AT&T Global Network
Services India Pvt. Ltd.
Vatika Triangle, 3rd Floor
Sushant Lok - I, Block A
M. G. Road, Gurgaon-122 002
Haryana, India

CIN: U72900DL2005PTC142096

Tel: 91.124.4868700
Fax: 91.124.4283194
91.124.4283195
www.ap.att.com

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Shri Sanjeev Banzal
Advisor (Networks, Spectrum and Licensing)
Telecom Regulatory Authority of India
Mahanagar Doorsanchar Bhawan
Jawahar Lal Nehru Marg
New Delhi - 110 002

Subject: **Consultation Paper [No. 15/2014 dated December 5, 2014] on 'Delinking of the license for networks from delivery of services by way of Virtual Network Operators'**

Dear Sir,

This is with reference to the captioned Consultation Paper [No. 15/2014] released by Hon'ble Authority on December 5, 2014.

AT&T Global Network Services India Private Limited ("AT&T") would like to respectfully submit its comments in support of the captioned consultation (enclosed as Annexure – I).

AT&T in India is licensed to provide National Long Distance (NLD), International Long Distance (ILD) and Internet Service Provider (ISP) services in India and began providing these services in 2007 and 2009 respectively.

We trust you will find our submissions in order.

Thanking you,

Respectfully submitted,
for **AT&T Global Network Services India Private Limited**

Naveen Tandon

Naveen Tandon
Authorised Signatory

Encl.: As above

Comments of AT&T on TRAI Consultation Paper on Delinking of License for Networks from Delivery of Services By Way of Virtual Network Operators, December 5, 2014

AT&T Global Network Services India Private Limited ("AT&T") respectfully submits these comments on the above-referenced TRAI Consultation Paper issued on December 5, 2014. The Consultation Paper asks for input from stakeholders on the "delinking of licenses for networks from the delivery of services by way of virtual network operators (VNOs)." AT&T is pleased to provide these comments in support of this proposal.

AT&T is a wholly-owned subsidiary of AT&T Inc., which, through its affiliates, operates one of the world's most advanced global backbone networks, provides services to virtually every country and territory in the world, and is a leading U.S. provider of international private line and other business and consumer communications services on the U.S.-India route. AT&T is licensed to provide National Long Distance (NLD), International Long Distance (ILD) and Internet Service Provider (ISP) services in India, and began providing these services in 2007 and 2009 respectively.

The Government's National Telecom Policy 2012 states that consumers and operators in India would obtain significant additional benefits from the greater competition that would result from delinking telecom network licenses from service delivery, in order to allow the resale of telecommunications services at both the wholesale and retail levels. AT&T agrees with this view.

The experience of other countries over the past two decades has shown that the removal of restrictions on resale encourages the more efficient use of facilities, increases competition, increases availability of innovative service offerings to meet niche demand opportunities, and reduces end-user prices. Amending the current license regime to allow the unrestricted resale of

all fixed or mobile telecommunications services (including ILD, NLD and Internet), through either VNO or other similar resale arrangements would allow customers and operators in India to obtain similar benefits as those experienced in other liberalized markets, including in areas of the country where there is still limited competition, and further encourage the roll-out of new and innovative services, technologies and affordable services.[1]

Machine-to-machine (M2M) communications provide an important example of the potential benefits of innovative telecom service offerings that would be stimulated by authorizing resale competition. M2M communications will transform India in many positive ways, and will impact virtually every sector and drive efficiency and productivity. The coming revolution in M2M communications is an opportunity for tremendous economic growth and societal benefit in India, and enabling competition through resale will help launch this growth.

The authorization of VNOs also would further the Indian Government's "Digital India" program launched in August 2014 with the objective "to transform India into a digital empowered society and knowledge economy."[2] This program has identified Virtual Network Operators as important market actors to ensure the provision of "Broadband for All."

