



Vodafone Response to TRAI Pre-Consultation Paper dated 3 September 2014 on 'Delinking of license for networks from delivery of services by way of virtual network operators'

I. Summary:

The Authority's Pre-consultation on Delinking of license for networks from delivery of services by way of virtual network operators [VNOs] raises several concerns as also questions on the need for either the delinking of license for networks from delivery of services or the entry of VNOs.

The Indian telecom market is admittedly hyper competitive. The need of the hour is to facilitate consolidation rather than further increase competition.

Telecom being a capital intensive sector with long payback periods, the first and foremost requirement of investors is a stable and predictable policy and regulatory regime. Security of investments is paramount and must be ensured.

The financial health of the industry is a matter of deep concern – which has also been recognized by the Authority. Huge investments have already been made and further huge investments are expected from the sector, which will not be forthcoming until investor confidence is restored.

The Unified Licensing regime has been introduced only around a year ago and is still in the process of being operationalized.

The infrastructure, including spectrum is barely sufficient to meet the growing needs of the TSPs – it is unlikely that there will be any surplus capacity to cater to a VNO even if introduced.

Active infrastructure sharing and spectrum sharing are already permitted under the existing licensing framework – it is not clear what benefits will be delivered by the new proposed framework; rather there are several adverse implications and drawbacks.

The need for such delinking of networks and services or entry of VNOs is not understood – it is not clear what benefits will be achieved if such delinking is permitted; rather there are far more adverse implications of such delinking – such as discouraging all further rollout and investments, especially to rural and remote areas, thus hampering the Government's objective of connectivity and broadband and vision of a Digital India.

The purpose or objective behind the proposed framework is also not clear and potentially could result in several level playing field issues and conflicting policy concerns.

The issues raised by the Authority in the Pre-consultation cannot be answered unless there is clarity of the exact nature and structure of the proposed framework including the objectives sought to be achieved through the same. We urge the Authority to request DoT to clarify its reference in the context of the above issues, before initiating a formal consultation.

Our detailed submissions on the Pre-consultation are as below:



II. Detailed Response:

A. DoT Reference and Background

A.1. We note that as per the reference received by the Authority from DoT, the Authority has been asked to give its recommendations on 'Delinking of license for networks from delivery of services by way of virtual network operators' on the basis on NTP-2012 which inter alia stipulates:

"3.3. To move towards Unified Licence regime in order to exploit the attendant benefits of convergence, spectrum liberalisation and facilitate delinking of the licensing of Networks from the delivery of Services to the end users in order to enable operators to optimally and efficiently utilise their networks and spectrum by sharing active and passive infrastructure. This will enhance the quality of service, optimize investments and help address the issue of the digital divide. This new licensing regime will address the requirements of level playing field, rollout obligations, policy on merger & acquisition, non-discriminatory interconnection including interconnection at IP level etc. while ensuring adequate competition."

"3.8. To facilitate resale at the service level under the proposed licensing regime – both wholesale and retail, for example, by introduction of virtual operators – in tune with the need for robust competition at consumer end while ensuring due compliance with security and other license related obligations."

A.2. In this regard, we would first like to draw the Authority's kind attention to its response to the Draft NTP-2011 where it had revised the draft document and urged that the same be placed before the Telecom Commission for due consideration. Copy of the same is enclosed as Annexure-1 for ready reference.

A.3. In its said response, the objectives and strategies recommended by the Authority with regard to the Licensing framework are reproduced below:

Objective

To establish an appropriate licensing framework for facilitating converged network and services, facilitating easy movement of customers across networks.

Strategies

I.A.1. Move towards Unified Licence regime enabling offer of converged services;

I.A.2. Create a path for existing licensees to migrate to the Unified Licence Regime;

A.4. However, the above objectives and strategies as recommended by the Authority are not reflected in the final policy document and that the NTP-2012 is actually at variance with the framework proposed by the Authority.

A.5. We would also like to most respectfully submit that the process of formulating NTP-2012 has been carried out in an inverted manner, where instead of the draft policy document being arrived at through the due statutory process as adopted by the Authority in respect of all consultations, in the present case, the document was formulated and finalized by DoT with the Authority being



relegated to giving its comments on the same. We respectfully submit that this is not in consonance with either the letter or spirit of the TRAI Act

A.6. It is respectfully submitted that it is not certain whether the objectives, need, implications, inter-linkages of various issues have received due consideration whilst formulating the policy document. The Authority may like to examine the above aspects before initiating a consultation on this subject.

A.7. Notwithstanding the above, we would like to respectfully submit that the delinking of the licensing of Networks from the delivery of Services and facilitating resale at the service level by introduction of virtual operators are not inter dependent and should be dealt with separately.

A.8. Delinking of the licensing of Networks from the delivery of Services is not a pre-requisite for introducing VNOs and the same, if required, can be introduced even with the existing licensing framework. It is however our submission that there is no need to introduce VNOs into the Indian market, which is already hyper competitive –the pressing need of today is to facilitate consolidation rather than increase competition

A.9. It is further submitted that the objectives sought to be achieved through delinking of the licensing of Networks from the delivery of Services, viz. enable operators to optimally and efficiently utilise their networks and spectrum by sharing active and passive infrastructure, enhance the quality of service, optimize investments and help address the issue of the digital divide are better met under the existing framework and in fact, the proposed delinking will actually hinder rather than help meet the stated objectives.

A.10. It is also not clear how the proposed new licensing regime will address the requirements of level playing field, rollout obligations, policy on merger and acquisition, non-discriminatory interconnection including interconnection at IP level etc. while ensuring adequate competition.

A.11. Our reasons for the above views are dealt with in detail below:

B. Recent Introduction of Unified Licensing

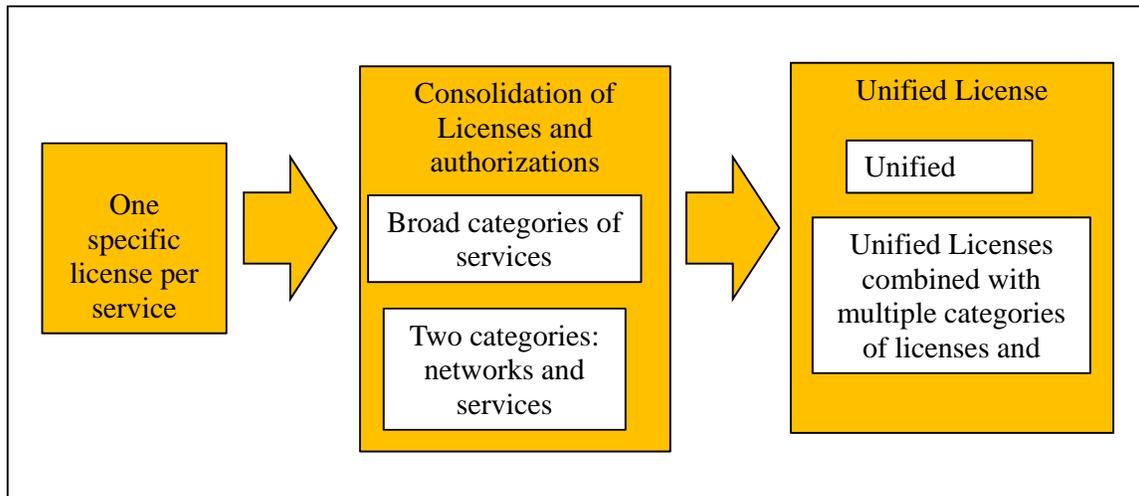
B.1. The Authority has rightly noted that a Unified Licensing regime has been introduced only around a year ago and the same is yet to be fully operationalized.

B.2. For the telecom sector, which is highly capital intensive and where the pay-offs take a long time, it is necessary that regulatory policies are predictable and stable in nature. It is submitted that arbitrary or frequent changes in the licensing regime, and that too, for no perceivable or tangible benefits, is not desirable.

B.3. The introduction of UL and delinking of networks and services are two contrasting /divergent regulatory policies with the former aiding the sector towards unification while the latter creating fragmentation. Such inconsistent regulatory approach is also against the principles enunciated by ITU which considers separate categories of networks and services as a pre-cursor to bring about unified licensing and not as a subsequent approach (as evident in the Chart 1 below).



Chart 1



Source: http://www.itu.int/dms_pub/itu-d/opb/stg/D-STG-SG01.10.2-2010-PDF-E.pdf

B.4. It is also respectfully submitted that any proposed delinking of networks from services needs to be supported by cogent benefits and rationale for such delinking. It is not clear what benefits can be offered by such delinking that are not available in the present regime which has:

- Delinked spectrum from license
- Allowed passive and active infrastructure sharing
- Permitted spectrum trading and sharing [detailed guidelines waited]
- Allowed MNP

B.5. We would also like to express our concern on the a purported decision taken by DoT in 2013 that Unified license may be introduced in two phases with delinking of licensing of networks from delivery of service being taken up in the subsequent phase.

B.6. It is most respectfully submitted that:

- The UL guidelines issued by DoT on 19 August 2013 were admittedly issued after considering the recommendations of TRAI for Unified Licenses.
- There was no recommendation by TRAI that Unified license be introduced in two phases with delinking of licensing of networks from delivery of service being taken up in the subsequent phase, hence such decision could not have been taken by DoT based on the TRAI recommendations.
- The guidelines issued by DoT in fact highlighted the imperative to move towards convergence between various services, networks, platforms, technologies – there is no mention of a subsequent phase of delinking of networks and services.
- The delinking proposed by DoT goes against the NTP-2012 objective to Strive to create *One Nation - One License* across services and service areas.

B.7. The Authority has rightly noted in its recent consultation paper on Definition of AGR that although the first step of bringing about convergence has been taken viz. delinking of license from spectrum for all future licenses, " *the UL Agreement does not unify the licensing regime such that a single licence now covers the provision of all telecom services. Instead, it is a collation*



under one cover of terms and conditions of all telecom services that were previously governed by different sets of agreements. The UL regime falls short of imparting true flexibility to the licence holder to leverage convergence of networks for seamless delivery of services to the consumer by operating in any or all service segments. The substantive licensing framework remains undisturbed, and the definitions of GR and AGR too remain more or less the same.” “...However, the present UL licensing is by no means a finished project, since true unification of the licence has not yet taken place...”

