting public benefit. *Policy and Rules for Dominant Carriers and Amendment of Part 61 of the Commission Rules to Require Quality of Service Standards In Local Exchange Carrier Tariffs*, CC Dkt. No. 87-313, Memorandum, Opinion & Order, 12 FCC Rcd. 22,091, ¶ 11 (1997). The much greater traffic and more extensive backbone networks of today's Internet would impose very much greater reporting costs. ⁵ Commission Staff Working Documents dated 28 June 2006: *Proposed Changes*, SEC(2006) 816, at Section 6.4



"In order to prevent any anticompetitive behaviour from SMP operators that might intentionally degrade quality of the interconnection with some specific networks, NRAs can use existing tools to impose non-discrimination obligations..."⁶

Absent any SMP, NRAs should rely on competitive market forces and customer choice to ensure quality. AT&T notes that the ERG is concerned that the Commission's proposal to delete Article 5, para 4 of the Framework Directive (2002/21/EC) would mean that NRAs would no longer have the power to intervene on their own initiative to ensure end-to-end connectivity/interoperability in an NGN environment where there is no SMP. AT&T agrees with the ERG that it would be legitimate for this existing power to be retained, but it should not be extended, as the ERG suggests, to empower NRAs to set on their own initiative minimum quality of service requirements on operators of public communications networks. As described above, quality of service is best ensured by a competitive market, and not by prescriptive rules that try to predict future engineering decisions in a multi-party networking environment.

3. <u>Network Management is Crucial to Ensuring Quality of Service</u>

Intelligent network management techniques are critical to ensuring quality of service amidst unprecedented traffic growth. As Internet usage patterns evolve and become more bandwidth-intensive with the proliferation of high bandwidth applications and the ongoing explosion in Internet traffic, the extent of required network upgrades, and the resulting impact on consumer rates, will depend, in large measure, on the degree of network management, including traffic prioritisation, that network operators are allowed to exercise. In particular, managed networks with traffic prioritisation, and efficient cost-distribution agreements involving content and application providers, are likely to result in better quality of service and lower end user consumer fees. However, regulatory intervention to restrict network providers' ability to differentiate their service offerings or pre-empt new service and pricing options would likely result in the use of inefficient, sub-optimal arrangements that

⁶ Consultation at page 19.



would raise Internet access prices, reduce incentives to invest in network capacity and performance and limit competition. Such regulation would harm the interests of both users and service providers and limit the future growth of the Internet. Rather than seeking powers to impose minimum quality of service requirements, regulators should focus on ensuring that network operators have the flexibility to manage their networks intelligently, as that will provide the best guarantee of quality of service.

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AT&T Response to Question 9 (section C.4.2 of the Consultation)

a) Do you consider sufficient to potentially regulate minimum quality (Art. 22 USD new para 3)?

As described above, there is not a justification for the proposed power that would enable NRAs to impose minimum quality of service requirements on providers of public communications networks.

b) Does this require additional regulation at the wholesale level?

As described above, existing provisions of the EU regulatory framework are sufficient to prevent any anticompetitive blocking or degradation of services. AT&T agrees with the ERG that the existing power of NRAs to impose end-to-end connectivity/interoperability requirements should be retained.

c) What is your opinion on ERG's consideration that the power to set minimum quality of service requirements (both, on end-user and network level) should be <u>entrusted directly to NRAs?</u>

As described above, a power to impose minimum quality of service requirements should not be given to NRAs, either directly or indirectly.

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AT&T is greatly concerned that the EU's well-established market-based approach to consumer protection could be severely compromised by the proposed new power for NRAs to set minimum quality of service requirements, particularly when there is no commonly identified market-place failure that is occurring, and no empirical understanding of the consequences of replacing market forces with regulatory prescriptions. AT&T therefore believes that market forces should be allowed to continue doing what they do best - build consumer value - and any regulatory intervention should be limited to enforcement remedies if and when a market failure arises.

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