1) ***What should be regarded as the core principles of net neutrality in the Indian context? What are the key issues that are required to be considered so that the principles of net neutrality are ensured?*** *3)* ***What should be India's policy and/or regulatory approach in dealing with issues relating to net neutrality? Please comment with justifications.***

First and foremost, within the business of providing network/internet connectivity – a distinction should be made between public property-based (and naturally limited) services and those that are not natural monopolies.

NATURAL MONOPOLY

Provision of Internet over licensed wireless spectrum auctioned by the government is both based on leveraging a public asset (spectrum) as well as a natural monopoly due to the finite nature of this resource. Eventually all available spectrum will be contracted out to a handful of companies for providing connectivity services and the monopoly of these companies over this essential raw material will be legally enforced and protected by the government. No person will be allowed to use the allotted spectrum to provide connectivity services. Thus, it is both a natural as well as legally enforced monopoly. Barriers to entry are not just high, they are absolute in the sense. Once all spectrum has been parceled out, there is no possibility for a new competitor to enter without the consent of at least one of the existing players.

NON-MONOPOLISTIC ISPs

The second type of connectivity business is where there is no natural limitation. For example, a cable operator provides Internet or network connectivity by stringing its cables or fiber on its own poles. There is no element of natural monopoly or exclusivity, nor does the government enforce any monopoly in such a situation (unless it imposes a cap on the number of cable/wired operators in an area.) In this case, the business of providing connectivity is just like any other normal business where the ever-present threat of a new entrant coming in prevents the emergence of collusion or cartel or oligopoly.

REGULATION IN BOTH CASES

The regulatory approach towards ensuring competition and fair access (which is at the core of the concept of net neutrality) needs to be different in both cases.

In the first case, where the government protects exclusive rights of the contractors and the contractors are in turn dependent on a very finite natural resource, it must have stricter provisions to prevent anti-competitive behavior compared to the second case where competitive forces are at play.

QUASI COMPETITION AND QUASI EQUILIBRIUM

If there is no strict regulation, and the government ensures exclusive rights of 3-4 companies over the entire commercial communication spectrum, competition is soon replaced by quasi-competition.

What is quasi competition?

The first aspect of quasi-competition is tariff uniformity. Let us look at the situation in the Indian market today. The three main 3G operators, who control about 80% of the 3G market (by revenue), have almost identical tariff cards: 1 GB for 250 rupees, 2 GB for 450, 5 GB for 850 etc..

If you look at one operator's tariff card, you know the rates provided by the others.

The second aspect of quasi-competition is inefficient use of resources. While millions of people yearn for connectivity at affordable rates, they are not able to get it because of an inefficient market. In other words, the 3G market is at a quasi-equilibrium at Rs 250 per GB.

None of the operators want to disrupt the equilibrium by cutting the price even though there is a possibility that they might be able to make as much, or higher, profits by expanding the base of Internet users by making it more affordable.

Innovation and risk taking – in terms of trying a different pricing model – is dead, because innovation comes from competition, while a market in which the three dominant players are assured of absolute monopoly (via protection of spectrum exclusivity) generates no competition. If there is no more 3G spectrum to be had, or if the operators are assured that they can buy all the spectrum that can come up in the future, they don't have to worry about new entrants.

This feeling of confidence leads to complacency and the inefficient use of a precious and crucial public asset.

The price for this inefficiency is paid by the country as a whole.

We lose thousands of companies that would have been started by potential entrepreneurs if they had access to the Internet.

We lose the huge social and economic change that would have resulted if people in the country could have access to educational and entertainment resources provided by cheaper Internet.

Over time, India, as an economy and a country, falls behind other nations in economic growth, social growth, education and innovation.

We slip from third world to fourth world and eventually become enslaved by a country which made more efficient use of its natural resources by fostering competition.

This would not have taken place if there was no legally enforced monopoly involved, as in case of wired Internet. For example, if there are three cable-based operators in a state who have 85% of the market, but due to high pricing, the average consumption of data per household is just 700 MB per month, you would have seen a fourth player enter the market offering cheaper rates.

But this is not a threat in case of wireless broadband as the incumbents can successfully prevent new entrants from entering by cornering any new spectrum that comes up for auction. In case of cable internet, it is not possible for incumbent players to buy up all the cable being manufactured and made available in the market.

As a result, the regulatory approach should less strenuous in case of non-monopolistic Internet provision business, and strict in case of legally enforced monopolistic situations.

The rest of the submission deals only with monopolistic situations. In case of non-monopolistic providers, there is probably scope for some relaxation in these rules.

WHY NET NEUTRALITY?

The question of why net neutrality (or more generally – competition) must be ensured in the wireless telecom business has been partially answered above.

Now, we can look at a specific analogy, the key to understanding which is the appreciation of the monopolistic nature of licensed wireless communication business.