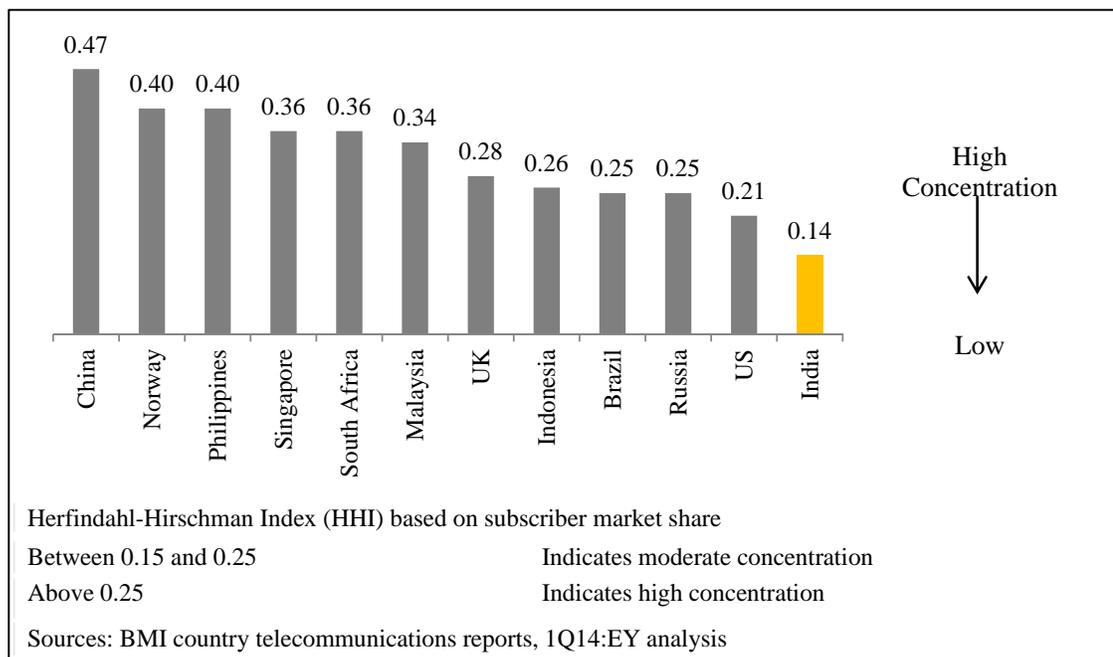
B.8. The Authority may like to examine the above aspects before initiating a consultation on this subject.

C. The Indian Telecom sector is already hyper-competitive

C.1. It is a well-recognized fact that the Indian telecom sector is one of the most competitive in the world, with significant/hyper competition in various segments. As noted by the Authority, there are presently 7-13 operational access service licensees in each service area across the country. Another new licensee is expected to commence services in 2015.

C.2. There are 32 licensed NLDOs in the country (of which 6-10 have deployed their own transmission infrastructure), 25 licensed ILDOs (of which 4-6 have their own cable landing stations), 350 licensed ISPs, of which at least 128 are operational and 23 are providing Internet telephony services, 102 MSOs in the country (which are connected to multiple cable operators across the country who have become digitized/are undergoing digitization which will help provide cable internet/broadband) and 11 licensed VSAT operators of which 9 are operational.

C.3. The HHI index of Indian access (mobile) market is one of the lowest in the world signifying a very fragmented yet excessively competitive market.





- C.4. Chairman TRAI is also on record stating that what the industry needs is consolidation. Some recent media reports highlighting the views of Chairman TRAI on this subject [attached for ready reference] record his views as below:
- *"The industry is bleeding. There are 12 operators here. Globally, each country has three to four telecom service providers. Some places, it is just two."*
 - *"No jurisdiction in the world has 12 operators, mostly the countries have 5 or 4 telecom players and at some places 2..."*
 - *"The industry is in dire need of consolidation, it simply just cannot carry on like this with 10-12 operators, some of them bleeding to death and it has to stop"*

Copies of media reports are enclosed as Annexure-2.

C.4. In view of the above, it cannot be anybody's case that the Indian market is not competitive or that there is a need to introduce more competition at the consumer end.

C.5. Rather as highlighted by Chairman TRAI, the sector is in dire need of consolidation. Chairman has also highlighted in recent media reports that existing M&A guidelines will not facilitate the much needed consolidation. It is therefore earnestly requested that these guidelines be reviewed suo motu by TRAI to facilitate the much needed consolidation in the sector

D. Rationale of Introducing VNOs needs due consideration

D.1. Any decision /recommendation on introduction of VNOs need to be examined by the Authority in a context. Regulators widely regard the availability of a network based competition model (in which players compete on their own infrastructure) as more sustainable than the so called service based competition in which regulatory intervention will be demanded by the virtual operators for exploitation of arbitrage opportunities. The availability of several sets of infrastructure is considered strategic for any country as relying on one company or one set of telecommunications infrastructure makes the economy and country vulnerable to unforeseen failure or market pressures.

D.2. Regulators typically adhere to the following guidelines to assess when to help the introduction of VNOs :

- a. **Infrastructure** – is the country's network infrastructure built out extensively and in a strong state? In India, this is not the case at present. Significant infrastructure investments are still required in the Indian telecom market to deliver world-class telecom services. E&Y estimates indicates that Indian telecom operators need to make a cumulative capex of ~INR 2,50,000 crores over the years 2013-20 in order to meet the NTP 2012 targets of 100% tele-density & 600mn broadband connections, which is in addition to the amounts required to be spent for spectrum acquisition via auctions in such a competitive market.
- b. **Network investments** – have network investments been absorbed by the current players? This has not been achieved by the operators as they are still struggling to make returns on their earlier investments.



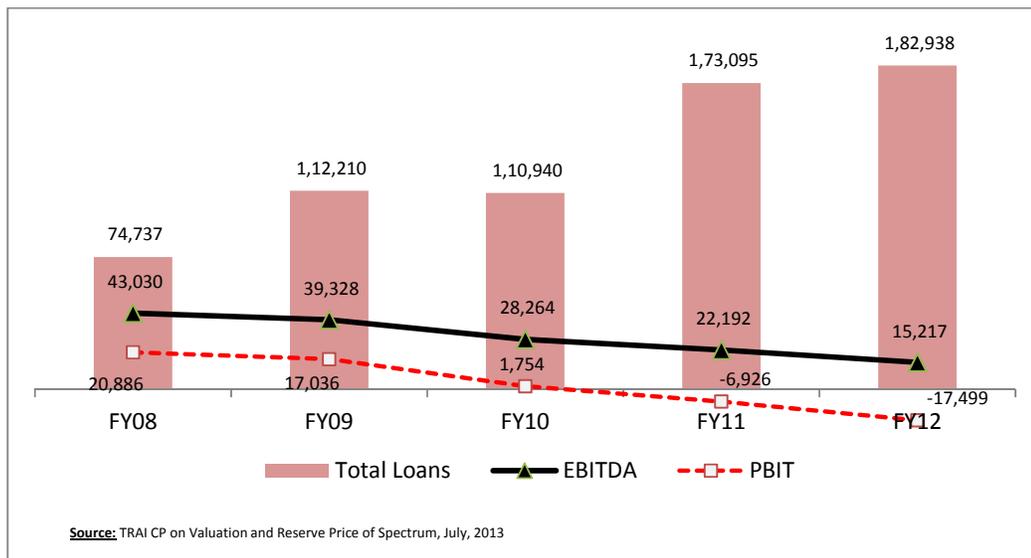
- c. **New MNO payback** – is there enough value potential left in the market to absorb one additional MNO? While internationally, virtual network operators have tended to have a limited impact in most markets and have tended to be a phenomenon which has been maintained on a sustainable basis only in high ARPU, profitable markets with 5 or less network operators, in the Indian telecom market, the situation is diametrically opposite with low ARPUs and hyper-competitive sector, thus making the business environment non-conducive/extremely challenging for entry.
- d. **Market growth** – is penetration relatively high and market growth is stagnating or slowing down? In India, over 2 million new mobile connections are still being added and mobile tele-density is still under 45% (41% rural subscribers).
- e. **Player dominance** – is there significant market power (SMP) by operator(s) resulting in high prices? With 7-13 operators in each telecom circle in the Indian telecom market and MNP, no operator holds SMP status.

E. Financial status of the industry cannot be overlooked

- E.1. As the Authority is aware, in recent times, the financial downturn in the economy coupled with increased policy and regulatory uncertainty, have led to severely deteriorated fundamentals and very poor financial health of the sector.
- E.2. The Authority's Annual report for FY 2012-13 shows that the debt equity ratio of telecom service sector increased from 1.51 (in 2011-12) to 1.83, which is an outcome of the sector's low profitability in a hyper- competitive and uncertain policy environment.
- E.3. Further, the Authority's study paper dated 19.11.2013 on Shareholding and financing pattern and capital structure of Indian private telecom access providers, shows that long term loans increased by ~32% since 2007-08 on account of significant investment for acquisition of 3G/BWA spectrum and for expansion/rollout of 2G & 3G networks.
- E.4. Share capital of most access providers remains stagnated since 2008-09 and profit before finance charges (PBIT) has recorded negative growth (- Rs. 5945.75 Crores) along with fall in the EBITDA margins for almost all the TSPs over the last five years.
- E.5. The Authority has also recorded in July 2013 that "*Presently, there are 6-10 operators in each service area. However, because of a large number of operators in each LSA, there is cut-throat competition which has adversely affected the financial health of operators and the industry. Due to unsustainable pricing and slow revenue growth, their EBIDTA is under pressure. The current state of industry is not sustainable in the long term and measures like consolidation, etc might be required to improve its financial health*"
- E.6. The mounting debt/loans of the telecom sector and the steadily declining EBITDA and PBIT since FY 2008 is depicted in the Chart 2 below.

