

DRAFT

Ministry of Communications and Information Technology Department of Telecommunications

October , 2012

Notification

Subject: Policy for preference to domestically manufactured telecom products in procurement, due to security considerations- Notifying Telecom Products due to security consideration in furtherance of the Policy.

No. 18-07/2010-IP: Department of Information Technology (DIT) has issued a Notification No. 8(78)/2010-IPHW dated 10.2.2012 for providing preference to domestically manufactured electronic products in the procurement process due to security considerations.

2.0 The Notification provides that the Ministries/Departments concerned and the agencies deploying such products would notify electronic product/s having security implications. As per clause 2.2.1 of the Notification, telecom products which have security implications and which are procured across various sectors, have to be notified by the Department of Telecommunications (DoT).

3.0 With increasing deployment of electronic and telecom devices and Information Technology (IT) applications in various sectors, the critical applications and networks are vulnerable to cyber attacks. As use of telecom & ICT products becomes all pervasive, the ability to use these devices or applications to disrupt normal human life and threaten life and property by an inimical interest has become increasingly common.

3.1 In a connected world, telecommunication is a vital and critical component of the economy. In the context of emerging cyber attacks, the security of the telecommunication infrastructure and network elements such as routers, switches, exchanges, transmission systems and other telecom infrastructure elements, is of paramount importance.

3.2 Some countries have the means, opportunity, and motive to use their telecom companies for malicious purposes to shutdown or degrade India's critical national security systems in time of crisis or war. Similar threats being posed by the components and systems imported in India from various countries, cannot be ruled out as the entire supply chain associated with hardware and software, including managed services, can easily be used to insert features or vulnerabilities into any product which could assist espionage and cyber warfare. Moreover, post-production evaluation processes may not necessarily be designed to uncover malicious codes; and the evaluation programmes may only create a false sense of security that an incomplete, flawed, or misapplied evaluation would provide, which may result in unwittingly dropping the guard, simply on the basis of *approval* given to the product by an accredited expert.

3.3 Keeping in view these issues, it is essential for India to protect its vital telecom infrastructure from espionage and cyber warfare aimed at it. The trusted security solutions of national importance with total assurance can be built only by using domestic products.

3.4 All Government licensees and their Managed Service Providers shall, therefore, be required to procure domestically manufactured product to the maximum extent possible due to followings reason:

- a) Trusted domestic telecom products have to be deployed in all critical/core segments of all the networks, as all such active network elements have security implications. Such deployments will strengthen the sensitive/vulnerable parts of the network by securing it against interception, eavesdropping, etc.
- b) Use of such equipments will ensure continuous services at critical times with no major outage.
- c) Such equipments must be used for providing telecom services to any government department, establishment needing secured functioning, bank, financial institution, public utility (hospitals, public service centers, railways/power companies), etc.
- d) Such equipments must also be used for sensitive network elements, like points of interconnection, internet exchanges, international bandwidth connectivity to or out of India, etc.
- e) By having a domestic supplier, the service provider will have access to continuous supplies of equipment in case of a war or territorial dispute with a foreign nation who may have capabilities and control to instruct the suppliers from their country to block further equipment supplies, spares or critical support. In such a scenario, the service provider can at least continue to run its network using existing foreign equipment as spares, and restoring or expanding its network using domestic products.
- f) Domestic equipment suppliers can serve as trusted, knowledgeable partner to identify, work-around or eliminate suspected security problems from foreign vendors' equipments.

4.0 Keeping in view the sensitive nature of the telecom infrastructure, 100% requirement of the active telecom products have to be met from domestic manufacturers. However, with a view to ensure gradual and smooth technology transfer, wherever required, for these security sensitive items and manufacturing these telecom products in the country, it is hereby notified that Government licensees including Managed Service providers will procure at least a minimum percentage of their telecom products requirement fulfilling minimum value addition prescribed against each item. For all Government Licensees, the list of telecom products, indicating the year-wise preferential market access and criteria to qualify as domestically manufactured product, is given in Table-A in the subsequent pages of this notification.

4.1 Preferential Market Access (PMA) and Value Addition (VA) indicated against each year are the minimum prescribed, and efforts must be made by Government Licensees, including Managed Service providers, to achieve higher preferential market access and value addition, every succeeding year. The formula for calculation of value addition for telecom products also shall be as notified by Department of Electronics and Information Technology from time to time. All the

telecom products which do not meet the minimum value addition criterion for that year, shall be treated as imported telecom products, and shall be dealt accordingly. Mere assembly of telecom products or Electronic Manufacturing Service (EMS) domestically would be considered as a value addition restricted to a maximum of 10%. In case of SIM Cards, blank SIM Cards can be imported in the first year and personalization and loading of Operating system in India will be considered as 25% value addition.

