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Issues, and initial comments:

In formulating this Consultation document, TRAI has referred-to and drawn-upon a number of regulatory frameworks (notably in Europe – e.g. Ofcom of the UK) which have gained some years in adopting and tuning their framework. Referring to these precedents will need therefore to take account of the “tuning” in order to be current and to advance TRAI’s work to embrace generic MVNO trends in 2008, and importantly, the specific differences in the Indian market environment. This “tuning” will also need to take full account of the extended Regulatory considerations and responsibilities to include the Internet and Media, and to embrace close working within Consumer Protection and Competition authorities’ interests, particularly towards dominant ICTM Service Operators.

The basic approach of the Regulator and the structure and strength of regulation are clear considerations. There has been a trend towards “self-regulation “ in a number of markets, reflecting the maturity of markets and the role of market dynamics; however, both the MVNO environment the unique characteristics of the Indian market demand a closer review of the extent to which regulation will introduce a “hands-off” or “hands-on” approach. The consultation document appears to draw a conclusion of a “hybrid” approach.

It is critical that the Regulatory approach, and the framework which is introduced, recognizes the advances and associated investments to date, and embraces the introduction and development of MVNOs to the benefit of all stakeholders.

Guiding principles in formulating the Regulatory approach and framework are those which have served Regulators since the telecommunications deregulation wave of the early 1990s. These principles are perhaps more important as the wider responsibilities of Regulators have been extended to include the internet and media: these principles are:

- Competition (in the provision and care of ICTM products and services)
- Choice (for consumers)

All stakeholders will acknowledge the significant investments made to date, and projected by the Mobile Network Operators(MNOs) in India. These investments are not limited to financial; the investment in expertise throughout the planning, deployment, development and supporting of mobile telecommunications networks has provided the underlying environment in which MVNOs can be introduced, nurtured, and matured. This will provide a strong platform on which India can develop a world-class ICTM position to benefit consumers and society, and contribute significantly to the rapidly accelerating economic development of the country.

The following is formatted in the order of the consultation document, wherein the main issues are highlighted (including a limited background to each issue). Thus Nokia Siemens Networks has formatted the issue, and our response to each issue:



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“MVNO licensee is an entity that does not have assignment of spectrum for Access Services (2G/3G/BWA) but can provide wireless (mobile) Access Services to customers by sharing the spectrum of the Access Provider (UAS/ CMTS licensee)”.

**Issue 1. Do you agree with the definition of MVNO given in section 2.1.6 ?
If not please suggest alternate definition with justification.**

The TRAI has drawn on current/precedental definitions of MVNOs, which generally is a valid approach. However, in the area of spectrum ownership it may need to consider further these definitions within the context of its own objectives, and as appropriate to the Indian market and associated regulatory framework (e.g. spectrum and associated licenses). There is the need to be more specific around the reference to spectrum, and to the subtle but important areas of “ownership, access-to, and allocation” of spectrum. Examples of the challenge to this definition is the trend towards spectrum trading introduced by some regulators, and to the recent allocation of 1800MHz (GSM/FEMTO) spectrum to parties who may be regarded (and are indeed defined) as MVNOs, and who will almost certainly require a wholesale agreement with current 2G/Roaming Operator in order to leverage it and make it viable.

Issue 2: Do you think there is a need to introduce MVNO in the Indian Telecom Market. If yes, is it the right time to introduce MVNO as a distinct service provider with its own licensing and regulatory framework? Please elaborate the comments with appropriate reasoning.

The experience to date has been positive towards MVNOs and to their role. It should be noted, however, that these markets have included characteristics such as good coverage/capacity, with high levels of penetrations (often in excess of 100%), and which are maturing in terms of traditional voice and Value-Added-Services (SMS, MMS). These markets also have much higher ARPU levels to those currently in India. However, ARPU in this context refers to average revenue per mobile subscriber rather than the extended addressable revenue derived from a significantly deep segmentation of subscribers, as MVNOs are increasingly doing. Furthermore, the definition of “saturation” will need to be contextualized for the near-uniqueness of the Indian market, which may indeed never reach even the 100% levels defined in the “mature” European countries and beyond.