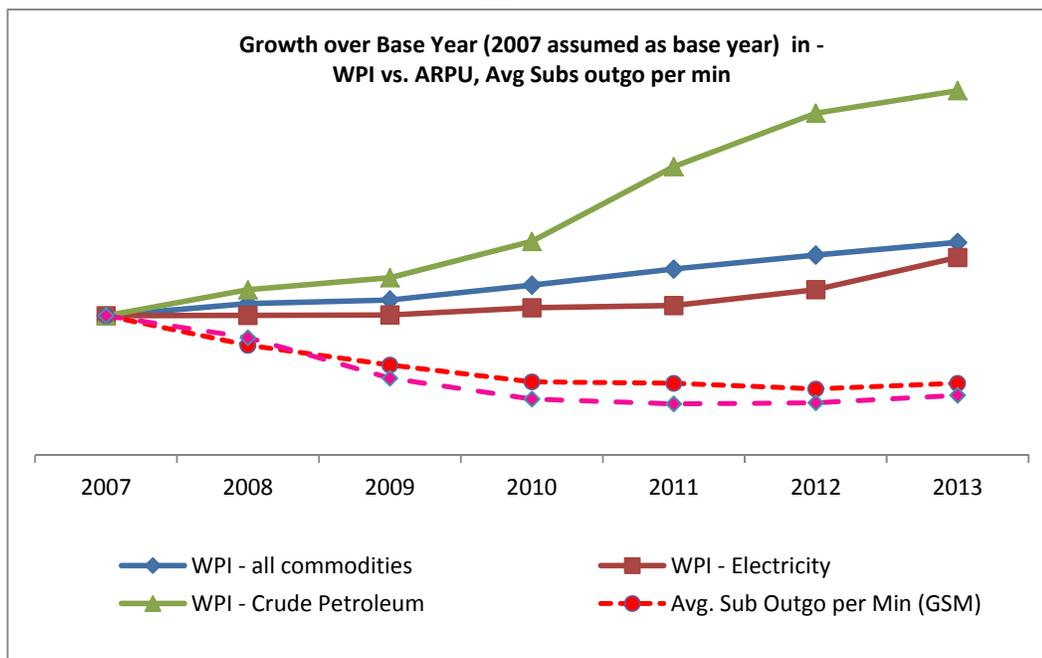


Chart 2



E.7. To add to the pressure on margins, the industry has also been grappling with steadily declining ARPUs while the cost of basic inputs — labour, power, diesel etc., have increased over time. The Wholesale Price Index (WPI) for all commodities and specifically that of electricity and crude petroleum have risen sharply in last 7 years whereas Telecom tariffs and ARPUs have witnessed unabated fall in the same period. [See Chart 3]

Chart 3



Source: ARPU, Outgo (TRAI); WPIs (Min of Eco Affairs); Vodafone India analysis



E.8. Thus the sector is characterized by mounting competition, declining ARPU and rising costs which have put tremendous pressure on operating margins. Operators have been unable to pass on cost inflation and debt servicing burden due to retail tariff competition (including MNP) in the presence of large number of operators which has resulted in their declining profitability. Operators are struggling to maintain optimal business operations with controlled costs and debts while defending existing markets and developing new segments. The declining profitability of the sector has made infusion of equity more difficult which is critically required for operations, expansion of network, introduction of new technologies and services while not falling into the debt repayment trap.

E.9. Thus, in an environment wherein the telecom operators are already in financial distress and are burdened with huge payouts on account of acquiring the spectrum and stringent network rollout obligations, we respectfully submit that it would be most undesirable to introduce any regime which further derails the financial health of the sector.

E.10. The Authority had recognised that an enabling environment for M&A needs to be created to aid in market consolidation and sharing, leasing and trading of spectrum needs to be encouraged to assist operators in achieving better debt control and operating efficiencies. Even most recently, Chairman, TRAI is on record stating "*The industry is bleeding...*" "*...it simply just cannot carry on like this with 10-12 operators, some of them bleeding to death and it has to stop*"

F. Connecting the Unconnected is a National Priority

F.1. NTP-2012 has set out several ambitious targets such as:

- 100% Tele-density, 600mn broadband connections by 2020
- National Optic Fiber Network (NOFN) – to bring high quality broadband access to all village panchayats.

F.2. More recently, the Hon'ble Prime Minister has himself set the agenda with detailed plans for "Digital India" being among the top priorities, approved by the Cabinet envisaging:

- Broadband as digital infrastructure as a utility to every citizen
- Financial inclusion - mobile phone and bank account, make financial transactions electronic & cashless
- e/m-Governance – on demand services in real time on online and mobile platform,
- Digital empowerment of citizens - all documents, certificates available on cloud

F.3. The Government is targeting to connect all village local bodies (panchayats) by broadband internet and phones, promote e-governance, WiFi connectivity in 250K schools, universities; public hotspots for citizens. We understand that a budget of INR 70,000 crores till 2019 has also been approved for telecom & IT where

- Broadband and mobile networks have been identified as key growth pillars under Digital India.
- Enhanced expenditure on broadband network to INR 320 bn to connect 250k Village Panchayats.
- INR 160bn to provide mobile connectivity by 2018 to ~ 42,300 villages with no network coverage.



- Deadline to roll out of national optical fibre network (NOFN) advanced to December 2016 [earlier March 2017].

F.4. As per Planning Commission's 12th plan projections – Telecom sector being an infrastructure sector is expected to invest Rs. 943,899 Crores during this 5 year plan – and 92% of that is expected to come from the private sector.

F.5. However for such investments to be made by the sector, it is of utmost importance that the policies formulated by the Government are predictable and stable in nature. The need to ensure security of investments and create a growth oriented environment has also been highlighted by the Hon'ble Prime Minister whilst launching the recent "Make in India" initiative.

F.6. It is however submitted that lack of policy stability and certainty over the last few years has significantly shaken the confidence of the investing community. FDI in last 2 years has fallen on an average more than 80% Y-o-Y – 90bn in FY12 to 17bn FY 13 and 11bn in FY 14 - upto Feb14)

F.7. As per GSMA's Report on India Mobile Economy – India, 2013, we rank at:

- 98th out of 144 for burdensome Government Regulations
- 65th out of 144 in Transparency of Policy Making

F.8. We need to urgently address these concerns and restore investor confidence in the sector and attract the much needed investments into the sector.

F.9. Any disruptive approach to policy and licensing will have the effect of further deterring investments and eroding investor confidence.

F.10. It is submitted that Delinking of networks and services will lead to over emphasis on services with reduced incentive to invest in infrastructure creation. VNOs/SDOs will focus on cherry picking the creamy layer in already developed markets, thus reducing the sustainability and business case to rollout infrastructure in rural and remote areas. There is also the possibility of the entry of non-serious players or fly by night operators.

F.11. This will severely hamper the achievement of the Government's connectivity and broadband objectives of the Government and the Digital India dream.

G. TSPs are already ensuring Optimal and Efficient Utilisation of Network and Spectrum

G.1. As per NTP-2012 and the DoT reference, the objectives sought to be achieved through delinking of the licensing of Networks from the delivery of Services include, inter alia, enabling operators to optimally and efficiently utilise their networks and spectrum by sharing active and passive infrastructure, enhance the quality of service, optimize investments and help address the issue of the digital divide, etc.

G.2. In this regard, it may first be appreciated that the infrastructure of the TSPs, including spectrum, is barely sufficient to cater to their own growing requirements and it will be very difficult for them to spare their infrastructure with new service operators.



G.3. With the average spectrum holding per operator around 13.8 MHz [in 800/900/1800/2100/2300MHz bands] per service area, spectrum allocation in India are perhaps one of the most sub optimal allocations globally. The spectrum holdings of other TSPs globally in 900MHz and 1800MHz bands alone, have been noted by TRAI in its consultation on the Valuation and Reserve Price of spectrum dated 23 July 2013, as below:

Country	Operator	900 MHz Band	1800 MHz Band
Netherlands	KPN	10	20
Germany	T-Mobile	12.4	20
Italy	TIM	9.8	15
Spain	Movistar	9.8	20
Ireland	Vodafone	10	25
Sweden	Tele2	7.5	3
	TeliaSonera	10	3
	Telenor	7.5	3
	Swefour	5	
	Hi3G	5	
France	Bouygues	9.8	26.6
	Orange France	10	23.8
	SFR	10	23.8
	Free Mobile	5	
Denmark	Telia	11.8	23.6
	TDC Mobil	9	17.2
	Telenor	9	20.2
	Hi3G	5	10
Romania	Orange	12.4	12.4
	Vodafone	12.4	12.4
	Cosmote	10	12.6

G.4. With such low spectrum holding it will be very difficult for the Indian mobile operators to spare spectrum for any VNOs as their first priority would be to meet their own growing requirements.

G.5. It is also not clear how introduction of VNOs will benefit the consumers, given that such operators necessarily need to depend on the network operators in terms of lease of telecom infrastructure (in whole or part) in order to provide their own services especially in a situation where the existing operators are struggling to meet their own requirements with limited/scarce spectrum resources.

G.6. In fact it is more desirable and necessary for the Government to make available additional spectrum to meet the growing requirements of the existing TSPs.

G.7. The better utilization of spectrum can also be achieved through notification of the guidelines on spectrum sharing and trading, which can be done even under the existing regime. Such measures will facilitate TSPs with insufficient spectrum holdings to either share or acquire spectrum being sub optimally utilized by other operators. This would lead to an overall more efficient utilization of existing spectrum allocations.



- G.8. Further, all the TSPs are already utilising their networks most optimally in order to achieve all possible cost efficiencies and offer the most affordable tariffs. Both active and passive infrastructure sharing are already permissible under the existing regime;
- a. In fact passive infrastructure sharing such as tower, dark fiber, duct space, Right of Way etc. with other Licensees is the rule rather than the exception.
 - b. Active infrastructure sharing [limited to antenna, feeder cable, Node B, Radio Access Network (RAN) and transmission system] was also permitted in 2008.
 - c. Further, spectrum sharing has also been permitted by DoT and TRAI has already given its recommendations on the guidelines for the spectrum sharing.
 - d. There is also an in-principle decision by DoT to permit spectrum trading. In this regard too, the recommendations have been made by the Authority and the guidelines on the same by DoT are awaited.
- G.9. It is therefore submitted that the objective of optimal and efficient utilisation of network and spectrum is being met even within the existing licensing framework and hence there is no requirement for delinking of license for networks from delivery of services by way of virtual network operators to achieve the same.
- G.10. In fact, it is submitted that the object of optimal utilization of infrastructure are better met under the existing framework and in fact, the proposed delinking will actually hinder rather than help meet the stated objectives.
- G.11. For example, if the service is offered by the SDO, the NSO will have no control on the use of spectrum and the fulfilment of rollout obligations.
- G.12. Delinking of networks and services will also lead to over emphasis on services with reduced incentive to invest in infrastructure creation. VNOs/SDOs will focus on cherry picking the creamy layer in already developed markets, thus reducing the sustainability and business case to rollout infrastructure in rural and remote areas. This would impact the national connectivity and broadband objectives as also the vision of a digital India.
- G.13. There is also the possibility of the entry of non-serious players or fly by night operators. This has also been recognized by the Authority that such a regime may attract SDOs who may turn out to be fly-by-night operators.

H. Key concerns with the proposed framework

The Authority has rightly raised various concerns on the foreseeable issues in the proposed framework. We delineate the issues and our submissions on the same, as follows:

H.1. It is submitted that delinking will not have any effect of existing TSPs who are both establishing networks and offering services as per the conditions of license agreement with DoT. Delinking, if at all can only be for future licensees, who enter the sector de novo.

