**Response to the document 'DRAFT REGULATORY AND LICENSING GUIDELINES FOR INVITATION OF PROPOSALS/OFFERS FOR ISSUING LICENSE FOR ESTABLISHING, OPERATING AND MAINTAINING BROADBAND WIRELESS ACCESS SERVICES IN BANGLADESH'**

1. **This is a timely effort to bridge the huge existing demand and supply gap of broadband in Bangladesh. By improving the supply it should aim to bring down broadband prices to the affordable levels of the industry and households.**

Exceptionally high cost of broadband remains a key barrier that prevents the development of the BPO industry in Bangladesh. This is apparent when the prices are compared with similar packages offered by the operators in neighbouring countries. The annual cost of the basic office broadband package offered by Grameen Cybernet Ltd is USD 8,016.[1] This is more than thirty times when compared with the equivalent in India (67 times that of EU average). These prices indicate a serious mismatch between demand and supply. So opening the market for broadband services is commendable, but the true impact will be felt only if this results in significant drop in prices.

Figure 1: Broadband prices in South Asian countries. 256 kbps business and residential connection prices compared on the basis of annual rental. [2]
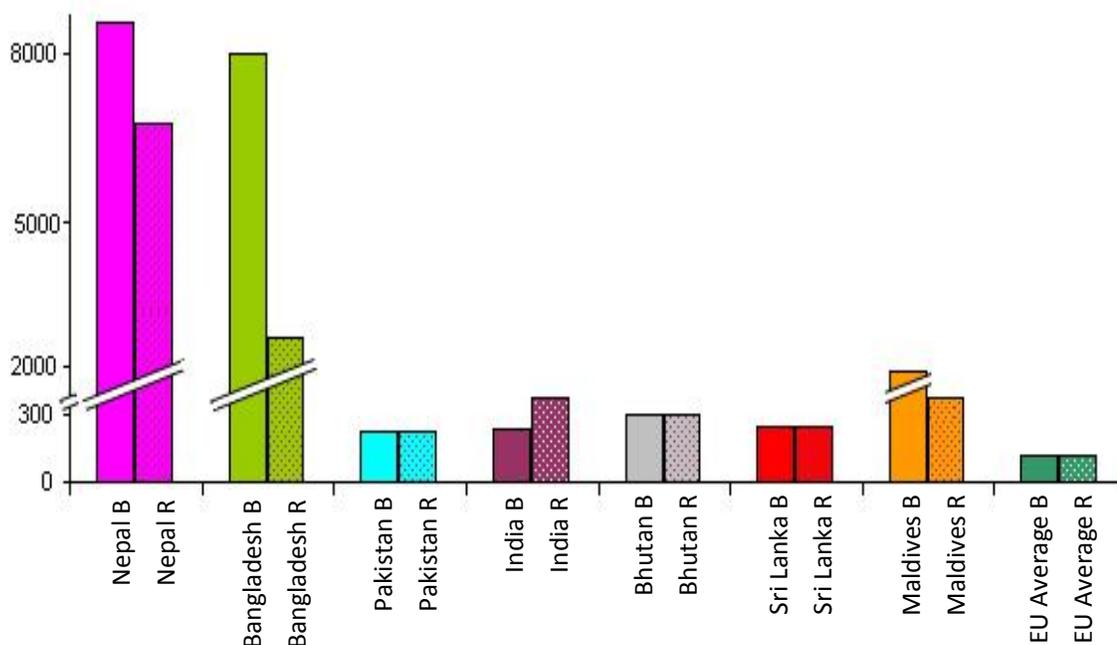
Source: LIRNEasia, Broadband Benchmarks-South Asia February 2008

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[1] LIRNE*asia* broadband benchmarks – South Asia, Feb 2008 http://www.lirneasia.net/wp-content/uploads/2008/03/broadband-benchmarks-feb-2008-pdf.pdf

[2] Most widely used 'unlimited' package of each country is considered for comparison.

2. A scheme that allows existing operators too to offer WiMax based broadband services would be a more optimal solution. It might even imply lower prices than they would be if competition is restricted to newcomers

The rationale that prevents existing operators offering Broadband services (except pre-WiMax services) is not apparent. Having already built their own backbone/backhaul infrastructure, the existing players would be the best to offer last-mile broadband solutions. Their operational costs will be lower and the consumer will be the beneficiary.

