CISCO

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New Delhi 110002

Subject: Cisco Response to TRAI Consultation Paper on Consultation Paper on Ease of Doing Business in Telecom and Broadcasting Sector

Dear Sir,

We hope you are doing well and are safe!

At the outset, we would like to thank TRAI for conducting this comprehensive consultation paper on the ease of doing business in telecom and broadcasting sector.

Over the last 25 years, Cisco has been a proud partner to India's journey to become one of the most digitized and connected nation the world. It is inspiring to witness India's commitment to not only enable access to the entire country but also build safe, secure and reliable world-class networks.

As we all recognize, regulations need to keep pace with advancements in technology and therefore periodic review of the regulatory framework becomes very important. In this regard, we have provided inputs on strengthening the current regulatory regime and also provided avenues for expansion of Indian telecom landscape. Please find enclosed our detailed submission for your kind reference. We look forward to opportunities to further discuss this with you.

Best Regards

Harish Krishnan

Telecom Regulatory Authority of India
Cisco Systems, Inc.
Response to the Consultation Paper on
Ease of Doing Business in Telecom and Broadcasting Sector

Q2. Whether the present system of licenses/permissions/registrations mentioned in para no. 3.81 or any other permissions granted by DoT requires improvement in any respect from the point of view of Ease of Doing Business (EoDB)? If yes, what steps are required to be taken in terms of:
1. **Simple, online and well-defined processes**
2. **Simple application format with a need to review of archaic fields, information, and online submission of documents if any**
3. **Precise and well-documented timelines along with the possibility of deemed approval**
4. **Well-defined and time bound query system in place**
5. **Seamless integration and approvals across various ministries/ departments with the end-to-end online system**
6. **Procedure, timelines and online system of notice/appeal for rejection/cancellation of license/permission/registration**

Give your suggestions with justification for each license/permission/ registration separately with detailed reasons along with examples of best practices if any.

Cisco response:

The current timeline provided granting a UL/UL(VNO) license is upto 120 days. We request the following:
1. The DOT has a dedicated portal for submitting applications. Currently, there are only three stages that are visible for an applicant
    a. Submitted
    b. Under Process
    c. Completed
2. It is recommended that the stagewise approvals/comments are recorded on the site it will be more transparent and easier to monitor
3. It would also be beneficial if the inter-departmental movement of the request can be traced
4. The entire process should have a guaranteed turnaround time (TAT), including stagewise TAT

In addition to the above, there is lack of clarity on adoption of UL license of a Virtual Network Operator (VNO) license. The National Digital Communications Policy 2018 under the National Broadband

mission has listed convergence in areas such as IP-PSTN switching as one of the strategies. The convergence is much needed to realize the full potential of the VNO license.

Virtual Network Operator (VNO) license is a service license meant for those service providers who do not wish to deploy their own network and rely on Network Service Operator (NSO) for telecom resources. The compliance burden and financial conditions associated with telecom networks is relaxed under the VNO license, hence it is most suitable for cloud based communication service providers aiming to deliver Digital services to the populace. The large section of the society can access these Digital services through data connectivity which were hitherto not available to them.

The recent pandemic has accelerated the Digital Transformation journey of consumers and businesses big and small alike. This has encouraged innovative solutions in the areas of workflow management, collaboration tools and unified communication. The application of these solutions and tools are across the board in all sectors, it is more visible in the services sector, e-commerce, e-education, e-healthcare.

Communication Service Providers (CSP) have developed or repurposed their existing products to leap-frog this Digital connect opportunity through faster deployment of data centers and software solutions. Few examples of these solutions are :-

a) Web based Conferencing

This is a web-based solution for exchange of information and views with a group of participants. The work from home/ anywhere environment has brought the utility of this solution to the forefront in many areas including office work and education. Webinars are generally used for information dissemination to a large group of participants. The rapid adoption of this solution has pushed the CSPs to add new features viz. instant messaging, sharing of documents, recording of events, whiteboard for collaboration. Some of the participants may be located in poor internet zone or using mobile hotspots. In such cases there is a need to connect to the meeting/ webinar using a PSTN dial-in number for audio connectivity. The regulations are unclear on converging IP and PSTN traffic for such solutions.

b) Contact Centre Solution

The domestic and global contact centers (GCC) have emerged as a major employment source. Post the liberalization of the OSP guidelines these contact centers are expanding to Tier-2 and Tier-3 cities thereby generating employment in hitherto un-covered areas. Most of the agents are working from home (WFH) from far flung areas. This contact center solution has dependence on PSTN connectivity and under the present VNO license this connectivity is permitted from only one NSO provider which impacts reliability of the solution that can be achieved through a redundant architecture.

c) Collaboration Tools

Customer engagement is the mantra for success in modern business environment. The organization should have a 360 deg view of the customer interaction, with integration of customer resource planning

(CRM) tools, sales monitoring tools, enterprise resources management (ERP) systems and the communication system. The client service executive has to have all the information on a single screen as well as ability to call any landline / mobile held by the customer from the agents' computer. This is possible by taking full advantage of the convergence of IP and PSTN.