H.2. We do not see any need for a change in the licensing regime given that the UL regime has come into existence only a year back. As rightly highlighted by TRAI, in the telecom sector, which is



highly capital intensive with long payback periods it is necessary that regulatory policies are predictable and stable.

H.3. Migration if at all can only be at the choice of the licensee and cannot be mandated on existing TSPs. It may be highlighted that even today, there are operators who have CMTS licenses and have chosen not to migrate to UASL/UL.

H.4. We seriously question the objective and the need for introducing more competition - as submitted above the sector is already over competitive and the need of the hour is to facilitate consolidation rather than introduce more completion is questionable.

H.5. TSPs infrastructure and spectrum is barely enough to meet their own requirements. It is unlikely that existing TSPs will have spare capacity to cater to VNOs/SDOs even if introduced.

H.6. There is a lack of clarity on the objective, context and structure of the proposed framework. The reasoning for such a reference has not been explained by DoT.

H.7. It is further submitted that the issues highlighted by TRAI with regard to rollout obligations, nature of agreement, sharing of infrastructure, spectrum usage charges, allotment of numbering resources, lawful interception, etc cannot be answered unless there is clarity of the exact nature and structure of the proposed framework including the objectives sought to be achieved through the same.

H.8. We request that TRAI request DoT to clarify its reference in the context of the above issues, before initiating a formal consultation.

Without prejudice to the above, we would like to give our prima facie views on the issues raised by the Authority.

H.9. Although the UL has delinked spectrum from licenses, the conditions of spectrum auctions are governed by the underlying license regime. In this situation, it is not clear how the obligations under license will be bifurcated between the Network service operators (NSOs) and Service based/delivery operators (SDOs).

H.10. The entire concept of license fee on revenue share basis is based on the concept of an integrated operator who both sets up the network and offers the service. If network is delinked from service, the entire license fee regime will also have to be reviewed. The NSO in this case will become somewhat similar to an infrastructure/ IP player who offers only passive infrastructure - there will be thus no case for charging license fee on revenue share basis.

H.11. If the service is offered by the SDO, the NSO will have no control on the use of spectrum and the fulfilment of rollout obligations. The Authority has rightly highlighted that there could be SDOs who are fly-by-night operators. Without prejudice, even if such delinking were to happen, the arrangements between the NSO and the SDO cannot be mandated and must be left to mutual agreement and market forces.



H.12. The Authority has also rightly highlighted that there would also be issues related to sharing on infrastructure, if an SDO takes services from more than one NSO.

H.13. Introduction of VNOs also contradicts the stated position of DoT/TRAI on various issues such as 3G ICR and spectrum sharing where

- A view is being [wrongly] taken by DoT that Roaming arrangement shall not entitle the Licensee to acquire customer in the spectrum band not held or technology not deployed or for services/facilities not offered by the Licensee in its network.
- Similarly, we note that the Authority, in its recent recommendations on spectrum sharing has taken a view that inter-band spectrum sharing "will lead to MVNOs like situation which is not permitted under the present licensing framework" due to which the Authority has only recommended intra-band spectrum sharing amongst two operators holding the same band spectrum.

We do not agree with the above as we believe that 3G ICR has been expressly permitted by the DoT and the NIA conditions cannot be overturned. We also firmly believe that inter-band spectrum sharing needs to be permitted in the market amongst two operators holding spectrum in any band. This is different from MVNO concept where the MVNO does not hold any spectrum in any band

Thus while we do not support these restrictions, but we must point out that there will be clear and obvious contradictions in the approach of DoT and TRAI if VNOs are permitted to offer roaming /services across multiple bands held by different operators, whilst existing licensees are constrained from doing the same, thereby creating a non-level playing field.

H.14. The spectrum usage charges are paid by the respective licensees – which at present are different for different operators. In case of delinking – who will pay these charges and at what rates. In addition, issues of applicability of separate spectrum charges on different quantum of spectrum used from two different operators for rendering a single service to the consumer will be another challenge as segregation of revenues against separate spectrum charges will not be possible.

H.15. Similarly, the numbering resources are at present allocated to the CMSPs/UASLs/UL – in case of delinking – who will be allocated the numbering resources and what will be the measures that will be required to be put in place to ensure the optimal utilization of the numbering resources.

H.16. In case of lawful interception, while the interception facilities can be offered by the NSO, the responsibility for the same will lie with the SDO. Security agencies will need to approach both NSO and SDO as the subscriber will be owned by the SDO who will maintain the subscriber's documents (incl. POA, POI etc).

H.17. It is submitted that the concerns with regard to OTT players not making investments and cannibalizing the revenues of the TSPs has already been raised to the Authority. We submit that this proposal of delinking networks and services will further aggravate the concern as the 'investments' need to be made by one set of operators, whilst the revenues will lie with another



set. It is further submitted that such a proposal will not only disrupt the entire licensing regime but will actively disincentive any investments that are required to be made to reach out into the rural areas to achieve the connectivity and broadband vision of the Government. The Hon'ble Prime Minister has repeatedly highlighted the need for security of investments and has also unveiled a vision of Digital India. It is submitted that both the objectives will be defeated if the current proposal is considered.

H.18. Delinking of licensing of networks from delivery of services may result in reduced incentives for investment by the network based operators especially if the regulatory conditions are made onerous in terms of forced access to infrastructure operators' networks. It has been recognized worldwide that VNOs typically thrive on arbitrage and have not really lived up to the regulators' expectations of climbing the "ladder of innovation" or "ladder of investment" insofar as delivery of innovative products/services to consumers and investment in own core and intelligent network platforms is concerned. Any regulatory intervention in terms of mandated access are fraught with high risks as the network operators would proceed for deployment of telecom infrastructure to cater to the demands of VNOs, without any concomitant risk of VNOs failure being borne by the VNOs. The Authority has cited the example of Singapore where FBO and SBO types of licenses are issued by the Regulator. However, it is to be noted that such classification of licenses has existed in the Singapore telecom market from the time the sector was de-regulated in 2000. Whereas the licensing regime framework in India has evolved over the years from Service based licensing to a more generic Unified licensing framework, in conformity with the technological developments towards convergence.

H.19. Existing TSPs are struggling to provide their own set of services especially mobile broadband with the allotted quantum of meagre spectrum and operators are struggling to make commensurate investments in telecom infrastructure to meet the fast growing demands of mobile broadband. In this scenario, there is very limited availability of unutilized/underutilized infrastructure and spectrum for providing to virtual network operators.

H.20. It will be difficult to define the terms of the SDO license including obligations and rights as these cannot be reduced/be disproportionate to the terms of the existing licenses. In Singapore, the SBO licenses are governed by a host of licensing obligations (similar to FBOs) including but not limited to payment of license fee, non-transferability of license, ownership/shareholding arrangements, legitimate use and deployment of telecommunication equipment, compliance to tariff and QoS rules, privacy and confidentiality of customer information, non-discrimination, security and national emergency arrangements etc. At the same time, existing licences cannot unilaterally be made onerous simply due to the introduction of VNOs including but not limited to aspects of penal provisions on SDOs for activities undertaken/not undertaken by VNOs (eg. sub-optimal use of spectrum or non-compliance to applicable laws such as telecom traffic generated due to provision of services outside the scope of license or in violation of license, sub-leasing of telecom infrastructure and spectrum, non-payment of fees, remote access to network, CLI tampering, non-inspection of bulk customer premises and mechanisms to monitor illegal use of telecom resources by subscribers such as illegal exchanges). It will not only be difficult to create clear demarcation of licensing roles and responsibilities between SDOs and VNOs with necessary checks and balances, additional licensing and regulatory rules along with monitoring/compliances w.r.t each set of operators will need to be created, which will result in more regulatory complexities.



H.21. It would be difficult for any regulatory authority to arrive at the mandatory charges on any cost based models/considerations for VNOs as wholesale charges. In northern Europe, MVNOs were forcefully mandated by the regulators in 2004-2007 in terms of very low wholesale access prices via a cost plus model that allowed MVNOs to discount heavily on price. This resulted in a price war that rendered the conditions in the market unsustainable for all operators (including MNOs). Orange withdrew from the market and another operator was forced to consolidate. Further, the MNOs focussed their funds on fighting competition, resulting in significantly lower 3G investments.

III. Our Position:

1. It is thus our view that delinking of licenses for networks and services and introduction of virtual network operators (VNOs) as proposed framework raises several serious concerns.
2. It is not clear how the proposed framework will benefit either the sector or the consumers.
3. Delinking of network from services or introduction of (VNOs) will not yield additionally beneficial/optimal results. It may, on the contrary, turn out to be counter-productive to the development of the sector as the Government's goals of balancing of licensing and security needs as well as consumer concerns may be endangered w.r.t any speculative/dubious entrants that may potentially create instability in the market. It may also constrain the existing operators in making further network investments as they may have to compete with VNOs who may resort to retail price wars that may destabilize the sector. In any event, the legacy of licensing regime cannot be disregarded to make an ad hoc change in the licensing framework without any rationale and such a policy decision cannot be forced upon existing licensees.
4. In fact, the introduction of VNOs contradicts the Authority's stated position on the need for consolidation in the sector.
5. Indian telecom sector has only just moved to a UL regime with the objective of providing a simple and clear licensing framework for all telecom services and this should not be further disturbed by introduction of separate licensing/regulatory framework for VNOs, especially when the benefits of such introduction are unclear, and potentially create serious non-level playing field issues.
6. In any event there are several concerns and lack of clarity on the exact nature and structure of the proposed framework including the objectives sought to be achieved through the same. We urge that the Authority request DoT to clarify its reference in the context of the issues raised in the Pre-consultation, before initiating a formal consultation.
7. In light of above, we are of the view that delinking of license for networks from delivery of services by way of VNO is not required especially for Indian telecom market, for the several reasons highlighted above.
8. Rather, the need of the hour is that the Government should resolve the legacy /pending problems and issues presently existing in the UL/licensing regime. such as



- a. Ensure predictability and stability of the policy and licensing regime to maintain/restore investor confidence
- b. Encourage investments in networks by ensuring security of investments
- c. Strive to make available additional spectrum preferably in contiguous spectrum blocks (to avoid the inefficiencies due to fragmented spectrum allocation), to meet the growing requirements of the TSPs
- d. Expediently notify guidelines for spectrum trading and spectrum sharing to facilitate the most optimal use of this resource.
- e. Review M&A guidelines to encourage and facilitate market based consolidation - through non-imposition of differential market determined spectrum price by transferee,
- f. Review the definition of Gross revenues/AGR for payment of applicable license and spectrum fees to make it simple, transparent and less open to controversies and disputes
- g. Further rationalization/reduction in license fees through lowering of USO levy, flat rate based spectrum fees, facilitating inter-band spectrum sharing without additional spectrum fees etc.