If not WiMax, we strongly recommend allowing existing players to offer mobile broadband services. Mobile broadband describes various types of wireless high-speed internet access through a portable modem, telephone or other device, in which mobile-WiMax is only one component. Prohibiting existing operators to provide mobile broadband wireless service as offered in IEEE 802.16e international standard (Paragraph 9.01) may not yield the expected high competition and low prices. If none of the new entrants are ready to offer mobile broadband services this would also mean not meeting the emerging broadband demand for mobile users.

3. More information is needed regarding the backhaul/backbone infrastructure

The focus of the document is the last mile. It does not strictly specify the backhaul and backbone issues.

Do allocation of additional pairs of frequency bands (Paragraph 8.10) and ruling that all operators to share the tower and the existing infrastructures (Paragraph 7.08) mean that BTRC expects the backhaul and backbone also to be wireless? Or will the operators are given the more viable and perhaps more economical choice of purchasing backbone capacity (say, fiber) from others on a cost-oriented and non-discriminatory basis? If necessary, are the operators allowed to build their own fiber infrastructure?

These questions need to be answered if this effort is to satisfactorily meet the demand for a period of another five years – which is reasonable consideration for planning. While high capacity wireless backhaul and backbone links are possible with the advent of advanced technologies, a more rational option is not to limit the choices – especially with an exponentially growing demand for broadband capacity.

4. The specified minimum bandwidth requirements must reflect present and near-future aggregate user requirements.

Paragraph 7.02 specifies a minimum limit of 128 kbps per subscriber. This raises two issues.

a) A user will not experience a noticeable performance difference from dial-up with a speed of 128 kbps. This looks far less ambitious even in present environment and will not certainly be adequate in another few years time.[3] It has to be a more realistic value. Speeds of 8-10 Mbps is the norm in many developed countries. They may be too

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[3] The definition of 'broadband' varies. Federal Communications Commission (FCC) recently specified the range 768 kbps – 1 Mbps as 'Basic Broadband'. Anything less is 'First Generation data'. Telecommunication Regulatory Authority in India (TRAI) in January 2008 ruled every broadband provider should maintain a minimum limit of 256 kbps.

ambitious given the conditions in Bangladesh, but on the other hand, users should not be the victims of an outdated stipulation.

b) The minimum bandwidth limits should apply end-to end and not be limited to the operator (ISP) domain. What LIRNE*asia* has seen in testing Broadband Quality of Service (QoS) in India and Sri Lanka (Please see below) is that while the speeds are within acceptable levels from user to operator (access network), they drop significantly when using international links. The situation in Bangladesh cannot be too different. The operators should guarantee the minimum bandwidth at least up to the first overseas entry point by purchasing adequate international bandwidth to meet the current and future demand. Non-discriminatory and cost-oriented access to the SEA-ME-WE4 cable is essential in this regard.

Figures 2 & 3: Actual download speeds of two widely used broadband packages in Sri Lanka, tested during weekdays, accessing ISP and International server.
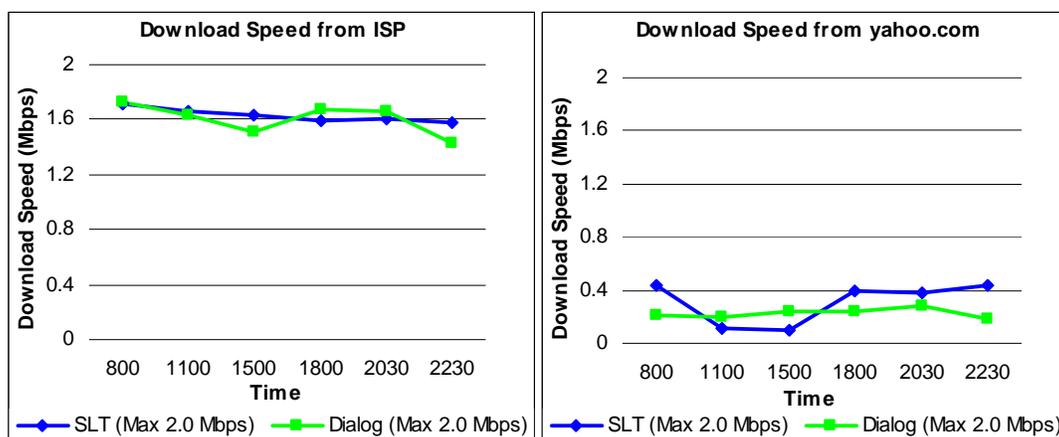
Source: LIRNEasia, Broadband Quality of Service Indicators, 2008