4.2 The policy is also applicable to procurement of telecom products as a service from Managed Service Provider (MSP).

4.3 Under license condition, security condition for all Government licenses shall be modified along with penalty provisions on default if any, to reflect their obligations to procure domestically manufactured telecom equipment notified even if managed by MSP.

5.0 It shall be the responsibility of concerned Ministry/ Department to ensure that preference as prescribed for notified telecom products is being provided by all entities.

6.0 Concerned Ministry/ Department may seek the advice of the Department of Telecommunications (DoT) for taking necessary actions.

7.0 Based on the availability of domestic products, the list of products, as well as value addition for each product, would be reviewed and notified by the Department of Telecommunications on periodic basis.

Table-A

PMA= Minimum Preferential Market Access to Domestically Manufactured Telecom Products in indicated financial year

VA= Minimum domestic Value Addition to qualify as Domestically Manufactured Telecom Products in indicated financial year

Sl. No.	Telecom equipment Description	Year 2013-14		Subject to Periodic Review based on new industry inputs/developments)							
				Year 2014-15		Year 2015-16		Year 2016-17 to 2018-19		Year 2019-20	
		PMA	VA	PMA	VA	PMA	VA	PMA	VA	PMA	VA
1	Encryption/UTM platforms (TDM and IP)	100	45	100	50	100	55	100	60	100	65
2	SIM Card's Operating System (OS) and Personalisation activities	100	25	100	30	100	35	100	40	100	45
3	Core/Edge/Enterprise routers	30	35	40	40	50	45	60	50	100	65
4	Managed Leased line Network equipment	30	35	40	40	50	45	60	50	100	65
5	Ethernet Switches (L2 and L3), Hubs, etc.	30	35	40	40	50	45	60	50	100	65
6	IP based Soft Switches, Media gateways	30	35	40	40	50	45	60	50	100	65
7	Wireless/Wireline PABXs	100	45	100	50	100	55	100	60	100	65

8	CPE (including WiFi Access points and Routers, Media Converters), 2G/3G Modems, Leased-line Modems, etc.	50	25	60	30	70	35	80	40	100	45
9	Set-Top Boxes	30	35	40	40	50	45	60	50	100	65
10	SDH/Carrier-Ethernet/Packet Optical Transport equipments	50	45	60	50	70	55	80	60	100	65
11	DWDM/CWDM systems	50	35	60	40	70	45	80	50	100	65
12	GPON equipments	50	35	60	40	70	45	80	50	100	65
13	Digital Cross-connects/MUXs	30	35	40	40	50	45	60	50	100	65
14	Small size 2 G/3 G GSM based Base Station Systems	75	35	80	40	90	45	90	50	100	65
15	GSM 2G&3G/4G, CDMA based wireless Access Systems including BTS, BSC, MSC, Media gateway, media server, GGSN, SGSN, Node B , RNC, E Node B, EPC, HLR, SMSC & other subsystems	30	35	40	40	50	45	60	50	100	65
16	LTE based broadband wireless access systems (eNodeB, EPC, etc.)	30	35	40	40	50	45	60	50	100	65
17	Wi-Fi based broadband wireless access systems (Access Point, Aggregation Block, Core Block, etc.)	50	35	60	40	70	45	80	50	100	65
18	Microwave Radio systems (IP/Hybrid)	50	35	60	40	70	45	80	50	100	65
19	Software Defined Radio, Cognitive Radio systems	30	35	40	40	50	45	60	50	100	65
20	Repeaters (RF/RF-over-Optical), IBS, and Distributed Antenna system	60	35	70	40	80	45	90	50	100	65
21	Satellite based systems – Hubs, VSAT etc.	30	35	40	40	50	45	60	50	100	65
22	Copper access systems (DSL/DSLAM)	30	25	40	30	50	35	60	40	100	45
23	Network Management systems	50	45	60	50	70	55	80	60	100	65
24	Security and surveillance communication systems (video and sensors based)	50	45	60	50	70	55	80	60	100	65