7th October 2014
New Delhi

Dr. J. S. SARMA (IAS)
Chairman
Telecom Regulatory Authority of India



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D.O.No.9-15/2011-BB&PA
March 2, 2012.

My dear Sir,

Please refer to your D.O. letter No. 2/9/2011-Policy-I(Pt.) dated 13th February, 2012, regarding the draft NTP 2011. The Authority has carefully considered the document.

2. We are happy to note that the Draft NTP is based essentially on the various Recommendations of TRAI that have been issued between May, 2010 and April, 2011. These include the Recommendations on Licensing Framework and Spectrum Management, National Broadband Plan, Infrastructure Policy, Telecom Equipment Manufacturing Policy and Green Telecommunications.

3. We have revised the draft document and the revised draft is enclosed alongwith this letter. You will kindly see that we have not included the TRIAD of Policies in the NTP 2012 because it was felt that, alongwith the Preamble, it made a very long reading and detracted from the focus on NTP itself.

4. The flow in the revised document is as follows:-

Vision > Mission > Objectives > Strategies

We have not included activities and targets as part of the Policy since it was felt that these would be better captured in an Action Plan that can be drawn up by the DoT separately. Most of the objectives and strategies have already been captured, albeit with certain modifications in the document now enclosed.

5. We are confident that this would be placed before the Telecom Commission/ Government for due consideration.

J.S. Sarma,

Yours sincerely,

(J.S.Sarma)

Shri R.Chandrashekhar,
Secretary,
Department of Telecommunications,
Ministry of Communications & IT,
Sanchar Bhavan, New Delhi.

**National Telecom Policy-2012
(NTP-2012)**

Response of TRAI

**Telecom Regulatory Authority of India
New Delhi**

National Telecom Policy-2012

(NTP-2012)

PREAMBLE

Telecom services are now recognised the world over as an important tool for the socio-economic development of a nation. In addition to fulfilling the basic need of making life simpler for the citizens, telecommunications today is, thanks to the enormous growth of Information and Communication Technologies, a vital support for the rapid growth and modernisation of different sectors of the economy.

2. The last decade has been satisfying for telecommunications in India. The New Telecom Policy 1999 has been a catalyst for growth of the telecom sector. The number of telephone connections, at the end of December 2011, was 926 million, as compared to 41 million at the end of December 2001. This growth has been fuelled by the cellular segment (mobile phones) which alone accounted for 893 million connections at the end of December 2011. The composition of the telecom sector too has witnessed a structural change, with the private sector accounting for 88 % of the total connections.

3. Today, India is one of the fastest growing telecom markets in the world. The unprecedented increase in teledensity and sharp decline in tariffs in the Indian telecom sector have contributed handsomely to the country's economic growth. Besides contributing to about 3% to India's GDP, Telecommunications, along with Information Technology, has greatly influenced the growth of the economic and social sectors.

4. Telecommunications is no longer limited to voice. The evolution from analog to digital technology has facilitated the conversion of voice, data and video to the digital form. Increasingly, these are now being rendered through single networks bringing about a convergence in networks, services and also devices. The telecom networks as information highways are capable of being used for distribution of various converged services, giving citizens access to not only voice communication but also information, entertainment and various applications that can significantly improve their lives. Once a mere communication device, the Telephone has now the potential of being an instrument of empowerment. There is need to reorient the telecommunication policy to exploit this potential and to foster a rapid and inclusive growth.

5. The National Telecom Policy 2012 (NTP 2012) is conceived against this backdrop. The vision is to transform the country into an empowered and inclusive knowledge-based society, using telecommunications as a platform.

6. Notwithstanding the economic progress over the last decade, the digital divide in the country continues to be significant. On the one hand, expansion of telecommunications in the rural areas has been slower than urban areas, with

the former accounting for only 34% of the total connections. On the other, the ability of the poorer sections of the society, both in rural and urban areas, to benefit from technology needs to be enhanced. It is also necessary to complement the traditional delivery of services to citizens with electronic delivery. The NTP 2012 seeks to address these issues by ensuring deployment of networks capable of delivering converged services both in rural and urban areas as well as facilitating the development of e-applications in Education, Skill development, Health, Agriculture, Commerce and Banking. Besides, e-governance will continue to form the focus of delivery by government of its services to its citizens.

7. Provision of broadband facility is a *sine qua non* for delivery of convergent services. NTP 2012 envisages the broadband facilities to be provided both on fixed and wireless networks. A National Optic Fibre Network will be established, connecting all the Gram Panchayats in the first phase and all the villages/habitations in the second phase, both of which will be completed in a definite time frame. The policy also seeks to make available adequate spectrum for wireless broadband services. Separately, the country has embarked upon a time bound program of digitalisation, with addressability, of the cable TV network. With availability of optic fibre network as well a digital cable TV network, it is expected that the spread of fixed lines will increase significantly enabling Fixed-Mobile Convergence, thereby enhancing the spectrum utilisation which is a finite and scarce resource.

8. All telecom licences in the country will be provided under a unified licence. While the unified licence will not be linked with spectrum, spectrum will be separately available through a market driven process enabling the realisation of its appropriate value. The policy envisages making available adequate spectrum to ensure efficient delivery of telecom services, through appropriate audit and refarming.

9. The indigenous manufacture of telecom equipment has unfortunately not kept pace with the remarkable growth of telecom sector. Resultantly, domestic manufacture accounts for only 12 to 13 % of the total demand. There is need to immediately redress the situation. Also, there is need to improve the quantum of creation of Indian Intellectual Property Rights (IPR), considering that IPR constitute a significant component of the equipment cost. This calls for a concerted effort in research and development. NTP 2012 seeks to make a major effort in achieving a high degree of self reliance in telecom equipment manufacturing besides promoting innovation and IPR creation. This effort would also address the security requirements of the country.

10. India being a major investment destination, there is need for the policy to be an effective instrument of attracting the requisite investment into the telecommunication sector. NTP 2012 recognises the need for a clear roadmap in terms of resource allocation and a conducive environment for investment to be made and gainfully employed.

11. Institutions form the backbone for policy implementation if the policy

objectives are to be fully realised. World over, the telecom regulator plays a critical role in the orderly growth of the telecommunication industry, balancing the interests of both the consumers and the service providers. By virtue of the TRAI Act, India has an independent regulator. NTP 2012 seeks to further empower the regulator.

12. NTP 2012 envisages a restructuring of the existing organs/agencies of the Department of Telecommunications besides creating new agencies required for effective implementation of policy objectives. It also envisages the strengthening and restructuring of Public Sector Undertakings.

VISION

TELECOMMUNICATIONS FOR AN EMPOWERED AND INCLUSIVE KNOWLEDGE BASED SOCIETY.

MISSION

- I. Establish a ubiquitous, robust, reliable, secure, affordable and efficient Converged telecommunication network capable of providing high speed broadband and seamless converged communication services, with special focus on rural and remote areas;**
- II. Reposition the telecommunication services as an instrument of socio economic empowerment of citizens, both in the rural and urban areas;**
- III. Achieve self-sufficiency in telecom equipment manufacturing through promotion of Research and Development (R&D) and indigenous production;**
- IV. Strengthen institutional framework to meet the requirements of growth of the sector;**
- V. Attract investments in telecom sector.**

MISSION –I

Establish a ubiquitous, robust, reliable, secure, affordable and efficient Converged telecommunication network capable of providing high speed broadband and seamless converged communication services, with special focus on rural and remote areas.

Objective IA: Licensing framework

To establish an appropriate licensing framework for facilitating converged network and services, facilitating easy movement of customers across networks.

Strategies

- I.A.1. Move towards Unified Licence regime enabling offer of converged services;
- I.A.2. Create a path for existing licensees to migrate to the Unified Licence Regime;
- I.A.3. Promote economies of scale in the telecom sector, while maintaining adequate competition, through appropriate M & A policy to be evolved from time to time on consideration of TRAI recommendations;
- I.A.4. Move eventually towards achieving One Nation –One License by providing for full Mobile Number Portability and removal of roaming charges, decision on both of which will be taken by TRAI;
- I.A.5. TRAI to consider minimising inter operator costs in fixing tariff so as to facilitate affordability of tariff to the consumers.

Objective IB: Convergent Networks

To facilitate the speedy establishment of converged networks

Strategies

- I.B.1. Orient, review and harmonise the existing licensing framework in a time bound manner to enable seamless delivery of converged services;
- I.B.2. To enable and enforce the VOIP facility including mandating interconnection between ISP and access providers, so as to enhance affordability to the consumers;
- I.B.3. Migrate towards Internet Protocol IPv6 in a phased and time bound manner by 2017;
- I.B.4. Encourage new and innovative IPv6 based applications in different sectors of the economy by enabling participatory approach of all stake holders;
- I.B.5. Facilitate and encourage the establishment of Next Generation Networks.

Objective IC: Spectrum Management

To ensure efficient and optimal use of available spectrum.

Strategies

- I.C.1. Ensure adequate availability of globally harmonised spectrum including through Audit and refarming;
- I.C.2. Make available additional 500 MHz spectrum for telecommunications services by the year 2017 and another 300 MHz by 2020;
- I.C.3. Ensure availability of adequate spectrum to meet current and future demand for microwave access/backhaul, in appropriate frequency bands;
- I.C.4. Move existing users of spectrum i.e. Government departments, public sector, private sector and telecom service providers to alternate frequency bands or media, so as to make spectrum available for commercial telecom services;
- I.C.5. Delink spectrum from license in respect of all future licences;
- I.C.6. Allocate spectrum to holders of Unified Licence ,based on recommendations of TRAI, in a transparent manner through market related processes, keeping in view the objectives of efficiency revenue and affordability;
- I.C.7. TRAI to conduct periodic Audit of spectrum utilisation to ensure its efficient use and to issue necessary Regulations / Directions from time to time;
- I.C.8. De-license additional frequency bands for public use and operation of low power devices;
- I.C.9. Promote use of unlicensed band and white spaces without causing harmful interference to the licensed applications;
- I.C.10. TRAI to evolve guidelines to deal with all issues connected with wireless (spectrum) licences and their terms and conditions including re-farming/ withdrawal of allotted spectrum, spectrum pricing, cancellation or revocation of spectrum licence, exemptions on use of spectrum, spectrum sharing, spectrum trading etc;
- I.C.11. Permit spectrum pooling, sharing and later, trading for optimal utilisation of spectrum based on recommendations of TRAI;
- I.C.12. Introduce Mobile Virtual Network Operators (MVNO) in the country;
- I.C.13. Actively encourage establishment and use of landlines based on optical fibre network and cable networks, so as to promote Fixed-Mobile Convergence.