The competitive landscape (using the “guiding principles” outlined at the beginning of this response) is multi-dimensional; the number of providers of service providers is being extended in all service areas, with new licenses forthcoming which will further intensify the competitive environment; this, the objective of providing competition should be balanced against quality, reliability, and sustainability of the business models of all stakeholders. Regulators to date have concentrated in providing the environmental conditions within which MVNOs can be introduced and grow; in India therefore, this would need to be done at the same time that the current service providers are being stretched to fulfill current obligations. This is one of the “extra dimensions” which should be considered over-and-above e.g. the European

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experience. Thus, to date the European examples have encouraged market-dynamics to stimulate MNOs to embrace MVNOs, within an “enabling” framework; this will need to be reviewed to some extent in India, as the some components are not present in India, yet some challenges are not easy to parallel with Europe/U.S.

The question of whether MNOs should be mandated to take-on MVNOs is not straightforward; neither a hands-on, nor hands-off approach by the Regulator is likely to succeed. A “free-for-all” inevitably will lead to some form of unwanted/uncontrolled “boom-to-bust” scenarios, whereas a strict mandatory approach will force situations in some artificial, perhaps unsustainable way. Thus, a balanced approach would appear to be the best.

With respect to licensing of MVNOs it is perhaps proven that the “market dynamic” of the wholesale agreement between the MNO and the MVNO will provide a good natural framework to the Regulator to oversee (perhaps setting up a repository of some kind), which can then record, monitor, and benchmark prevailing market metrics etc. An additional safeguard might be to work with the MNOs to create a “wholesale environment”, which would separate the retail arm of the MNO, and create a healthy internal competition, and build the trust required to attract MVNOs, and in particular those who come with a strong customer-affinity/brand, to a potential competitor.

Moreover, the objective is to encourage all stakeholders to grow “the size of the pie and their slice of it”. Perhaps the more successful and sustainable current MVNOs illustrate what is meant by this; Virgin Mobile, Tesco, Carrefour, Tschibo, Blyk.

The subscriber “ownership” should fall into line with the overall DoT, and consumer protection frameworks and legislation. Included – and perhaps emphasized – are subscriber consumption, authentication criteria, credit rating, and data-gathering, storing, and maintaining. In addition, all matters of national security will need to be protected (currently all examples of “full MVNO” still rely on the MNO to deal with all matters of Lawful Intercept for example)

Some other considerations which we would introduce here, and which serve to shape the Regulatory framework are the following:

- The impact of the internet, with particular to the nascent, but significant, mobile internet
- The shift in the direction of advertising and search-assisted revenues
- Shifting consumption and subscription paradigms
- The relationship between MVNOs and MNOs is changing
 - Premium MVNOs are emerging which are being selective of their host MNO, and are moving towards multiple MNOs-per-market
 - MNOs have the opportunity to become “premium” network and service providers to premium MVNOs
 - Brand/Co-Brand collaboration are in the ascendancy

Issue 3: To what extent should the MVNO be permitted to set up their own infrastructure?

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Issue 4 (i): What Regulatory Model should be followed for MVNO in the Indian context?
(ii): What kind of obligations may be imposed on MNOs so that Mobile Virtual Network Operations are implemented effectively in India benefiting the customers?

Please elaborate the comments with appropriate reasoning.

All “flavours” of MVNO should operate within a licenses/mandated framework. However, they should be recognized as new-entrants, and such framework should be as light, but effective as possible; currently MVNOs have substantial distractions in mobilizing their business-idea/proposition via a wholesale agreement with an MNO. They need to have sufficient “oxygen” in the early stages of their development. Also, where they are significant players in another area (e.g. retail, financial, music etc) the MNOs benefit greatly from their approach to mobilizing their business proposition, so they need to be attracted/seeded to bring the extended value to the wider mobile environment in order to “grow the pie”. Thus, the wholesale agreement with the MNO requires little, but needs to focus on time/timing and barriers-to-entry as much as to price levels.