Issues in the VNO license

	Current position	Why is change required	Impact of reform on India as a country
IP-PSTN mixing	Permitted only in NSO network	• NDCP 2018 envisages convergence of IT and Telecom through IP-PSTN switching. • Most countries permit convergence	• Enhances digital services viz. hybrid work, WFH, Web 3.0 services, financial services to small businesses
Multiple PSTN connectivity	Not clearly permitted under VNO	• Build redundancy in network • Permitted for other services (internet, NLD, ILD)	• Enhanced Quality of Experience (QoE) for consumer
Lawful intercept and monitoring (LIM)	System specifications for lawful intercept under VNO license not provided	• PSTN is already monitored under NSO network & internet is monitored under ISP network • Uncertainty about whether a pure VNO (without any telecom infrastructure) need to deploy any LIM system	• Eliminates duplicity in network • Removes uncertainty for licensee

I. IP-PSTN mixing

Communication Service Providers (CSP) may like to acquire a Virtual Network License (VNO) license in order to deploy data center infrastructure in India and offer communication services. However, the present VNO license permits mixing of IP-PSTN in Network Service Operator (NSO) network and not in the VNO network, thereby reducing the flexibility of the VNO licensee. In the event they procure a full-fledged UL license, then they will be subject to strict compliance burden which is envisaged for a core network deployment, this is not the case for these application service providers.

These solutions are hosted on the cloud and mixing of IP communication with PSTN connectivity is integral to the network architecture of the CSPs, thus creating a limitation of the existing VNO license. The VNO licensee procures access to landline services (PSTN) from Network Service Operators (NSO), the internet bandwidth is procured from ISPs. All calls to landline/ mobile are routed through the NSO network and all internet traffic from any location in India/ abroad is routed through the ISP network. CSPs use PSTN services as a network resource or raw material and create innovative products and services.

Thus, suitable changes may be incorporated in the VNO license to increase its suitability for cloud based communication service providers.

II.   Multiple PSTN connectivity

The VNO license permits parenting to only one NSO for access services, no such restriction applies for other services (internet, NLD, ILD). Since the CSP is dependent on PSTN, they need to be connected to more than one NSO for landline services in order to provide redundancy in its network architecture. This specific point may be suitably clarified to build redundancy in the wireline connectivity.

III.   Lawful intercept

Communication Service Providers (CSPs) may procure any of the two licenses as per their needs and service offerings :-

VNO license – The access license condition mentions that the licensee shall own & install, test and commission all the Applicable systems parented to NSO(s) for providing the Service authorized under this License agreement if required. If equipment capable of monitoring is available with the Licensee otherwise it shall be the responsibility of parent NSO(s). In that case the VNO licensee has to intimate the Licensor prior to commencement of service.

The VNO access licensee does not provide user identifiable numbers and is solely reliant on the NSO for these numbering resources. The PSTN calls get monitored in the NSO network. They intend to provide data services under the VNO Access license, in case of data services the Lawful Intercept and Monitoring is covered under TEC No. GR/IPLC-01/01 JUL 2007. This system is provided by CDOT under the CMS project and applicable to ISP license.

Unified License – The access licensee permits provision of voice, SMS and data services. The system requirement for intercept of Voice call is mentioned in the Access license condition below and the detailed specifications are provided in TEC/GR/SW/LIS-001/04/JUN-17. Such capability needs to be demonstrated to the licensor and approval sought prior to the commencement of service.

Lawful Interception and Monitoring equipment for trouble free operations of <u>monitoring of at least 480 simultaneous calls</u> as per requirement with at least 30 simultaneous calls for each of the designated security/ law enforcement agencies. Each MSC of the Licensee in the service area shall have the capacity for provisioning of <u>at least 3000 numbers for monitoring</u>. Presently there are ten (10) designated security/ law enforcement agencies.

As may be seen from the above, the system requirements are designed for voice calls.

In the absence of clarity on the above issues, some of the CSPs are going ahead and procuring UL license instead of VNO license. Regardless these licensees do not intent to deploy core network and continue to rely on NSOs for numbering resources and PSTN connectivity.

Clarity is needed that is such circumstances, the UL licensee can rely on the lawful interception system of the NSO network, and they do not have to install such systems which are designed for voice calls.