Objective ID: Broadband

To recognise broadband as a basic necessity and to provide ubiquitous and efficient networks capable of increasingly higher speeds so as to eventually move towards a level where Broadband can be a Right for all citizens.

Strategies

- I.D.1. Provide reliable and affordable broadband access in the country including in rural and remote areas by appropriate combination of optical fibre, wireless and other technologies;

- I.D.2. TRAI to periodically fix the minimum broadband download speeds of broadband;
- I.D.3. To facilitate availability of broadband progressively at speeds higher than the laid down minimum;
- I.D.4. Optical fibre network to be laid by an independent agency, initially up to the village Panchayat level and to be extended progressively in a time bound manner, to all villages and habitations having a population of more than 500 persons. Access to this Optical Fibre Network will be open, non-discriminatory and technology neutral;
- I.D.5. Incorporate enabling provisions in the current regulatory framework in order to facilitate utilisation of existing infrastructure including cable TV networks for extending high quality broadband services including in rural areas;
- I.D.6. Develop an eco-system for broadband in close coordination with all stakeholders, including Ministries/ Government Departments/ Agencies;
- I.D.7. Ensure that all servers on which sensitive data are hosted are located within the country;
- I.D.8. Ensure that all local content is hosted on servers located within the country;
- I.D.9. Rationalize the duties levied on inputs and finished products and provide requisites incentives to ensure affordability of Customer premises equipment including modem;
- I.D.10. Provide appropriate Tax benefits to Telecom infrastructure provider companies;
- I.D.11. Formulate appropriate policies in the area of enterprise and data services to fuel further growth of India's ICTE sector.

Objective IE: Cloud Services

To setup an efficient cloud computing environment.

Strategies

- I.E.1. Adopt best practices to address the issues related to cloud services;
- I.E.2. Create a secure network for cloud computing covering encryption and privacy;
- I.E.3. Create a legal and security frame work covering network security, law enforcement assistance and preservation of cross-border data flows for deployment of Cloud Services;
- I.E.4. TRAI to devise appropriate mechanisms to provide interoperability among cloud computing service providers.

Objective IF: deployment of telecom infrastructure

To facilitate deployment of telecom infrastructure in a cost effective and timely manner.

Strategies

- I.F.1. Declare telecom infrastructure to be an essential infrastructure and provide requisite tax benefits;
- I.F.2. Bring the telecom Infrastructure providers under unified Licensing regime;
- I.F.3. Authorise the unified license holders the Right of way to install the telecom Infrastructure;
- I.F.4. Prescribe, in consultation with ministry of Urban development, uniform road reinstatement charges across the country;
- I.F.5. Review and simplify the policy for Right of Way for telecom infrastructure;
- I.F.6. Coordinate with State Governments and Local bodies to enable the growth of telecom infrastructure;
- I.F.7. Coordinate with State Governments to ensure efficient power supply to tower based and other telecom equipments in rural areas on priority basis;
- I.F.8. Do away with the requirement of land conversion for setting up of telecom towers in rural areas;
- I.F.9. TRAI to mandate standards for all types of towers used in telecommunications;
- I.F.10. Promote sharing of both passive and active infrastructure, based on the recommendations of TRAI;
- I.F.11. Introduce Mobile Virtual Network Operators (MVNO) in the country, based on recommendations of TRAI;
- I.F.12. Create end to end IPv6 test beds for testing IPv6 networks and applications.

Objective IG: Rural Telephony and Universal Service

To obliterate the digital divide between the rural and urban areas;

Strategies

- I.G.1. Impose rural roll out obligations in all licenses where spectrum is being provided such that all Habitations with a population of 500 persons and above are covered by the service providers;
- I.G.2. To enforce rural rollout obligations through appropriate disincentives against non-performance of the obligations and appropriate incentives for performance;
- I.G.3. Make Use of the USOF component of the licence fee and spectrum charges to provide appropriate incentives and disincentives;
- I.G.4. Ensure quick and time bound roll out of the Optic Fibre network in all Habitations with a population of 500 persons and above;
- I.G.5. Ensure, through coordination with Ministry of I & B, time bound digitisation of the TV Cable industry in all the rural areas;
- I.G.6. Provide support from USO fund for provision of converged communication services in villages / habitations with population of less than 500;
- I.G.7. Facilitate the setting up of VSAT in remote areas;

- I.G.8. Endeavour to make available Global Mobile Personal Communication by Satellite (GMPCS), compliant with security requirements, for all remote areas.

Objective IH: Security

To ensure security of the information in the telecom network and monitoring of the information, compliant with the objectives of national security.

Strategies

- I.H.1. Keeping in view individual privacy and in line with international practices, develop and deploy a state of the art system for providing assistance to Law Enforcement Agencies (LEAs);
- I.H.2. Mandate and enforce that the Telecom Service Providers take adequate measures to ensure the security of communication in/through their networks by adopting contemporary information security standards;
- I.H.3. Create an institutional framework through regulatory measures to ensure that safe-to-connect devices are inducted into the Telecom Networks;
- I.H.4. Build national capacity in all areas that impinge on Telecom network security and communication assistance for law enforcement, such as security standards, security testing, interception and monitoring capabilities and manufacturing of critical telecom equipment;
- I.H.5. Ensure that all equipments supplied to the telecom service providers are in conformity with the laid down security and safety standards;
- I.H.6. Mandate, on consideration of recommendations from TRAI, standards in the areas of functional requirements, safety and security and in all possible building blocks of the communication network i.e. devices, elements, components, physical infrastructure like towers, buildings etc;
- I.H.7. Develop a rational criterion for sharing of costs beyond a threshold limit between Government and the service providers in implementing security measures.

Objective IJ: Quality of Service

To ensure better quality of experience for telecom consumers.

Strategies

- I.J.1. Quality of Service and consumer interests being under TRAI's domain, TRAI will appropriately lay down the end-to-end system performance standards, Quality of Service parameters, and measures to Protect consumer interest; (covers all issues of QoS listed in the draft NTP)
- I.J.2. TRAI to be given necessary powers including the power to enforce including penalty provisions, to enforce the observance by the service providers of the laid down standards /parameters;
- I.J.3. Undertake legislative measures to bring disputes between telecom consumers and service providers within the jurisdiction of Consumer Forums established under Consumer Protection Act.

Objective IK: Emergency Response Services

To enable access to telecommunication services in times of emergency and disasters.

Strategies

- I.K.1. Entrust TRAI, under clause 11 (1) (b) of TRAI Act, with the development of nationwide Unified Emergency Response Mechanism by providing nationwide single access number for emergency services;
- I.K.2. To ensure availability of communication to agencies connected with law and order, security and disaster management during calamities and emergencies.

Objective IL: Environment and Health

Address health and environmental concerns related to the telecom sector.

Strategies

- I.L.1. Strengthen the framework to address environmental and health related concerns including e-waste management;
- I.L.2. Encourage adoption of green policy by promoting the use of energy efficient equipment, active infrastructure sharing, incentivizing service providers deploying green technologies for the reduction of carbon footprint in the telecom sector;
- I.L.3. Facilitate increased use of alternative sources (Renewable Energy Technologies) of energy for powering telecom networks;
- I.L.4. Promote use of In-Building Solution (IBS) and Distributed Antenna System (DAS) and its deployment in coordination with Ministry of Urban Development by aligning the National Building Code as well as embedding these critical requirements in the process of developmental planning and finalization of master plans for rural and urban areas in consultation with the State Governments;
- I.L.5. Promote mobile phones which do not contain brominates and chlorinated compounds and antimony trioxide and ensure proper disposal of telecom wastes in accordance with e-Waste Rules 2010;
- I.L.6. Mandate testing and certification of all telecom products for conformance, to health, safety, security, EMF/EMI/EMC standards;
- I.L.7. Entrust TRAI under clause 11 (1) (b) of TRAI Act with the function of developing and monitoring EMF standards.

MISSION-II

Reposition the telecommunication service as an instrument of socio economic empowerment of citizens, both in the rural and urban areas.

Objective IIA: Development of e-applications

To facilitate the development of e-applications, particularly in Education, Health, Agriculture, Skill development, Small and Medium Enterprises, e-Governance, e-Commerce, e-banking.

Strategies

- II.A.1. Promote an ecosystem for participants in VAS industry value chain to develop applications, particularly to meet the needs of the rural citizens; (O19)
- II.A.2. Incentivise companies involved largely with the development of e-applications for rural areas and in regional languages;
- II.A.3. Put in place an appropriate regulatory framework for delivery of VAS at affordable price so as to fuel growth in entrepreneurship, innovation and provision of region specific content in regional languages;
- II.A.4. Encourage development of mobile phones based on open platform standards and leverage the mobile device for enabling secure transactional services including online authentication of identity;
- II.A.5. Work with handset manufacturers and international standards bodies to make e-applications interoperable in Indian languages;
- II.A.6. Incentivise application developers to provide customised applications suitable for local needs;

Objective IIB: Enabling delivery of e-services to rural areas

To deliver e-services provided by various government agencies to the citizens.

Strategies

- II.B.1. Promote synergies between roll-out of broadband and various Government programs viz. e-governance, e-Panchayat, NMEICT, MNREGA, NKN, AADHAR, AAKASH tablet etc.;
- II.B.2. Digitize the content available in the government departments;
- II.B.3. Coordinate with State Governments and different Ministries in Government of India such that all procedures are amended, to ensure digital delivery of services, in a definite timeframe;
- II.B.4. Coordinate with State Governments and different Ministries in Government of India such that all personnel are trained in a definite timeframe to achieve the desired degree of competence in understanding of the revised procedures and delivery of services;
- II.B.5. Equip all the Panchayats and Villages Centres with the requisite Hardware and train the personnel;

- II.B.6. Stimulate the demand for e- applications and services by working closely with Department of IT in the promotion of local content creation particularly in regional languages.

Objective IIC: Empowering urban citizens

To empower citizens in the Urban areas through establishment of Fibre networks and deployment of applications required for smart cities and towns.