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[1] Virtual Network Operators are service providers without a (physical) network, although they may own or control some network elements. There are different types of Virtual Network Operators. A recent OECD Report contains one description: "At one extreme, reseller service providers are the most basic virtual operators. They purchase calling time from a network operator and sell it to customers, using their own brand name" OECD, Wireless Market Structures and Network Sharing, OECD Digital Economy Papers, No. 243 (2014), at 71. In contrast to these "light" VNOs, the Service Provider VNOs provide billing and customer support, without however engaging in any network activity, such as call routing. One step up in the value chain is the Enhanced Service Provider, which provides additional services such as call and data routing. At the other extreme from the "VNO light" is the "full" VNO which leases network capacity from a network operator and operates its own "virtual" network. In the case of a full Mobile VNO, this means obtaining its own numbering ((IMSI) range, issuing SIM cards and operating its own Home Location register (HLR) containing the data of the MVNO's customers. *See, id.* at 71.

[2] *Cf.*, Department of Electronics and Information Technology, Government of India, Digital India - A programme to transform India into a digitally empowered society and knowledge economy, "Pillar 1 - Broadband Highways."

To expand and optimize the benefits of competition in telecommunications services through resale, the licensing regime should allow VNOs to provide all telecommunications services with minimal licensing and other regulatory requirements. The TRAI also should allow market mechanisms rather than regulation to determine where VNOs may provide services, the nature of their commercially negotiated agreements with network operators, and any issues relating to the sharing of infrastructure. Additionally, VNOs should receive the same rights as other operators to enter into agreements for interconnection, number porting, numbering resources, and other necessary services.[3]

To fully optimize the potential of a resale market, the license fee structure should be amended to remove the double license fees currently paid by operators using leased or purchased airtime or capacity and resulting in higher end-user prices. This current anomaly in the definition of Adjusted Gross Revenue ("AGR") results in a cascading impact at each service level which both impedes competition and harms consumers. Other countries have frequently addressed these concerns by allowing licensees to deduct wholesale service input costs from their retail revenues. A further important consideration is that all operators should be allowed to use the benefits of resale arrangements to serve their customers by operating as VNOs and leasing or buying and reselling the airtime or capacity of other fixed or mobile network operators and ISPs.

The removal of existing restrictions on resale and the authorization of VNOs to provide service under a "light touch" regulatory model would provide significant benefits to consumers and operators in India in the form of increased telecom competition, downward pressure on

[3] For an overview of MVNO business models see OECD, op. cit., at 71 seq. For a brief analysis of MVNO business models in Latin America see Informa, The Future of MVNOs: Strategies to Succeed with MVNOs in Latin America, 2012 (www.informatandm.com).

telecom prices, the wider availability of innovative services and the more efficient use of infrastructure, which would further expand the critical role of telecom and ICT services in stimulating increased economic growth. To promote these important objectives, the license structure should be amended to allow the authorization of VNOs as soon as possible.

AT&T's responds to the questions asked in the Consultation as follows.

Q1. (a) Is there any need to introduce more competition in service delivery by the way of introduction of VNOs in the sector? If not, why not?

(b) If yes, is it the right time to introduce VNOs?

The right time to introduce VNOs is now. The TRAI has already recommended the introduction of Mobile Virtual Network Operators in 2008, following a broad consultation[4] and the DoT has approved the introduction of MVNOs in 2009. The policy reasons that drove this decision are still valid today.

The benefits of allowing the resale of telecom services by VNOs are further highlighted by the National Telecom Policy 2012. The Policy states that facilitating resale by VNOs in India would promote "the need for robust competition at consumer end," and that delinking network licensing from service delivery to end users would allow network operators to "optimally and efficiently utilize their networks and spectrum by sharing active and passive infrastructure."[5] Such action would "enhance the quality of service, optimize investments and help address the issue of the digital divide."[6] These findings are supported by experience elsewhere around the world. For example, the U.S. Federal Communications Commission (FCC) has emphasized that