TRAI, in its consultation paper has illustrated three business models for MVNOs, which are as follows:

- **Full MVNO**, which provide their own network core including a Mobile Switching Center (MSC).
- **Intermediate MVNOs**, which acquire a switched service, but either provide their own home location register (HLR) or share a jointly owned HLR with an MNO; and
- **Thin MVNOs**, which only provide additional applications and content and which are not much different from pure resellers or service providers. These thin MVNOs are also called Enhanced Service Providers.

The type of MVNO is a feature of the business model of the party. Furthermore, the above types of MVNO can describe a single MVNO-over-time, wherein it begins life as a thin MVNO, and evolves into a full MVNO. Hence we see a need to recognize this evolution, and the way in which a framework will encourage the MVNO to evolve its business model appropriately, and not to introduce any restrictions to growth at the early stages; this would effectively be a “cap” on their ambitions, and be counter-productive in attracting innovation and entrepreneurialism to the wider opportunities available to MNOs. The “market dynamic” of the wholesale agreement between the MNO and MVNO will provide for much of this intent, but some light, but effective conditions may be required to facilitate this, particularly during the early stages. One consideration here might be a “time” obligation, wherein millstones are put in place at certain stages, which accelerate the wholesale agreement through to a timely conclusion, mapped to the business model of the MVNO, but respectful of the obligations and limitations of the MNO.

The business models will always invoke a harmonized type and level of regulatory compliance, and mandatory responsibilities; this should be mapped closely with those of an MNO, e.g. in collecting, storing and filing of data, tariffs, and billing/reporting, including qualitative benchmarking with industry.

TRAI can naturally draw on the examples provided (UK, Germany, Pakistan etc) but needs to map the differences, and therefore their particular considerations and situation re market development,

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Governmental/Political and Regulatory environment to these examples. Typically there are significant sensitivities driving the MVNO landscape:

- Market maturity/saturation
- Number of operators, and their wider ownership/connection with Wireline incumbent
- Pre-pay/Post-pay ratios, and how they are served/channelled
- Critical calling/collection scenarios between originated/terminated, and fixed/mobile

Issue 5: What should be the eligibility criteria for MVNO?

Please refer to response to Issue 4

Issue 6: Do you suggest different eligibility criteria for different MVNO models and regulatory frameworks? If Yes, Please suggest with justification thereof.

Entry barriers to MVNOs are inherent within the competitive landscape; Introduction of additional barriers would be against the spirit of the encouraging new value and propositions in an environment where current service providers have significant challenges in extending network footprints and meeting milestone commitments. Thus, MVNOs can be complementary to network service providers ramp-up in bringing additional attention to subscriber-acquisition.

Any eligibility criteria should be carefully introduced, should not unduly encumber MVNOs, and should be even-handed across the MVNO-types.

An MVNO can be one of a wide variety of entities, from a Brand, through to a loyalty/affinity-play, retail (high-street or internet), through to public service providers, hence it will not have a knowledge of working experience of telecommunications at its core. These players are increasingly "of substance", and successful in another sphere of business, hence they come with a working awareness of corporate responsibility etc. Further, they have a developed brand and loyalty value towards their customers which are central to their relationship with their customers (indeed many are referred-to as CRM-MVNOs). Thus, they need more by way of alignment with the eligibility and regulation of MNOs in this environment.

There may be the inclination to build-in to eligibility metrics some "balance sheet" criteria. So long as this is clearly set-out in the context of MVNO, this may be desirable in order to prevent a "free-for-all"

Issue 7: Should there be any restriction on the number of MVNOs attached to an MNO? Please elaborate the comments with appropriate reasoning.

In principle there should be no restrictions in order to create a healthy, competitive environment in which market-dynamics will play the most significant part in the number of MVNOs which come to the market, survive, and grow. Beyond this the same dynamics generate acquisitions and consolidation.