Strategies

- II.C.1. Provide fibre to home/kerb as an integrated access to meet ICT requirements of urban citizens ;
- II.C.2. Coordinate with the Ministry of Urban Development to ensure that National Building Code is aligned to facilitate deployment of fibre in the buildings as well as embedding the requirement of fibre in the developmental planning and finalization of master plans for urban areas;
- II.C.3. Make regulatory changes to unbundle fibre infrastructure;
- II.C.4. Encourage Fibre to Home/Kerb (FTTH/FTTC) by Infrastructure Providers (IPs) with enabling guidelines and policies;
- II.C.5. Coordinate with State Governments and different Ministries in Government of India such that all procedures for services in urban areas are amended in a definite timeframe to ensure digital delivery of services;
- II.C.6. Coordinate with State Governments and different Ministries in Government of India such that all personnel are trained in a definite timeframe to achieve the desired degree of competence in understanding of the revised procedures and delivery of services;
- II.C.7. Use Information and Communications Technologies (ICT) for converting, as per a definite time program, the urban areas into smart cities/ smart towns, by way of appropriate applications for managing all urban services particularly road infrastructure, water and sewerage management , electricity, security and transport systems;
- II.C.8. Digitize the content and data available in the government departments, in a definite timeframe;
- II.C.9. Provide policy support including standards implementation, for secure communication of information within and between different sectors;
- II.C.10. Develop a regulatory framework for Machine to Machine communications;
- II.C.11. Provide financial support for research and smart infrastructure pilot projects in few major cities.

MISSION-III

Achieve self-sufficiency in telecom equipment manufacturing through promotion of Research and Development (R&D) and indigenous production.

Objective IIIA: Innovation and IPR creation

To promote entrepreneurship, innovation and IPR creation for indigenous product development and its commercialisation.

Strategies

- III.A.1. Develop detailed guidelines for promotion of innovation and IPR creation;
- III.A.2. Promote Indian products viz., products having Indian IPR, by stipulating a mandatory market share;
- III.A.3. Create a Telecom Research and Development Corporation (TRDC) for setting up of an R&D fund and establishing a Research and Development Park;
- III.A.4. Establish a Telecom Research and Development Park for facilitating research, IPR creation and commercialisation;
- III.A.5. Facilitate access to financial resources on favourable terms and provide fiscal incentives to relevant R&D institutions;
- III.A.6. Assist researchers to obtain IPRs for their innovation;
- III.A.7. Set up an autonomous Telecommunications Standard Development Organisation (TSDO) to develop standards to meet national requirements, to generate IPRs and to participate in international standardization bodies to contribute in formulation of global standards;
- III.A.8. Create suitable testing infrastructure to aid in development of new products and services;
- III.A.9. Encourage the entrepreneurs to develop and commercialize Indian products by making available requisite funding (pre-venture and venture capital), management and mentoring support.

Objective IIIB: Self reliance in telecom equipment manufacturing

To achieve a high degree of self reliance in telecom equipment manufacturing to meet the indigenous demands.

Strategies

- III.B.1. Develop detailed telecom equipment manufacturing policy, providing, *inter alia*, for
 - a minimum extent of 60% and 80% of domestic manufacturing,
 - a minimum value addition of 45% and 65%,
 - Indian products (products with Indian IPR) at 35% and 50%by the year 2017 and 2020 respectively;

- III.B.2. Set up a Telecom Equipment Manufacturing Organisation (TEMO) to coordinate between manufacturers and service providers for proper implementation of the telecom equipment manufacturing policy;
- III.B.3. Create designing and manufacturing Clusters for design, development and manufacture of telecommunication equipment;
- III.B.4. Facilitate access to the financial resources on favourable terms and fiscal incentives required by indigenous manufacturers of telecom products and R&D institutions;
- III.B.5. Facilitate provision of fiscal incentives through a Modified Special Incentive Package Scheme (M-SIPS) to eliminate the disability costs in manufacturing of telecom equipment on account of infrastructure gaps relating to power, transportation etc. and to mitigate relatively high cost of finance;
- III.B.6. Restructure taxes and duties such that indigenous manufacturers are not disadvantaged vis-à-vis imported products and components and put in place a stable tax regime and provide income tax holiday for 10 years to domestic telecom manufacturing;
- III.B.7. Create a Telecom Manufacturing Fund (TMF) for providing venture capital to indigenous manufacturing;
- III.B.8. Set up a cutting edge technology fab facility with government funding support in the form of equity, grants and soft loans;
- III.B.9. Set up an International Standard Testing and Certification Agency, by converting TEC into an autonomous agency, for carrying out conformance testing, certification and to aid in development of new products and services;
- III.B.10. Provide preferential market access for domestically manufactured telecommunication products to address strategic and security concerns of the nation, consistent with international commitments;
- III.B.11. Encourage the service providers to use Indian and Indian manufactured products, through measures including appropriate incentives;
- III.B.12. Leverage synergies among the various telecom players (manufacturers, service providers and project integrators) to provide integrated communication solutions for exports;
- III.B.13. Incentivise export of telecom equipment and services;
- III.B.14. Facilitate access to the financial resources on favourable terms and fiscal incentives required by indigenous manufacturers of telecom products and R&D institutions.

Mission-IV

Strengthen institutional framework to meet the requirements of growth of the sector.

Objective IVA: Strengthening the Regulator

To further strengthen the Telecom Regulator.

Strategies

- IV.A.1. Review the TRAI Act with a view to addressing regulatory inadequacies/ impediments in effective discharge of its functions;
- IV.A.2. To confer penal and enforcement powers to TRAI, so as to enable it to protect the interest of consumers by ensuring compliance of its regulations/directions/orders by the service providers;
- IV.A.3. To confer powers of civil court on TRAI to enable the Authority to summon persons and receive evidence and also call for expert advice while conducting enquiry;
- IV.A.4. To confer upon TRAI all or any powers of the Telegraph authority under the Indian Telegraph Act;
- IV.A.5. To provide independent means of financing to TRAI;
- IV.A.6. Undertake a comprehensive review of Indian Telegraph Act and its rules and other legislations with a view to making them consistent with and in furtherance of the above objectives.

Objective IVB: Telecom Institutions

To establish and strengthen new/existing institutions dealing with different aspects of telecom eco-system.

Strategies

- IV.B.1. To appropriately restructure the Department of Telecommunications to meet the objectives of the National Telecom Policy 2012;
- IV.B.2. Strengthen and develop National Telecom Institute for Policy Research, Innovation and Training (NTIPRIT) as an institute of international repute, for capacity building and enabling research in India centric technologies and policies in telecom domain;
- IV.B.3. Set-up a comprehensive repository in NTIPRIT for disseminating telecom field related information, standards, benchmarks, resources, program curriculum etc.;
- IV.B.4. Develop other training institutes under Department of Telecommunications and its organisations as national level telecom schools of excellence for imparting training to Government/ PSU officials and other stakeholders;
- IV.B.5. Encourage collaboration with premier educational institutes like IITs and telecom research organisations of excellence for directing research and development to field problems;

- IV.B.6. Coordinate with Ministry of Human Resource Development (MHRD) to periodically upgrade the curriculum of telecommunication courses in academic institutions;
- IV.B.7. Form a high level Apex body (supported by advisory groups comprising representatives from industry, academia, PSUs, etc.) to oversee all aspects relating to skill development in telecom field;
- IV.B.8. Assess the manpower requirement at different skill and expertise levels by partnering with National Skill Development Council and industry to identify the relevant needs of the sector and prepare a roadmap;
- IV.B.9. Promote and augment vocational and non-formal training institutes in urban and rural areas to cater to the skill and training needs of telecom sector;
- IV.B.10. Convert the Telecom Engineering Centre into an autonomous agency, for carrying out conformance testing, certification and to aid in development of new products and services;
- IV.B.11. Create a Telecom Research and Development Corporation (TRDC) for setting up of an R&D fund and establishing a Research and Development Park;
- IV.B.12. Set up an autonomous Telecommunications Standard Development Organisation (TSDO) to develop standards to meet national requirements, to generate IPRs and to participate in international standardization bodies to contribute in formulation of global standards;
- IV.B.13. Set up a Telecom Equipment Manufacturing Organisation (TEMO) to coordinate between manufacturers and service providers for proper implementation of the telecom equipment manufacturing policy.

Objective IVC: Public Sector Undertakings

To strengthen the public sector undertakings to be competitive and profitable.

Strategies

- IV.C.1. Appropriately restructure the Public Sector Undertakings, under the Department of Telecommunications, in terms of management, manpower and equity;
- IV.C.2. Carry out financial restructuring, including strategic disinvestment, of the PSUs;
- IV.C.3. Recognise the strategic importance of Telecom PSUs in nurturing/enhancing Government's intervention capabilities in matters of national security or international importance, including execution of bilateral projects funded by Government of India;
- IV.C.4. Encourage recognition and creation of synergistic alliance of public sector and other organisations of Department of Telecommunications (DoT) through appropriate policy interventions and support for optimal utilisation of their resources and strengths in building a robust and secure telecom and information infrastructure of the nation;

- IV.C.5. Identify and exploit strategic and operational synergies among Public Sector Units under the DoT for playing a significant role in service provision, infrastructure creation, and manufacturing;
- IV.C.6. Exploit individual strengths of organisations under DoT to their mutual benefit for ensuring these organisations to effectively flourish in the competitive telecom market while adequately supporting the security needs of the nation;
- IV.C.7. Recognise and enhance the opportunities available through/within Telecom PSUs for deployment of indigenously developed Telecom products, with Indian IPR, to provide vital support for domestic manufacturing of Indian Telecom products in the long run.

Mission-V

Attract investments in telecom sector.

Objective VA: Create an investor friendly environment

To create an investor friendly environment for attracting investments in the sector.

Strategies

- V.A.1. Recognize telecom as Infrastructure Sector and extend to it the benefits available to infrastructure sector;
- V.A.2. Strengthen the institutional, legal, and regulatory framework to generate investor confidence;
- V.A.3. Provide a roadmap regarding availability and allocation of spectrum over next five years;
- V.A.4. Provide a stable fiscal regime to stimulate investments;
- V.A.5. Rationalise taxes, duties and levies for long term sustainability of telecom sector;
- V.A.6. Create a Telecom Finance Corporation as a vehicle to mobilize and channelize financing for telecom projects in order to facilitate investment in the telecom sector;
- V.A.7. Work with banks to facilitate availability of credit to the investors;
- V.A.8. Include telecom sector projects within the ambit of financing from existing entities such as India Infrastructure Finance Company Limited (IIFCL).