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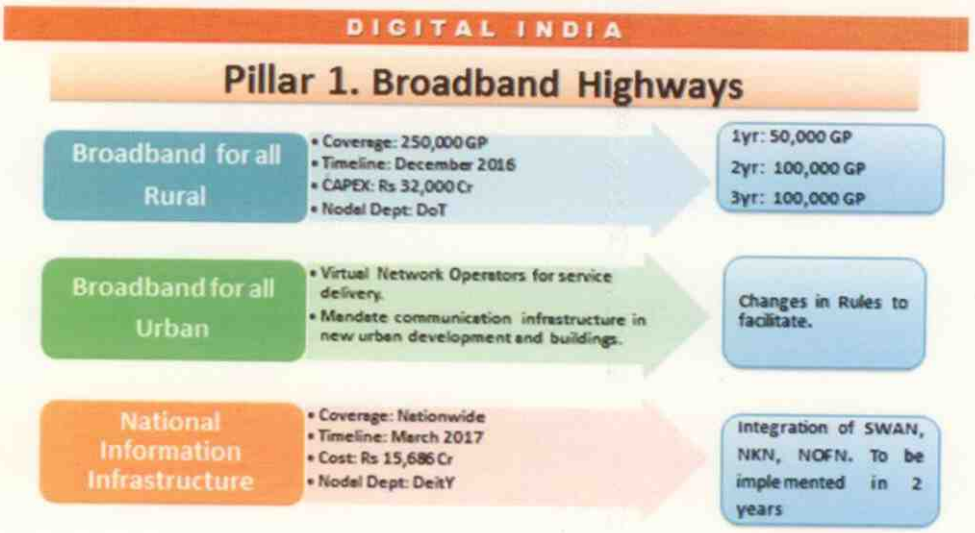
[4] *Cf.* TRAI, Consultation Paper on Mobile Virtual Network Operator, 5 May 2008, Consultation Paper No 9/2008.

[5] National Telecom Policy 2012, June 13, 2012, Sects. 3.3. & 3.8.

[6] *Id.*, Sect. 3.3.

competition between facilities-based operators and resellers in the United States has led to "more affordable rates, new service offerings, and numerous new entrants."[7] Indeed, India's experience with the limited resale allowed for telecom licensees has similarly benefited competition and resulted in the provision of new services.

The introduction of VNOs in India would further encourage lower rates and new services, including niche, unserved and underserved markets and services such as machine-to-machine services, which would benefit consumers, existing operators and the broader Indian economy and promote the objectives of the "Digital India" program. Indeed, the slide extracted from the main Digital India presentation included below identifies the introduction of Virtual Network Operators as the key step required for service delivery to facilitate overall broadband growth. Accordingly, the objectives of NTP 2012 and the Digital India Program, as well as the DoT's prior approval of this step in 2009, clearly support the introduction of VNOs to facilitate competition and growth in the sector and to achieve the objectives of the stated policies and roadmap of the Government of India.



[7] *See* FCC, *Connecting the Globe*, http://transition.fcc.gov/connectglobe/sec5.html.

Thus, the "right time" to introduce VNOs is clearly now.

Q2. Will VNOs pose a threat to NSOs or will they complement their operations? Justify your answer.

As stated by the National Telecom Policy 2012, virtual network operators complement the operations of facilities-based operators, by allowing them to "optimally and efficiently utilize their networks and spectrum by sharing active and passive infrastructure." Indeed, in the experience of AT&T worldwide, competitive resale opens opportunities for both VNOs and NSOs. VNOs are customers and partners of facilities-based operators and therefore complement the operations of facilities-based operators by providing an important source of revenue for capacity that may otherwise be under-utilized. AT&T has found that facilities-based operators in markets that allow resale regard VNOs as an important channel for doing business.

VNOs also may focus on providing different services than facilities-based carriers, such as niche innovative services, or on serving different customer groups. VNOs thus may complement the operations of facilities-based operators in providing service to the public by facilitating the provision of a wider range of services, and service to a wider range of customers, than are provided by facilities-based operators.

Q3. How can effective utilization of existing infrastructure be improved? Can VNOs be a solution to achieve targets defined in NTP-2012 for rural density?