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We have set-out earlier the potential to promote within the MNOs the concept of the creation of the “wholesale environment”; this would (in addition to other benefits-to-all) provide for an investment program on the part of the MNO and the MVNO along the lines of the development/growth of the business. The danger in not providing for this concept is that the MNO channels its investments towards the development of its own retail, customers, and potentially to the detriment of the MVNO. The wholesale environment within the MNO creates relationships embracing the trust necessary for the MNO-MVNO to develop to mutual advantage

Whilst in principle the choice and number of MVNOs per MNO should not be mandated or managed, other mechanisms could be introduced which would provide a balanced framework ensuring a structured approach to attracting MVNOs and resisting the bow-wave affect in parallel industry situations (Local Loop Unbundling of the broadband network). The above “balance” will need to be taken in tandem with the network resources of the MNOs, which needs to be able to handle the additional traffic introduced by the MVNOs.

A “free-for-all” would not be in the interest of all of the stakeholders in the MVNO value-chain. At its works it could introduce a “boom-to-bust” environment, which would be a serious setback to a introducing and nurturing such a significant industry trend

Issue 8 What should be the commercial model/framework for spectrum sharing by MVNO; w.r.t. (i) Department of Telecom and (ii) MNO?

This has been covered in part earlier in the response. The essence of our conclusion is that there needs to be clear harmonization of terminology in the context of spectrum ownership in relation to

- Ownership of spectrum
- Sharing spectrum
- Access-to spectrum

This detail needs generate a harmonized terminology in the wider context of spectrum ownership, which is increasingly being taken-up by many none-traditional owners and operators, but whom will require access-to and perhaps spectrum-trading in future.

Issue 9: What should be the service obligations of MVNO? Please list them with justification thereof.

The service obligations will tend to be mapped to the MVNO model, wherein the obligations of a full MVNO will typically be essentially those of an MNO, with the exception of those Service Levels and Quality of Service associated with the radio coverage/spectrum.

Issue 10. What should be the method and consideration for determining the entry fee for MVNO?

A balanced approach needs to be applied to setting entry fees for MVNOs. Clearly the MVNOs have to be of substance and be able to meet their evolving obligations. Thus, determinants similar to the approach of a fee linked to Service Area Category and/or circle category, and associated, addressable market size. It is important to set such a fee on a number of criteria, which both recognizes the need to attract new, innovative value and propositions, and capture the shared-success approach.

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Issue 11. What should be the definition of AGR for MVNOs?

The definition of ~AGR for the purpose of MVNOs should be similar or the same as for MNOs. It is important that the AGRs discount the charges associated with the wholesale agreement with the MNO, so that AGRs are fairly charged on the “net sale” of the MVNO. A phasing or sliding scale of this charge may be a fairer to the MVNO as it takes significant costs in setting-up its ability to gain revenues (go-to-market), and cannot achieve economies of operation until it reaches a critical-mass installed-base.

With reference to Spectrum Usage Charges, a consideration here is that a blanket-charge approach to specific spectrum charge allocation is perhaps not in the interest of any of the stakeholders. A wholesale rate across-the-board would be an alternative approach. A consideration here is that the value-per-unit of spectrum is likely to be very variable (e.g. advertising, maps, machine-to-machine) and this would actually be restrictive on the MNO!). There are few – if any – “data MVNOs”, and the limited experience is already highlighting the anomaly of the charging by the MNO of non-revenue generating data which has to be paid under current arrangements (e.g. for enabling presence updates and other background-status updates and refreshes)

Issue 12: What is the best way to protect the subscribers both in terms of continuity of service and applicability of tariff plan:

We have proposed that the subscribers will have the same or similar protection in terms of service availability and support whether they are served by MNOs or MVNOs. This will certainly be desirable and necessary where the MVNO serve the subscribers similarly. Where the service continuity breaks down where it is provided by the MVNO it would be practical that the subscribers would transfer (with associated service continuity) to the serving MNO; the principle of same or similar protection would safeguard this transfer process, as the subscriber continuity will be the same i.e. they will see no change.

In the latter eventuality, there would be some guidance provided wherein the subscribers are made aware of the impending change to their provider so that they can make a conscious alternative choice or default to the serving MNO. Provision for these fall-back eventualities can be built within the wholesale agreement between the MNO and MVNO, and into the licensing framework of the MVNO.