Objective V B: Foreign Investment

To attract foreign direct investment and foreign institutional investment

Strategies

- V.B.1. Ensure protection of intellectual property rights;
- V.B.2. Create designing and manufacturing Clusters for design, development and manufacture of telecommunication equipment;
- V.B.3. Expedite clearances required for foreign direct investment;
- V.B.4. Incentivise export of telecom equipment and services.

'No M&A Can Take Place within DoT Guidelines'

Trai chairman says telecom department has failed to facilitate much-needed consolidation

Our Bureau

New Delhi: The telecom regulator on Monday was critical of mergers and acquisitions guidelines that didn't facilitate much-needed consolidation.

"DoT (Department of Telecommunications) issued some M&A guidelines. These guidelines are a non-starter and no M&A can take place within those guidelines," said Rahul Khullar, chairman of the Telecom Regulatory Authority of India (Trai).

"I think the industry is in dire need of consolidation and it can't go on this way," Khullar added, while speaking at an 'open house' discussion with the telecom industry. The session was on pricing of airwaves in the 1800 Mhz and 900 Mhz bands that would likely be auctioned early next year.

It's been more than six months since the previous UPA government issued revised M&A rules but there hasn't been a single major deal. There has only been the odd Bharti Airtel-Loop Mobile subscriber and infrastructure sale deal for the Mumbai circle that is yet to be cleared by DoT. None of the reported M&A talks between Tata and Vodafone, Tata and Uninor or a three-way deal among Tata, Aircel and Sistema have fructified so far.

The new M&A rules had raised the cap on the market share of a merged entity in a circle to 50% from 35% earlier, but retained a contentious clause that requires a

buyer to pay market-linked prices for spectrum that comes with any acquisition. This clause, most operators said, was the biggest factor behind deals not being inked, as it raised the cost of acquisition.

Other hurdles included a clause that allowed a merged entity to hold a maximum of 25% spectrum allocated in a service area and 50% in a particular band. This practically ruled out the big three - Airtel, Vodafone India and Idea Cellular - from striking a deal among themselves but allowed them to do so with smaller operators but only in limited circles. The clause however allowed the smaller operators to combine among themselves.

None of the reported M&A talks between Tata and Vodafone, Tata and Uninor or a three-way deal among Tata, Aircel and Sistema have fructified so far

"The industry is bleeding. There are 12 operators here. Globally, each country has three to four telecom service providers. Some places it is just two. Despite notifying, no consolidation has happened," Khullar said. He was referring to how the intense competition has led to smaller operators running up thousands of crores of debt, a deterrent for any potential suitors.

Apart from the lacunae in the M&A rules, those on other modes of direct or indirect consolidation - spectrum trading and sharing -

are yet to be cleared by the DoT, despite Trai having recommended these months back.

Trading allows operators to sell airwaves that they aren't utilising. This offers an exit route for a struggling operator apart from an M&A deal. Sharing on the other hand allows operators to pool resources without selling to one another. Both though provide another avenue for stronger operators to beef up their bandwidth holdings, without having to take part in auctions, and could allow weaker players a way to monetise their spectrum assets.

"We have already submitted our recommendation and the telecom department now has to come out with the rules on sharing and trading of airwaves to pave consolidation of the sector," Khullar said.

The government though has recently said that sharing and trading rules will be out by the year end.

The industry on its part requested the regulator to speak to DoT for an early notification of the spectrum trading and sharing rules before the government auctioned airwaves.

Separately, the GSM operators said the reserve price for 900 MHz in the forthcoming spectrum auction should be same as that for the 800 MHz band used by CDMA players because both the

bands have similar propagation characteristics.

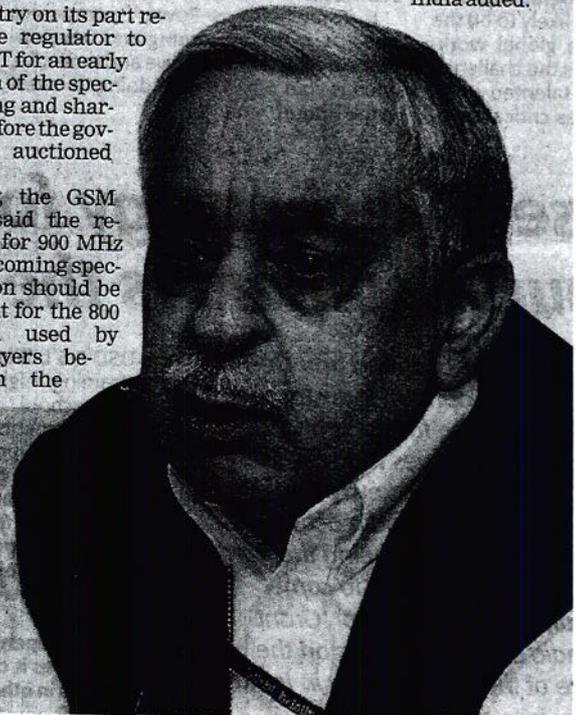
"We propose that the reserve price of 800 MHz band as finally accepted by the government based on the Trai's recommendations dated February 2014 shall be used for 900 MHz band also," Bharti Airtel said.

Trai has recommended a pan-India reserve price of Rs 2,685 crore per Mhz for 800 MHz band, typically used for offering CDMA services. The GSM players were of the view that 800 MHz and 900 MHz spectrum have similar propagation characteristics and are being used for the deployment of broadband technologies such as 3G and LTE.

"The coverage in 900 MHz is roughly double that in 1800 MHz. The reduction in capital and operational expenditure could be as much as 40%. Operations in the 800 MHz band enjoy similar advantages," Vodafone India added.

RAHUL KHULLAR
Chairman, Telecom Regulatory Authority of India

"DoT issued some M&A guidelines. These guidelines are a non-starter... The industry is bleeding. There are 12 operators here. Globally, each country has three to four telecom service providers. Some places it is just two. Despite notifying, no consolidation has happened



Fewer telcos better, says Trai

Regulator suggests easing rules for telecom M&A

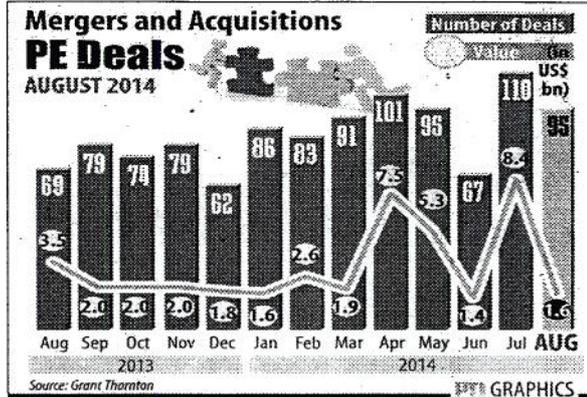
AGE CORRESPONDENT
NEW DELHI, SEPT. 22

Telecom regulator Trai believes that the current merger and acquisition (M&A) rules in the telecom sector need to be reworked by the government to bring consolidation in the sector which has too many players.

"No jurisdiction in the world has 12 operators, mostly the countries have 5 or 4 telecom players and at some places 2. For this to happen (here) merger and acquisition guidelines have to be reworked," said Trai chairman Rahul Khullar.

Mr Khullar was of the view that the current guidelines have been a non-starter as M&A activity has not taken place despite the industry being in dire need for consolidation.

"I think the industry is in dire need of consolidation, its simply just cannot carry on like this with 10-12 operators, some of them bleed-



ing to death and it has to stop," said the Trai chief.

In the recent years, the balance sheet of the telecom players has been bleeding due to fierce competition.

However, some telecom operators margin are showing improvement and they have been able to hike tariffs.

The government has allowed mergers between

firms with up to 50 per cent combined market share.

There have been reports of some telecom players being interested to sell off due to huge financial burden.

However, these mergers have not happened due to various issues effecting the sector including spectrum and uncertainty on regulatory side faced by the sector.

Telecom M&A norms need to be reworked, says Trai chairman

New Delhi, Sept 22: With a view that the country cannot carry on with 12 telecom operators, sectoral regulator Trai on Monday said current merger and acquisition (M&A) rules need to be reworked by the government for any pick up in consolidation activity.

"No jurisdiction in the world has 12 operators, mostly the countries have 5 or 4 telecom players and at some places 2. For this to happen (here) merger and acquisition guidelines have to be reworked," TRAI chairman Rahul Khullar said here.

The Chairman of Telecom Regulatory Authority of India (TRAI) said the guidelines have been a non-starter as M&A activity has not taken place despite the industry being in dire need for consolidation.

"I think the industry is in dire need of consolidation, its simply just cannot carry on like this with 10-12 operators, some of them bleeding to death and it has to stop," Khullar said.

Telecom operators have long been demanding changes in the M&A rules, terming them difficult.

Vodafone India chief Marten Pieters had earlier said that companies should be allowed to buy assets of a particular firm such as spectrum and not the entire firm

Keep 900 MHz base price same as that for 800 MHz: GSM operators

New Delhi, Sept 22: GSM mobile operators on Monday said the reserve price for 900 MHz in the forthcoming spectrum auction should be same as that for the 800 MHz band, used by CDMA players, because both the bands have similar propagation characteristics.

"We propose that reserve price of 800 MHz band as finally accepted by the government based on the Trai's recommendations dated February, 2014 shall be used for 900 MHz band also," Bharti Airtel said during an open house session on spectrum pricing for licences expiring 2015-16.

Trai had recommended a pan-India reserve price of ₹2,685 crore per megahertz for 800 MHz band, used for

offering CDMA services.

The GSM players were of the view that 800 MHz and 900 MHz spectrum have similar propagation characteristics and are being used for the deployment of broadband technologies such as 3G and LTE.

"The coverage in 900 MHz is roughly double that in 1800 MHz. The reduction in capital and operational expenditure could be as much as 40 per cent. Operations in the 800 MHz band enjoy similar advantages," Vodafone said.

On the reserve price for 1800 MHz band, most of the telecom players unanimously said base price recommended by the Authority in September 2013 may be used for the next auctions as well. *PTI*

which has a lot of debt in its books.

Giving an example, Pieters had said, "We love to buy 3G spectrum but for 3G spectrum, if I have to buy complete operator who has 3G spectrum... It comes with all kinds of stuff I don't want because I have it all. So, it is very difficult to make an attractive proposition in such

a situation."

Easing the M&A rules, the government had allowed mergers between firms with up to 50% combined market share. Earlier, telecom firms were allowed to merge if their combined market shares in terms of subscriber base does not exceed 40% in any of the nation's 22 circles or zones. *PTI*