Scenario 1: Imagine that a particular town had only one mall, owned by the Municipal Corporation, and no other places of shopping. Private companies are not allowed to build malls in the city.

The municipal corporation had arm to run and manage the only mall, but being a bureaucratic organization, the arm did a lousy job of running the mall.

So, in an effort to provide better shopping services to the citizens, the corporation invites private companies to take over mall management.

A particular company wins the bid, and is allowed to charge various fees to meet its expenses and generate returns for its investors.

Over time, some consultants come and tell the mall management company that it should not just look at itself as a mall manager or a ‘dumb pipe’. Instead, say the consultants, imagine if everyone bought their clothes from you, and their grocery, and their entertainment?

The mall management company is enthused. As a first step, it ties up with specific shops in the mall, and promises to drive more traffic to their shops in exchange for a cut of the increased profit that this would bring. It starts redesigning the alleys and the stairs of the mall in such a way that they are no longer ‘neutral’ ,but instead favor these ‘partner’ shops.

The mall management company redesigns the traffic in the mall in such a way that shoppers find it easier to walk to those shops that have paid special fees to the mall management company. On the other hand, if you want to visit the shops that did not pay special fees to the mall manager, you have to stand in long queue and push against other people. Altogether, it becomes a totally unpleasant experience.

Eventually, people end up going to the stores that the mall management company wants them to, even though the prices there are higher and the products out-of-date and of inferior quality.

Over time, the mall management company thinks – why should I send traffic to these partner stores? Why not set up my own stores? So, it sets up its own stores on the ground floor, and makes going to other stores more difficult.

People, being people, end up fulfilling their shopping needs from stores exclusively owned by the mall management firm. Eventually, because of shoppers’ difficulties in accessing other stores, the other stores shut down, and the entire mall is taken up by stores owned by the mall management company.

Now the mall management company is not just the manager of the mall. It is sole supplier of everything to the people – entertainment, shopping, healthcare etc.. And because the city has space (spectrum) only for one mall, everyone must shop from the mall management company.

The store people start getting rude because they know people don't have any other option but to come to them to buy their stuff. They raise their prices. People become tired of the entire situation and start moving out of the city. Over time, the city collapses.

Learnings

Where did the city administration go wrong?

It made several mistakes.

1) It failed to understand that the purpose behind handing over the contract to the company was to ensure **a specific service** to the people, not for the contractor to make maximum returns on its investment.

2) It failed to understand that the mall was **not the private property** of the contractor, but the property of the city. It had to be used for the benefit of the people, not for the contractors' private gain.

3) It failed to understand that while public sector monopoly may be bad, **private sector monopoly** can be ten times worse.

---

2) ***What are the reasonable traffic management practices that may need to be followed by TSPs while providing Internet access services and in what manner could these be misused? Are there any other current or potential practices in India that may give rise to concerns about net neutrality?*** *6)* ***What further issues should be considered for a comprehensive policy framework for defining the relationship between TSPs and OTT content providers?***

A net neutrality policy can include the following aspects:

a) No distinction may be made, as far as traffic management is concerned, when dealing with traffic generated by, or destined to, the same class of entities. (For example, you may not discriminate between traffic going to one website versus another. You may not discriminate between traffic generated by one app versus another. You may not discriminate between traffic generated by one remotely deployed camera versus another and so on.)

Clarification 1 – No distinction should be made between traffic generated by **in-house entities versus client or customer entities**. For example, if the telecom operator has a VoIP app, its traffic may not be given higher priority over traffic from WhatsApp or any other VoIP app. All businesses other than the licensed business of providing network connectivity (pipe) must be dealt with at arms length by the licensed business. The licensed business of providing network connectivity may not favor in any way any of the other businesses run by, operated by or partnered by the contractor/operator. A level playing field must be maintained at all times between add-on applications/services offered by the operator and similar services offered by third parties.

Clarification 2 – An exception can be made for circuit-switched voice traffic as this kind of traffic can only be provided by the operator and the question of level playing field does not arise vis a viz third party providers. However, such an exemption cannot be provided for IP-based voice and video services **that are/can be provided by third parties**. For all-IP networks, therefore, no exemption can be made – as far as priority in traffic management is concerned – for any sort of value added service provided by the operator in addition to/ and on top of basic connectivity (pipe).

Clarification 3 – The above non-discrimination clause is also applicable to so-called ‘intranet’ or ‘closed user group’ traffic. **Its scope extends to, and is limited to, all activities utilizing the public asset of spectrum contracted out to the operator**. Whether the connectivity is being provided to the Internet or to a group of servers in the operators (or its partners’) datacenter is immaterial. The rules apply to ‘all use of spectrum’ handed over as part of the auction.

---

4) What precautions must be taken with respect to the activities of TSPs and content providers to ensure that national security interests are preserved? Please comment with justification.

No comments for now.

5) What precautions must be taken with respect to the activities of TSPs and content p roviders to maintain customer privacy? Please comment with justification.

No comments for now.