The authorization of VNOs would assist the achievement of this objective. As noted above in response to Question No. 2, the National Telecom Policy 2012 has properly emphasized that a major benefit of the authorization of VNOs would be that they would allow NSOs to more efficiently utilize their existing infrastructure by providing an important source of revenue for

capacity that would otherwise be under-utilized. This would apply in all areas where VNOs provide service, including niche, unserved and other underserved areas.

Q4. Does there exist a business case for introduction of VNOs in all segments of Voice, Data and Videos?

A major priority should be to rely on market mechanisms rather than regulation to determine what services VNOs should provide, where VNOs may provide services, the nature of their commercially negotiated agreements with network operators, and any issues relating to the sharing of infrastructure. Under a market-based approach, the TRAI would not attempt to identify a need for more competition in a geographic area or for a particular type of service, or whether there is a supporting business case, before allowing VNOs to provide service. Instead, VNOs should be able to provide service, based on their business judgment that it may be profitable to do so in light of available market opportunities and required resources. A market based approach of this type is more likely to better serve the interests of all parties and avoid the significant costs, delays and other significant inefficiencies that are inherent in any regulatory approach.

Q5. Whether VNOs be introduced in all or some of the services notified in the UL? Please name the services and the justification.

To optimize the potential benefits of opening the Indian market to full resale competition (i.e., wholesale and retail as enunciated under National Telecom Policy, 2012), VNOs should be licensed in a manner that allows them to provide any existing or future service on a resale basis in any geographic location by entering into commercial arrangements with the underlying fixed and mobile operators. To optimize innovation and competition, VNOs should be authorized to provide any electronic communications service, and should not be restricted to a limited set of existing services. This unified approach for licensing is the optimal approach for promoting

innovation, investment and competition in India, and allows for full regulatory oversight by the Indian authorities.

Q6. Is there sufficient infrastructure (active and passive including access spectrum) available with a TSP to meet its own requirements? Can TSPs spare available infrastructure for VNOs?

As noted above, the TRAI should rely on market mechanisms to address and resolve any issues relating to the sharing of infrastructure. Thus, existing facilities-based operators are best placed to determine their infrastructure requirements and the availability of infrastructure for utilization by VNOs based on commercially-negotiated arrangements.

Q7. If any TSP is able to share its infrastructure with VNOs, what should be the broad terms and conditions for sharing the infrastructure?

As noted above, the terms and conditions for the sharing of infrastructure should be a matter of commercial negotiation between VNOs and TSPs. The licensing and regulatory framework should permit the sharing of both active and passive infrastructure in all respects amongst all categories.

Q8. Should VNOs be allowed to create their own infrastructure to reach out to niche markets? If yes, to what extent?

VNOs should be allowed the greatest possible flexibility to determine the manner in which they provide service to customers. The defining characteristic of VNOs is that they do not own the underlying wireline or radio network infrastructure (cell transponders) or spectrum or capacity. Consistent with this definition, VNOs potentially may provide telecommunications service to end-users by using various possible combinations of the VNO's own capabilities and resources with underlying network infrastructure or spectrum leased or purchased on a commercial basis from network operators (such shared use of spectrum and capacities/other

forms of infrastructure is permissible in many jurisdictions that have successfully allowed VNOs).[8] The extent to which they self-provide other resources should be a commercial matter for the VNO.

For example, under the VNO arrangements allowed in many countries, a mobile VNO enters into a commercial agreement with a mobile network operator to access spectrum via the mobile network operator's radio access network, or purchase minutes, megabytes or SMS, but may itself provide other requirements such as the Core network (switching points, packet gateways, internet access point), Home Location Register (HLR), mobile network code, client management activities, and SIM cards. Under "full VNO" regimes, VNOs themselves provide all these requirements, while "VNO-light" VNOs may simply resell wireless voice or data/SMS plans purchased under a commercial agreement with a mobile network operator. The latter entities may or may not use the commercial brand of the network operator and may have their own client management activities, but do not have their own switching points, HLR, mobile network code, or SIM cards.