8. Telecom has emerged as a key driver of economic and social development in an increasingly knowledge intensive global scenario, in which India will play a leadership role. The Government has targeted to increase broadband coverage in the country up to 175 million by 2017 and 600 million by 2020. Additional Spectrum of about 500 MHz is proposed to be made available by 2020. In same way, the mobile subscriber base is targeted to reach 1200 million by 2017. Based on the TRAI report on Manufacturing Policy for Telecom Equipment, the demand of various

telecom equipments in India and abroad is estimated as indicated in Table-B below:-

TABLE-B

SI No.	Year	Global Total Demand (Rs. millions)	Indian Demand (Rs. millions)	% of Global Demand
1.	2012-13	16382550	769400	6.2%
2.	2014-15	19108610	965140	6.6%
3.	2016-17	22288280	1210670	7.1%
4.	2019-20	28076820	1700910	7.9%

The demand of various verticals of telecom equipment in India is estimated and detailed as in TABLE-C, as follows:-

TABLE-C

Wireless Equipment Demand (Rs. millions)		2015-16	2019-20
	Wireless Equipment	264440	444380
i)	2G Wireless	25320	-
	BTS Antenna	10130	-
	BSC	9110	-
	MSC/GMSC/HLR/VLR/EIR	6080	-
ii)	3G Wireless	101280	26450
	Node B	40510	10580
	RNC	36460	9520
	GGSN/SGSN	24310	6350
iii)	LTE/Mobile Wi-MAX/5G	126590	238100
	eNode B	75960	142860
	MME/SGW/PDG/SAE	50640	95240
	FAP	11250	27990
iv)	Mobile Handsets	384020	613100
	Total	648460	1057380

Wire-line Equipment		2015-16	2019-20
i)	Switches		
	Local	1640	1480
	Transit	1840	1660
ii)	STP	990	900
iii)	IN Platforms	500	450
	Total	4960	4480

IP & Packet Switching		2015-16	2019-20
i)	Switching		
	LAN Switches	107520	130690
	Ethernet/IP Aggregation	8060	12680
	Carrier Ethernet (Incl. above)	2020	9510
ii)	Routing		
	Edge IP/MPLS Routing	19350	30440
	Core IP/MPLS Routing	4840	7610
iii)	Packet Voice	7130	20890

	Soft switch	2850	8360
	SGW/MGW	2140	6270
	Session Border Controller	1070	3130
	Media/Voice App Servers	1070	3130
	Total	146890	201310

Broadband Equipment		2015-16	2019-20
i)	FTTX	38810	208700
	ONT/ONU	15520	83480
	OLT	23280	125220
ii)	DLS Broadband	31040	29810
	DSL Modem	15520	14910
	DSLAM	10870	7450
	MSAN	4660	7450
iii)	CMTS	7760	59630
	Total	77610	298150

Backhaul and Transmission		2015-16	2019-20
1.	Fibre/Optical		
	Optical	58110	79220
	SDH	31880	35880
	DWDM	19730	34880
	POTP(Incl. within SDH,DWDM/DXC	27460	66770
	DXC	3300	3430
	Submarine Systems	3200	5030
2.	Microwave Backhaul	27240	39890
	PDH/SDH/Microwave	1360	800
	Ethernet Microwave	25880	39090
	Total	78380	109600

9. The procuring agencies shall follow their own laid down procurement procedures, subject to meeting the requirement related to specified percentage of procurement being made from domestically manufactured telecom products as per this policy.

(i) aggregation of annual requirements and such other procurement practices, which facilitate the implementation of this policy, may be adopted by procuring agencies.

(ii) adherence to the policy for the procurement of telecom products those are sensitive due to security angle.

(iii) wherever the domestically manufactured telecom products are procured under this policy by a Government Ministry or Department or an agency thereof, such procurement may be subject to matching of L1 price and on satisfying technical specifications laid down for the respective items.

(iv) In case the domestic manufacturer is not lowest bidder (L1), at least the specified part of the order would be awarded to the lowest technically

qualified domestic manufacturer, if such bidder is available, subject to matching with L1 price. The remaining part may be awarded to L1 bidder.

(v) It is not necessary that every lot for procurement of telecom products is split between domestic and non-domestic manufacturers. If a procurement lot/project cannot be split, either because the unit of procurement is small or because of technical reasons, or because no domestic manufacturer is available for the product, the procuring agency may ensure that the annual requirement of procuring the specified extent of telecom products from domestically manufactured products is achieved through suitable enhancements in other procurement lots/projects.