Q. 11: Whether the present system of permissions/approvals mentioned in para no. 3.107 or any other permissions granted by TEC requires improvement in any respect from the point of view of Ease of Doing Business (EoDB)? If yes, what steps are required to be taken in terms of:
1. **Simple, online and well-defined processes**
2. **Simple application format with a need to review of archaic fields, information, and online submission of documents if any**
3. **Precise and well-documented timelines along with the possibility of deemed approval**
4. **Well-defined and time bound query system in place**
5. **Seamless integration and approvals across various ministries/departments with the end-to-end online system**
6. **Procedure, timelines and online system of notice/appeal for rejection/cancellation of permission/approval**

Give your suggestions with justification for each permission/approval separately with detailed reasons along with examples of best practices if any.

Cisco Response:

At the outset, the industry is grateful for the acknowledgement by TRAI on the overlaps that exist between multiple certifications and multiple authorities. We highly recommend removal of overlaps from the said certifications, including MTCTE from TEC, ETA from WPC, COMSEC

from NCCS and others and enable a single-window scheme be introduced. In addition, we recommend the following:

1. The Phase 4 of the MTCTE currently is bifurcated into two parts with two different timelines:
   a. EMI/EMC and Safety requirements: February 1, 2022
   b. TR requirements: July 1, 2022

As you must be aware, Safety tests are destructive in nature, and once a sample is tested for safety requirements they can't be used for any other testing. Because of the bifurcation of the certification of Phase-4, the OEMs would be forced to arrange minimum two sample for testing Phase-4 products. This would unnecessarily double the sample and certification costs for the OEMs/applicants.

It is requested that the bifurcation is removed and all parameters are made mandatory within a single timeline, so as to empower the OEM to choose the sequence of tests. Apart from reducing the cost and manpower by the OEM, it will also reduce the burden on the authority to issue two certificates – interim and complete.

2. **Decouple National Security Directive for Telecom Scheme (NSDTS) and MTCTE:** Currently there is a pre-requisite of obtaining a Trusted Product certification to further obtain the MTCTE certification. This is problematic because the NSDT scheme is only applicable to products in the Indian public telecom network, whereas the MTCTE scheme is applicable to all telecom products sold or imported in the country. Further, the NSDT scheme is still in its early stages of implementation and evolution. If the schemes are coupled, there will be delay in certification, which will further disrupt installation in critical infrastructure.

3. **Industry consultations for change in procedures:** TEC conducts regular Mandatory Testing Consultative Forum (MATCOF) for discussions pertaining to Essential Requirements (ER) and General Requirements (GR). However, there are no active consultations for any procedure related changes. It is recommended that an Annual MATCOF is conducted to review the procedures of the MTCTE scheme to understand the challenges faced by the applicants, CABs and other members of the ecosystem.

Q. 12. What measures should be taken to ensure that there is no duplicity in standards or in testing at BIS, WPC, NCCS, and TEC? Which agency is more appropriate for carrying out various testing approvals? Provide your reply with justification.

Commonalities in Various regulations in India

	BIS	WPC	MTCTE	ComSec
Concerned Ministry	Bureau of Indian Standards MEITY, Department of Consumer Affairs	Wireless Planning Commission (WPC), Department of Telecom	Telecom Engineering Centre (TEC) Department of Telecommunications	National Centre for Communication Security (NCCS) Department of Telecom
Application format		Saral sanchar portal	MTCTE portal	To be announced
Effective Duration	2,3,5 years Depends on fee	No end date	5 years	5 years
Domains	Safety (IS 13252, IEC 60950)	Radio Frequency	Safety (IS 13252, IEC 60950, IEC 62368) EMC/EMI Radio Frequency Telecom	Communication Security
Product categories	Consumer ICT products	Telecom products in delicensed band	All telecom products	All telecom products
Products common in Scope with MTCTE	IPMCE, Servers, Smart Cameras,	Wi-Fi Access Points	loT Gateway, Wi-Fi Access Points, WLAN Controller Equipment, PTP PMP Wireless Access Equipment, Smart Camera, Router, LAN Switch, Optical Networking (DWDM), IP MCE, Conferencing Equipment IP Security Equipment	IP Routers, PON Devices, SDH/SONET, DWDM, DXC, Wi-Fi Products, IoT/Cellular Gateway, etc.
Avg lab Test cost for in-country testing in India (INR)	80,000 – 120,000	0 (No in-country testing, submit global TR)	10,00,000 – 40,00,000	10,00,000 – 40,00,000
Avg Certification Cost	100,000	10,000	300,000	300,000

It must be noted that the present consultation does not capture the essentials of the National Security Directive in Telecom (NSDT), which is governed by the National Security Council (NSC). The Directive attributes Trusted Source to the OEM supplying products and 'Trusted Products' which are installed in the Indian public telecom network.