The provision of services by VNOs provides competitive benefits to consumers under either scenario. VNOs with greater control over their activities may be better able to offer innovative service offerings, pricing plans, and services tailored for niche, un-served and under-served customers and thus compete more effectively with network operators. On the other hand, VNOs that simply repackage and resell network operators' services may require less upfront investment and be likely to enter in greater numbers, thus providing more choices for consumers. To best serve consumer interests, VNOs should have the flexibility to adopt these or any other

[8] *See, e.g.*, Article 9b Directive 2002/21/EC of the European Parliament and of the Council of March 2002 on a common regulatory framework for electronic communications networks and services (Framework Directive).

approaches provided they do not own or control the underlying network facilities (in the case of wireline VNOs) or spectrum (in the case of mobile VNOs) over which they provide service.

The more infrastructure that is required to be provided by the NSO, the more difficult it is for the VNO to sever its relationship with a non-performing NSO. In order to incentivize competition among NSOs to help ensure an acceptable level of performance, mobile VNOs will want the option to provide any infrastructure other than the radio network or spectrum. If, for example, the VNO were required to use the NSO's HLR, the VNO effectively would be unable to move to a different NSO in case of poor performance. Almost every system, from ordering, provisioning, and settlement feeds through the HLR where the subscribers are identified. Having to repopulate this data in an HLR of another NSO would be cost prohibitive and likely force the VNO to accept poor performance from the NSO rather than change operators, which would harm the interests of consumers and impede competition.

Q9. Should Local Cable Operators (LCOs) or Multi System Operators (MSOs) with cable networks be permitted to share infrastructure with VNOs to provide last mile connectivity?

Yes. All network providers, including LCOs and MSOs, should be able to share infrastructure with VNOs based on commercially negotiated arrangements between the parties. As described above, these market based arrangements benefit both the network operator and the VNO.

Q10. Does the adoption of the VNO model require an entirely new licensing regime or will a chapter or a separate section for VNOs added to the existing UL suffice?

Many countries maintain licensing policies that facilitate the provision of resale services by maintaining simple authorization or notification regimes, or other streamlined procedures under which VNOs and other providers of resale services are subject to fewer licensing

requirements and less regulation than that applied to network service operators. The adoption of similar "light touch" authorization procedures by the Government and the TRAI would greatly benefit the Indian market. Such procedures can be accommodated simply by creating a separate authorization under the current regime, as shown by the authorization frameworks used by other countries (e.g. the UK, Norway, Sweden, Singapore, and Australia).

Q11. Comment on what measures are required to ensure that the existing or new licensing regime takes care of future requirements of technological development and innovation and provides a clear roadmap for migration to existing service providers.

The simple authorization approach recommended above in response to Question No. 10 without restrictions on the services they may offer would best address the highly dynamic telecom markets in which VNOs will offer services by allowing VNOs to offer new services without unnecessary regulatory involvement. Requiring service-specific authorizations for these operators would serve little purpose and delay their ability to offer new services and the associated consumer benefits, thus impeding competition.

Q12. In view of the complexity in the existing licensing regime as explained in Para 3.16 to 3.18, should India move towards NSO and VNO based licensing?

As stated in response to Question No. 10, the authorization of VNOs does not require any major change to the existing license regime and should be accomplished by creating a separate authorization under the current regime, or a notification scheme. The future license regime thus could allow proposed entrants to specialize in network creation or service delivery.

Q13. If yes, whether existing licensees may be mandated to migrate to NSO & VNO based new licensing regime? What challenges will arise in the migration to the two types of licensing framework?

As noted above in response to Question No. 10, a simple authorization or a mere notification scheme should be adopted for VNOs. However, we do not support any compulsory migration of existing licensees to a NSO and VNO based new licensing regime. Any such changes should be voluntary.

Q14. Should a VNO be issued a license at the National Level, or for LSAs as in the case of UL or should it be based on the host NSO license areas?