(vi) The procurement conditions must ensure that domestic manufacturers of telecom products are encouraged to participate, and they are not subjected to restrictive products specifications or mandatory requirements of prior experience, etc. However, procuring Department or Agency may incorporate such stipulations as may be considered necessary to satisfy themselves of the security, production capability and product quality of the manufacturer. The procuring agency may also rationally identify and evaluate predatory pricing by any bidder.

8. In case of a question whether an item being procured is a telecom product to be covered under the policy, the matter would be referred to the Telecommunications Engineering Centre (TEC), Department of Telecommunications for clarification.

9. The guidelines as notified by the Department of Electronics and Information Technology shall be followed for this purpose. In case of any doubt in respect of Telecom Products, reference shall be made to Telecommunications Engineering Centre (TEC), Department of Telecommunications or technical auditor as accredited by the Telecommunication Engineering Centre, Department of Telecommunications for the purpose.

11. The policy shall come into force from 01.04.2013 and shall be valid for 10 years thereafter.

12. The expressions or abbreviations used in this Notification have been detailed in the list below for easy understanding.

List of Acronyms used in the notification

SI No.	Acronyms	Expansion
1.	2G	Second Generation
2.	3G	Third Generation
3.	4G	Fourth Generation
4.	5G	Fifth Generation
5.	ADSL	Asymmetrical Digital Subscriber Line
6.	ATMP	Assembly, Testing, Packaging And Marking
7.	BOM	Bill Of Material
8.	BSC	Base Station Controller
9.	BSS	Base Station Subsystem
10.	BTS	Base Transceiver Station

11.	BWA	Broadband Wireless Access
12.	CDMA	Code Division Multiple Access
13.	CN	Core Network
14.	CPE	Customer Premises Equipment
15.	CWDM	Course Wavelength Division Multiplexing
16.	DAS	Distributed Antenna System
17.	DeitY	Department of Electronics and Information Technology
18.	DSL	Digital Subscriber Line
19.	DSLAM	Digital Subscriber Line Access Multiplexer
20.	DWDM	Dense Wave Division Multiplexing
21.	DXC	Digital Cross Connect
22.	EIR	Equipment Identity Register
23.	EMS	Electronic Manufacturing Services
24.	EPABX	Electronic Private Automatic Branch Exchange
25.	FTTH	Fiber to the Home
26.	GGSN	Gateway GPRS Support Node
27.	GMSC	Gateway Mobile Switching Centre
28.	GPON	Gigabit Passive Optical Network
29.	GPRS	General Packet Radio Service
30.	GSM	Global Standard For Mobile
31.	HLR	Home Location Register
32.	HSPA	High Speed Packet Access
33.	IMS	IP Multimedia Subsystem
34.	IP	Internet Protocol
35.	LAN	Local Area Network
36.	LTE	Long Term Evolution
37.	MGW	Media Gateway
38.	MME	Mobility Management Entity
39.	MPLS	Multi-Protocol Label Switching
40.	MPLS-TP	MPLS Transport Profile
41.	MSAN	Multi-Service Access Node
42.	MSC	Mobile Switching Centre
43.	MUX	Multiplexer
44.	NGN	Next Generation Network
45.	NG-PON	Next Generation Passive Optical Network
46.	OAN	Optical Access Network
47.	ODF	Optical-fiber Distribution Frame
48.	OLT	Optical Line Terminal
49.	ONT	Optical Network Termination
50.	ONU	Optical Network Unit
51.	OTN	Optical Transport Network
52.	PABX	Private Auto Branch Exchange
53.	PDH	Plesiochronous Digital Hierarchy
54.	PON	Passive Optical Network
55.	POTP	Packet Optical Transmission Platform
56.	RAN	Radio Access Network
57.	RLC	Radio Link Control
58.	RNC	Radio Network Controller
59.	ROADM	Reconfigurable Optical Add-Drop Multiplexer
60.	SDH	Synchronous Digital Hierarchy
61.	SONET	Synchronous Optical Networking

62.	STM	Synchronous Transport Modules
63.	STP	Signal Transfer Point
64.	TDM	Time Division Multiplexing
65.	USOF	Universal Service Obligation Fund
66.	VDSL	Very High Data Rate Digital Subscriber Line
67.	VLR	Virtual Location Register
68.	VSAT	Very Small Aperture Terminal
69.	WCDMA	Wideband Code Division Multiple Access
70.	WDM	Wavelength Division Multiplexing
71.	Wi-Fi	Wireless Fidelity
72.	Wi-Fi AP	Wireless Access Point
73.	WiMAX	Worldwide Interoperability For Microwave

[F. No. 18-07/2010-IP]

Authorized Signatory