There may need to be a link between Consumer Protection legislation and the above, in order that the subscribers wider interests and choices are served. This would serve both all parties in cases where MVNOs are subject to acquisition/consolidation as well as to disputes arising from MNO/MVNO wholesale agreements; associated escalations and appeals etc would also be included.

i) in case of a dispute between MVNO and MNO?

This eventuality, and the role of the Regulator, would be framed by the overall approach of the Regulator in setting out the approach to the framework. A strong regulatory framework is likely to call for a role of the Regulator in disputes of this nature, whereas a more relaxed framework will provide for dispute resolution within the working and legal agreements between the MNO and MVNO. A

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more practical approach might be for the strength of the formal wholesale agreement to provide for dispute and escalation procedures, and that the Regulator takes an arbitrational role, the outcome of which is given as binding.

ii) in case MVNO wants to exit the business.

This eventuality does require detailed consideration, as there is a high incidence of exits by MVNOs for any of a number of reasons. The above response covers this. The area not considered however, is the invoking of “performance bonds” placed by the MVNO and held by the Regulator, and which can be redeemed at the appropriate time under conditions to be formulated.

Issue 13: Should there be any roll out obligations specified for MVNO? If yes, what should be the penal provisions for failure/ delay in fulfilling the obligations.

In principle it would be counter-productive to impose any rollout obligations on MVNOs. This would further deter market entrants, many of which have developed businesses and propositions which do not/cannot take such further barriers to entry.

By nature of the business models (niche, deeply-segmented approach), the proposition of the MVNO may be skewed to lower-subscriber volume, higher ARPU, so it would be difficult in any event to provide a fair qualitative and quantitative obligations – particularly to a nascent business.

Issue 14: What shall be the specific guidelines on the Mergers and Acquisitions of MVNO? Please elaborate the comments with appropriate reasoning.

This area should be considered in close harmony with DoT in order to align impact of Mergers/Acquisitions along corporate lines and licensing-framework considerations. For full MVNOs at least the same framework from both the DoT and Regulatory perspective should be applied as if they were MNOs. This (as with other aspects of the regulatory framework) would benefit from timescales/milestones being put in place by both the Regulator and the DoT, including the processes during transfer of assets and subscribers. The transfer of licenses will presumably be coupled with the transfer of obligations, and license payment metrics and performance obligations would remain in place. As stated elsewhere, the Competition Authority/DoT will be required to assure fairness in the competitive landscape and that “significant market power” metrics are in place in such eventualities.

Issue 15: Should there be any restriction on cross holdings between two MVNOs and between MVNO and an MNO in a service area? Please comment on the nature and scale of restructuring.

Issue 16: What should be the FDI limit for MVNO?

We would suggest that the 74% FDI limit for MNOs be applied to the MVNO; this matches many aspects of the framework which draw on the similarity of the MNOs (particularly the full MVNOs) and MVNOs.



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Issue 17: What should be the quantum of FBG and PBG for MVNO?

It is within the spirit of stimulating the market, and incentivising the MVNOs to come-to-market that no performance bank guarantee be levied on MVNOs. Where there is no “rollout” - as by definition there is not – there should not be performance or bank guarantees. However, if this requirement aligns with consumer protection compensation, or requirements of the DoT, funds/bonds may need to be in place to provide compensation or offset obligations

Issue 18: Any other relevant issue you would like to suggest/comment upon.

NMP and MNC are emerging issues at present. The former has been an issue for some years, and different markets have followed similar approaches as to how to implement and maintain it; however, to leapfrog such markets as the UK, a stronger “time” dimension needs to be considered, i.e. it should not take weeks to port a number (with associated provisioning, admin etc), it should be days! Current regimes are too “soft” with the “losing” party, which is statistically more likely to be the MNO, hence it is to some extent anti-competitive for the porting process to be unduly long.

Also, MNC needs the extra attention of the suggested MNP and interconnect regimes, and should be linked to thinking and framework of number-block allocations.