भारत सरकार
GOVERNMENT OF INDIA
संचार और सूचना प्रौद्योगिकी मंत्रालय
MINISTRY OF COMMUNICATIONS AND INFORMATION TECHNOLOGY
इलेक्ट्रॉनिकी और सूचना प्रौद्योगिकी विभाग
DEPARTMENT OF ELECTRONICS AND INFORMATION TECHNOLOGY
Website: www.deity.gov.in

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No..............

दिनांक
Date...................

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5th June 2013

Subject: Horizontal Connectivity Guidelines for e-District Mission Mode Project

Sir,

This has a reference to the discussions held during the workshops conducted on 12th & 13th of April 2013 at Manesar and 26th & 27th of April 2013 at Hyderabad, regarding connectivity and source of funds for providing connectivity to offices covered under the eDistrict MMP. In this direction, Horizontal Connectivity Guidelines for the e-District Mission Mode Project have been prepared to facilitate States and UTs to take the appropriate decisions for all connectivity related issues.

2.   The connectivity guidelines are enclosed for your kind reference and are also hosted at the website http://www.mit.gov.in/content/e-district-guidelines.

With regards

Yours sincerely

6-6-13

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To

All State/UT IT Secretaries

o/c. letters issued
6/6/13.

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e-District Mission Mode Project

Horizontal Connectivity Guidelines

सत्यमेव जयते

May 2013

eDISTRICT
DEVELOPED 2 DELIVER
SUCCESS THROUGH COLLABORATION

Department of Electronics & Information Technology (DeitY)

Ministry of Communications & Information Technology

Government of India

6, CGO Complex, New Delhi 110003

Background

The National Rollout of e-District Mission Mode Project (MMP) under the National e-Governance Plan (NeGP), aims at electronic delivery of identified high volume citizen centric public services at district and sub-district level by leveraging the four pillars of e-infrastructure i.e. State Wide Area Networks (SWANs), State Data Centers (SDCs) State Service Delivery Gateways (SSDGs) and Common Services Centers (CSCs).

The Note for the Cabinet Committee on Infrastructure for National Rollout of eDistrict MMP specifies that the vertical connectivity up to Block level PoPs has been provisioned under SWAN; under e-District project the concerned Government office would be connected to the nearest SWAN PoPs. This will provide last mile connectivity across all offices in the District Head Quarter, Tehsils and Blocks. **Provision for horizontal connectivity has been made for connecting the field offices at District, Tehsil and Block level to the nearest SWAN PoP which is not covered under any of the scheme**. The cost estimate of Rs. 25 lakhs per district has been provisioned in the budget which also includes LAN Networking of all such field offices.

Purpose & Intended Audience

The purpose of these guidelines is to provide guidance to the States/UTs for effective utilization of the funding available under eDistrict, SSDG and SWAN projects for bandwidth charges, hardware funding and connectivity media for users located at various distances from the PoPs established under the SWAN network. It is very critical to identify the gap infrastructure to be procured and the source of funds for such procurement. These guidelines provide instructions to the eDistrict SPMUs / SeMT teams who are preparing the RFP for Selection of SI for eDistrict Rollout in the State / UT.

Connectivity and Hardware at Field Offices

The State Wide Area Network (SWAN) is one of the core infrastructure components under the National e-Governance Plan of the Government of India. SWAN is envisaged as the converged backbone network for data, voice and video communications throughout a State/UT. Under this Scheme, technical and financial assistance are being provided to the States/UTs for establishing SWANs to connect all State/UT Headquarters up to the Block level via District/ sub-Divisional Headquarters, in a vertical hierarchical structure with a minimum bandwidth capacity of 2 Mbps per link. Each of the State / UT can enhance the bandwidth up to 34 Mbps between SHQ and DHQ and upto 8 Mbps between DHQ and BHQ depending upon the utilization. Further each PoP (Points of Presence) has a Configurable Aggregation Equipment to enable vertical & horizontal connectivity.

Under the SWAN Scheme for horizontal office connectivity (20, 10, 5 for SHQ, DHQ and BHQ respectively), some district & sub-district level offices may already be networked/planned to get networked. The State / UT must ensure that funds for LAN networking & horizontal connectivity at the district & sub-district levels under the eDistrict program are used only for the offices that have not been covered (or are not proposed to be covered) under the SWAN scheme or any other scheme.

Connectivity to the field offices could be through the following media:

(i) Ethernet
(ii) Optical Fiber Cable (OFC)
(iii) Point to Point Leased Lines (P2PLL) (2 Mbps) to SWAN POP
(iv) VPN over Broadband (VPNoBB) (512 kbps)
(v) WiMAX (512 kbps)
(vi) VSAT (64 kbps CAR , 512 kbps MAR)

The table below provides a matrix of the connectivity to the field offices, corresponding medium to be used, connectivity provider, the indicative source of funding, etc.