As noted in response to Question No. 5, VNOs should be licensed in a manner that allows them to provide any existing or future service, domestic or international, on a resale basis in any geographic location throughout India. Thus, VNOs should be issued nation-wide licenses. In particular, it would be unnecessarily cumbersome and burdensome to tie the license to a host NSO license area or to LSAs. Licenses limited to "host" NSO license areas would potentially require the VNO to obtain multiple licenses or would impede competition by "locking in" VNOs to purchasing the services of a NSO and limiting the ability of VNOs to negotiate satisfactory arrangements with NSOs on a commercial basis.

Q15. What should be the duration of a VNO's license? Should it be linked with the license of the NSO or should it be for 20 years, as in the case of UL?

A VNO's license should have not any set termination that requires renewal. The license should be revocable in the event the licensee violates the terms of the license and should terminate automatically upon the VNO ceasing to do business. It is most efficient, and customary elsewhere, for the license term not to have an expiration. If a specific term is nonetheless required, it should be no less than 20 years.

VNO licenses also should not be linked with particular NSO licenses. VNOs should function independently of NSOs and should negotiate resale arrangements with NSOs on a commercial, arm's length basis and should have the ability to enter into arrangements with other

NSOs if they wish to do so. Such commercial flexibility is essential to the proper functioning of a competitive marketplace.

Q16. Should there be any cap on the number of VNOs in a service area for a particular service? If yes, what should be the number? Please provide (a) service wise and (b) service area-wise numbers with justification.

There should not be any cap on the number of VNOs in a service area for a particular service. Indeed, even the current licensing regime does not mandate any caps on the number of providers in a service area. Market forces will determine the ideal number of competitors and allow consumers to enjoy the full benefits of competition resulting from the authorization of VNOs. A cap would hamper this competition. Any cap is likely to be highly arbitrary, because only the competitive marketplace can determine how many VNOs any market will support, and in the highly dynamic telecom marketplace, that number is likely to change over time. In the United States and Europe, for example, there are many hundreds of operators providing service on a resale basis. Such dynamic, highly competitive markets provide optimal benefits to consumers and other users, by providing a wide range of choices, low prices and innovative services.

Q17. Should there be a restriction on number of VNOs parented to a NSO? Justify your answer.

There is no reason, or basis, to restrict the number of VNOs with which any NSO may enter into resale arrangements. Different VNOs will have different requirements and different NSOs will have different abilities to accommodate those requirements. Even the requirements of each VNO and each NSO are likely to vary over time. Therefore, individual VNOs and NSOs are the only parties able to determine those requirements and the extent to which their requirements may be complementary. Accordingly, the TRAI should allow the parties to resolve

such matters through commercially negotiated arrangements. Any restriction required by the TRAI would not reflect the changing needs of individual VNOs and NSOs, and would likely impede the ability of VNOs and NSOs to enter into mutual commercial arrangements.

Q18. Alternatively, should one VNO be permitted to parent more than one NSO per LSA?

Yes. The VNO's architecture should be determined by the VNO which will develop an architecture that makes most sense for its business needs and may require the use of more than one NSO.

Q19. What should be the eligibility conditions for becoming a VNO?

A VNO should be a company registered under Indian Companies Act, 1956, and should be subject to the same equity and net worth requirements that are necessary for such registration. The underlying NSO is responsible for the network and thus the VNO does not need to establish its bone fides as a network operator. Such a VNO brings to the table its business acumen for providing service.

A VNO that provides part of the telecommunications network and seeks to access numbers should be subject to a review of the design by the DoT for the purpose of confirming that the network will not cause interference with other networks and that numbers will be used judiciously. Numbers should need to become active within 24 months of grant.

Q20. Whether an existing Unified Licensee with authorisation to provide all services shall be eligible to become a VNO of another Licensee in the same or other LSA? Or, will it need separate/additional authorisation to work as a VNO for delivering services for which it does not have access spectrum?

To allow all operators to use the benefits of resale arrangements to serve their customers, network operators should be allowed to operate as VNOs by buying and reselling the services or

capacity of other network operators pursuant to commercial arrangements. Such arrangements would provide some of the same benefits as the resale of such services or capacity by VNOs, by allowing network operators to provide service where they do not otherwise have adequate capacity and by allowing network operators with underused networks to operate more efficiently. This market-based practice can be helpful in promoting efficient network deployment and utilization.