Given the above context, we propose the below:

I. **Integration of ETA and MTCTE**
   1. As is evident in the above table, there is overlap between products, testing parameters between ETA and MTCTE. WPC also requires only global test reports, which is currently valid under the MTCTE regime till June 30,2022. Presently, it is unclear whether global test reports will be acceptable for ETA after June 30, 2022. Further, both respective agencies – WPC and TEC – are under the domain of the DOT. In light of this, we propose the following:
      a. Option 1: Subsume ETA approval for wifi products under MTCTE scheme. Eliminate separate filing entirely for ETA approvals
      b. Option 2: Retain ETA approvals but offer a section within the MTCTE portal to seek ETA approvals. This will eliminate separate filing for ETA approval under the Saral Sanchar portal
      c. In both cases, it is recommended that additional fees for WPC approval is removed

II. **Integration of CRO and MTCTE**
   1. The BIS regulation seeks information pertaining to two key aspects of the products – Safety and the supply chain (location of manufacture). For example, BIS provides factory authorization (location-based approval) and factory registration requires documents such as Business license, ISO. Therefore, the Factory owns the certificate. However, in TEC, Brand is manufacturer.
   2. The supply chain parameters for telecom products are also governed by the NSDT regime under NSC
   3. There is also an overlap between products that are covered under the present phases of both CRO and MTCTE regulations. In a recent MATCOF by TEC, more consumer products like Servers and ICT equipment are proposed under Phase V, which is expected to be made mandatory by January 2023
   4. Therefore, there is a clear overlap in the testing parameters and products between the CRO, NSDT and MTCTE regulations
   5. In light of this, we propose the following:
   6. Integration can be done in phases:
      a. Phase 1 - Use of Single safety test report across CRO and MTCTE

       i. Since TEC is overarching of BIS, testing for common products for both regulations should be done under MTCTE and safety results to be used for CRO

       ii. Products that are not covered under TEC, separate safety testing to be performed for BIS but Test Reports need to be used in future for TEC (in case these products come under TEC scope)

       iii. Safety Test Reports should be acceptable by both depts irrespective of labs (TEC should accept Test Reports from BIS approved labs and vice-versa)

   b. Phase 2 – Integration of complete process:

       i. Common portal for BIS and TEC with various option of roles access – separate users for BIS and TEC; User authorization of the portal should be given to multiple users for the given company

       ii. Portability of test reports and report formats across BIS and TEC

       iii. Optimization of certification fee between 2 agencies with single payment method.

       iv. Single certification to be leveraged for BIS and TEC

       v. Uniform documentation

       vi. Single label

       vii. Single cert repository

       viii. Single renewal timeline & process

       ix. Internal alignment of various dept.

III. Alignment of BIS, ComSec, ECR/EP, etc. Main Tested Model/Hardware Configs with TEC

1. If the worst-case config for each regulation differs, we end importing different set of Hardware of all types of testing. At present TEC worst case Config might not be worst case config for ComSec and so for ECR/EP. For eg., For ECR/EP we need to use the highest power consumed Optics while TEC limit these optics type as per IEEE Standards, so when ECR/EP becomes mandatory in-country testing we might face these issues

2. Main and associated model definition should be uniform for all ComSec, ECR/EP, TEC, etc., it will make sure we get one hardware to test and comply all the Indian Certification

Q. 15. Whether the present system of permissions/registrations mentioned in para no. 5.10 or any other permissions granted by MeitY along with BIS, requires improvement in any respect from the point of view of Ease of Doing Business (EoDB)? If yes, what steps are required to be taken in terms of:

1. **Simple, online and well-defined processes**
2. **Simple application format with a need to review of archaic fields, information, and online submission of documents if any**
3. **Precise and well-documented timelines along with the possibility of deemed approval**
4. **Well-defined and time bound query system in place**
5. **Seamless integration and approvals across various ministries/ departments with the end-to-end online system**
6. **Procedure, timelines and online system of notice/appeal for rejection/cancellation of permission/registration**

Give your suggestions with justification for each permission/ registration separately with detailed reasons along with examples of best practices if any.

Cisco response:

Over the last few months, the applicant does not get intimated on the queries being raised. The applicant is required to manually visit the portal every day to check any new queries or the status of the responses provided. It is recommended that if there is any query raised by BIS, the applicant and Manufacturer should both be intimated through E-mail and/or SMS.

Similarly, till the schemes are rationalised, it is recommended that BIS adopts the helpdesk model under TEC where the Applicant and Manufacturer can reach out for any clarification related to product, application or for any query raised by BIS on any applications and obtain a clarification in a time-bound manner.

Q.16 What improvements do you suggest in the various extant audit processes conducted by DoT LSAs? How the process of the Customer Acquisition Form (CAF) audit can be further simplified? Provide your comments with justifications.

Cisco response:

While there are no specific challenges with the procedure of the audit processes, repeat queries tend to delay processes longer than expected. While carrying out audits, it is recommended that LSAs indicate all relevant queries in one go, to minimise the time and effort by applicants. Further, all their observations and any follow up should preferably be restricted in the areas of the initial observations

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