Table 1: Connectivity Funding

Field Offices / Sites	Co-located Sites < 500 m		Non Co-located Sites > 500 m
Distance	**<100 m From SWAN POP**	**Between 100 m & 500 m From SWAN POP**	
Connectivity Provider	SDA (SWAN Operator)	SDA (SWAN Operator)	SDA (SWAN Operator)
Medium of Connectivity	Ethernet	OFC	(In Order of preference, if first is not available then the next.) 1. P2PLL 2. VPNoBB 3. WIMAX 4. VSAT
Funding for Bandwidth	State IT Department from ACA of SWAN	State IT Department from ACA of SWAN	State IT Department from SWAN ACA from Bandwidth funded by DeitY GOI**
Funding for connectivity including laying down the connectivity infrastructure.	State IT Department from ACA of SWAN	State IT Department from ACA of SWAN	State IT Department from SWAN ACA from Bandwidth funded by DeitY GOI**

** As per instructions issued earlier by DeitY to all State IT Secretaries, State IT Department has to reserve one port (V.35/G.701) at SWAN POP for connecting non co-located sites feasible on 2Mbps P2PLL for which bandwidth charges including corresponding modem pairs will be borne by the State IT Department from ACA for bandwidth funded by DeitY, GOI.

Where SWAN connectivity is unavailable till the last mile office, an interim arrangement of connectivity via the internet through the Telecom Service providers may be made for delivering services under the eDistrict project. However, as and when the SWAN connectivity is available, the same should migrate to SWAN and discontinue the interim arraignment.

The details of key hardware required for the horizontal connectivity for the various types of connectivity and their indicative source of funding has been elaborated in the table below. Kindly note that the SPMU is required to undertake the infrastructure gap assessment for the horizontal connectivity and procure these where they are not available at the sites/field offices.

Table 2: Hardware Funding

Medium of Connectivity	Key Hardware	Hardware provisioning by: (In order of Preference)	Indicative source of funding.
Ethernet	Switches	• eDistrict SI • Network Operator & Bandwidth Provider. • Any other entity appointed by the State.	**(In order of Preference)** State IT Dept. from the funds meant for: • SWAN • SSDG • eDistrict • Any other State / Centre MMP.
	Cables, Connectors for cabling	• eDistrict SI • Network Operator & Bandwidth Provider. • Any other entity appointed by the State.	

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eDistrict MMP National Rollout Guidelines – Horizontal Connectivity

Medium of Connectivity	Key Hardware	Hardware provisioning by : (In order of Preference)	Indicative source of funding.
Optical Fiber Cable (OFC)	Optical Fiber	• eDistrict SI • Network Operator & Bandwidth Provider. • Any other entity appointed by the State.	**(In order of Preference)** State IT Dept. from the funds meant for: • SWAN • SSDG • eDistrict Any other State / Centre MMP.
	Fiber-Optic Connectors	• eDistrict SI • Network Operator & Bandwidth Provider. • Any other entity appointed by the State.	
	Fiber media converter	• eDistrict SI • Network Operator & Bandwidth Provider. • Any other entity appointed by the State.	
	Fiber Switches	• eDistrict SI • Network Operator & Bandwidth Provider. • Any other entity appointed by the State.	

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Medium of Connectivity	Key Hardware	Hardware provisioning by : (In order of Preference)	Indicative source of funding.
Point to Point Leased Lines (P2PLL) (2 Mbps) to SWAN POP	Lease Line Modems	Telecom Operator / SWAN Bandwidth Provider	Bandwidth Charges are inclusive of Modems (does not include router).
	Routers with basic firewall solution	Telecom Operator/ SWAN Bandwidth Provider	The service related payment would be covered under "Funding for Bandwidth" as mentioned in Table 1.
VPN over Broadband (VPNoBB) (512 kbps)	Broad Band Modems	Telecom Operator / SWAN Bandwidth Provider	Bandwidth Charges are inclusive of Modems (does not including router). The service related payment would be covered under "Funding for Bandwidth" as mentioned in Table 1.
WiMAX (512 kbps)	WiMAX USB Wireless Adapter	eDistrict SI	State IT Dept. from e District funds.
	WiMAX Wireless Access Point	• WiMAX Service Provider (BSNL / Other Telecom	No separate payments for hardware to be made since these are part of the services provided by the Telecom Service

Medium of Connectivity	Key Hardware	Hardware provisioning by : (In order of Preference)	Indicative source of funding.
		Entity) • SWAN Operator / SWAN Bandwidth Provider.	Provider / SWAN Bandwidth Provider. The service related payment would be covered under "Funding for Bandwidth" as mentioned in Table 1.
	WiMAX Wireless Controller	• WiMAX Service Provider (BSNL / Other Telecom Entity) • SWAN Operator / SWAN Bandwidth Provider.	No separate payments for hardware to be made since these are part of the services provided by Telecom Service Provider / SWAN Bandwidth Provider The service related payment would be covered under "Funding for Bandwidth" as mentioned in Table 1.
VSAT (min 64 kbps CAR , 512 kbps MAR)	VSAT Dish Modem and Router	VSAT Service Provider. However funding of VSAT Hardware is not provisioned as yet.	Only the Bandwidth Charges/ Annual Connectivity Charges for VSAT is provisioned. The service related payment would be covered under "Funding for Bandwidth" as mentioned in Table 1.

Based on the above, the SPMU / SeMT teams assisting the States / UTs are required to integrate these guidelines in their RFP for eDistrict SI Selection and accordingly identify the hardware to be procured and estimate the quantity of that hardware to be procured. This hardware and its related installation work can be funded with some limit within the funds available under SSDG, SWAN, eDistrict or any other State/Centre MMP. Funds for O&M phase beyond Scheme period is to be borne by the State / UT through its own funds. The State/UT can have an SI responsible for networking and connectivity, but the payment can be made through various fund sources as detailed above.

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