Q21. Should there be any cross-holding restriction between a NSO and VNOs? If yes, please quantify the same with justification.

There should be no such restrictions other than as may be required by generally applicable competition law or mergers and acquisition guidelines as framed from time to time.

Q22. What should be the financial obligations of VNOs in the form of a) Equity & Networth b)Entry Fee c)PBG and d)FBG etc.? Please quantify the same with justification.

As noted above in response to Question No. 19, a proposed VNO should be a company registered under the Indian Companies Act, 1956 and the equity and net worth requirement should be same as required to register a company. The entry fee should be the minimum necessary to cover the costs of processing the authorization application. The performance bank guarantee should not be applicable under the proposed authorization framework for VNOs through a registration rather than a license, but the financial bank guarantee will be required to indemnify the DoT for the license fees payments to be made by the VNO, as with other telecom licensees.

Q23. Should a VNO utilise numbering resources, Network Codes and Locational Routing Number (LRN) of the NSO? Or, should the Licensor allocate separate numbering resource, Network Codes and Locational Routing Number (LRN) directly to a VNO?

VNOs should be eligible for allocation of their own number blocks and mobile network codes so that they may operate independently of the underlying network operator in these respects and, if necessary, change to another underlying network operator to obtain improved service. The ability of VNOs to obtain local numbers, which is widely available in Europe and elsewhere, leads to improved service quality and prevents VNOs from being "locked in" to their underlying network operator by the potential need to repopulate multiple databases with new numbers. This would limit the ability of VNOs to compete effectively and prevent the realization of the full potential benefits of the introduction of VNOs in the Indian market.

Q25. In case your reply is that the Licensor allocates numbering resource to the VNO, then how can it be ensured that the resources allocated to a VNO are efficiently utilised? Should any obligation be placed on VNOs for efficient utilisation of resources?

To ensure the efficient utilization of resources, the VNO should be required to employ numbers within 24 months. The Licensor should issue numbers in blocks of 1000 or 5000 if possible, with a review every five years to ensure that numbers are being utilized.

Q26. Should the LF and SUC applicable to the VNO be as per stipulated conditions of authorisation in UL? Or, should it be treated differently for VNO? Please quantify your answer with justification.

The LF, but not SUC, should be applicable to VNOs. Further, to allow for VNOs to compete on a fair and equal basis, the TRAI should amend the license fee structure to remove the duplicative fees that are paid on resold services and which severly impede competition.

The current license fee is levied on revenues from all sales at both the wholesale and retail levels, with no deductions for the costs of any leased or purchased airtime or capacity used to provide services. As a result, VNOs will be required to pay the licensee fee for this capacity twice – once when they acquire the airtime or capacity from the underlying network operator (as

part of the cost of the lease or resale agreement), and again when they resell this airtime or capacity as part of their service to the end customer. In contrast, network operators pay license fees on their services only once.

To remove this significant disadvantage to VNOs and other operators using leased or purchased airtime or capacity, and the resulting higher prices paid by their customers, the TRAI should allow all operators to deduct the cost of leased or purchased airtime or capacity used to provide service from the revenue upon which the license fee is levied.[9] This is a practice applied in many markets for calculation of their regulatory or similar fees.[10]

VNOs will not hold spectrum usage rights for the provision of mobile electronic communications; therefore, VNOs should not be charged any fees for the use of the radio spectrum. Instead, these fees will be paid by the host mobile network operator. As appropriate, the commercial agreement between the VNO and the MNO will incorporate cost of such fees.

Q27. Should an NSO be mandated to provide access to its network to a VNO in a time-bound manner or should it be left to their mutual agreement.

No. As noted above, arrangements between VNOs and TSPs and other network providers should be a matter of commercial negotiation between the parties.

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[9] *See also*, Comments of AT&T, filed Sept. 15, 2014, on Consultation Paper No. 09/2014 dated July 31, 2014 on Definition of Revenue Base (AGR) for the Reckoning of Licence Fee and Spectrum Usage Charges.

[10] For example, in Malaysia, the cost of circuits obtained from other Malaysia carriers is deductible from the revenues used to determine the universal service charge. In Thailand, operators may deduct up to 50 percent of the revenues used to determine the universal service charge based on these circuit costs. The United States prevents the universal service fee being charged twice on capacity that is resold to end-users by exempting capacity sales at the wholesale level where the wholesale provider obtains a universal service reseller certificate from the resale provider. If a wholesale provider obtains a reseller certificate, it does not report that associated revenue in its universal service contribution base. Instead, the reseller reports its revenue for this capacity in its universal service contribution base.

Q28. How can MNP be facilitated in the VNO/NSO model? Can the VNO be treated separately for MNP purposes? Or, should MNP be facilitated only through the network of the NSO?

The answer to this question depends upon whether the VNO provides simple resale (or "VNO-light") where the VNO buys a full retail service from the NSO and resells it, or whether the VNO is facilities based and obtains its own numbers ("VNO-heavy" or "full-VNO").

Under a "full-VNO" model, the VNO should be treated separately. Thus, where a VNO obtains numbers and provides other network elements in order to provide a traditional telecommunications service with 2-way voice calling via the PSTN, the number portability rules that apply to NSOs should also apply to the VNO.

Under a "VNO-light" model, MNP should be facilitated through the network of the NSO. In this regard, AT&T affiliates have extensive experience in Europe with mobile number portability as a reseller of retail personal communications services to enterprise customers under the simple resale model where the NSO's numbers are used and there are no special rules for VNOs. Instead, the numbers are issued to the VNO as part of the service provided by the NSO, and when the VNO's customers wish to change operators, the generally applicable number portability rules apply to the VNO as a reseller.

Q29. Who is to be held responsible for CAF verification and number activation, the NSO, the VNO or both?

The party that has the contractual arrangement with the end user purchase of service should be responsible for CAF verification. A VNO should be able to use the numbers of an NSO or to obtain its own numbers. The latter prevents "lock-in" to a single NSO. The NSO or the VNO, as the case may be, whose numbers are being used should be responsible for number activation.

Q30. Should an NSO or VNO or both be responsible for maintaining QoS standards as per TRAI's regulations?

The QoS standards should apply to the party whose network is being utilized. Thus, in the case of simple resale of a retail service using only the network of the NSO, the QoS standards should apply to the NSO as the network operator. In such case, the NSO is the only party with control over network quality. To the extent that the VNO provides network elements, it should be responsible for the QoS for those elements. If the QoS standard applied to the overall service, then both the VNO and NOS should have responsibility, and the commercial agreement between the VNO and NSO can allocate the respective duties to ensure adequate QoS for the overall service.

Q31. How should Mergers & Acquisitions be dealt with in the VNO/NSO licensing model? Should the recently announced M&A guidelines issued by the Government for existing players be extended to cover VNOs? Or, should their M&A be treated separately?

This issue should be addressed separately in the future in coordination with other Ministries and Departments responsible for competition matters and need not be a matter for initial licensing in this emerging field of new competition and investment.

Q32. Should the VNO be treated equivalent to the NSO/ existing TSPs meeting obligations arising from Tariff orders/regulations /directions etc. issued by TRAI from time to time?

Yes. VNOs should be treated in the same manner as other TSPs with regard to obligations arising from tariff orders and regulations.

Q33. Please give your comments on any related matter not covered in this Consultation paper.

VNOs should be accorded the same rights as other operators to enter into agreements for interconnection, access to numbering resources (such as E.164, E.212, and destination point

codes), mobile roaming, and other necessary services. Without such equal treatment, VNOs will have more limited ability to compete effectively with network operators and India will fail to obtain the full potential benefits of resale competition.

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AT&T would be pleased to answer any questions on these matters.

Respectfully submitted,
for **AT&T Global Network Services India Private Limited**

Naveen Tandon
Authorised Signatory

January 15, 2015