Guidelines

For

Technical and Financial

Support

For

Establishment

Of

State Wide Area Network

(SWAN)

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Guidelines for Technical and Financial Support for Establishment of State Wide Area Network (SWAN)

1.0 Preamble

1.1 The National e-Governance Action Plan (NEGAP) has identified 22 Mission Mode Projects, which are to be implemented in a phased manner over the next 3-4 years by the Line Ministries/Departments concerned at the Central and State level, as applicable, in addition to the various other e-Governance initiatives being taken by the respective States and Central Ministries. State Wide Area Network (SWAN) has been identified as an element of the core infrastructure for supporting these e-Governance initiatives and the Department of Information Technology (DIT) has earmarked a significant outlay for supporting this activity. Under NEGAP, it is proposed to extend connectivity to the block level through NICNET/ State Wide Area Networks (SWANs). Govt. of India support for the establishment of such infrastructure up to the block level will be provided by Department of Information Technology in accordance with these Guidelines.

2.0. Background

2.1 The National Informatics Centre (NIC) currently operates a Ku Band VSAT network connecting all districts (barring a few newly created ones) with 64 Kbps satellite link from each district. Some of the districts in the country are also connected through video-conferencing facility on NICNET through 2Mbps DAMA VSATs. In some States, e.g. North-east & Sikkim, J&K (under implementation), NICNET connectivity extends up to the block level through the CICs (Community Information Centres) via a 64 Kbps satellite link. Orissa is implementing a VSAT network up to the block level through the NIC. The NIC is currently planning restructuring and augmentation of the existing NICNET as a viable G2G Network in order to position it as the core infrastructure for Government-to-Government data and video interactions.

2.2 While formulating these guidelines the Department of IT has noted that some State Governments have established State Wide Area Networks adopting different models, including outsourcing models, for implementation, operation and maintenance of the SWAN infrastructure, while leveraging the existing NICNET infrastructure for the purpose. Some States have also incorporated voice connectivity on the SWAN. It has been noted that establishment of SWAN is an expensive proposition involving high capital cost, recurring bandwidth and operational cost. There is a range of outsourcing options possible. Further, depending on the types of the services to be made available on the SWAN, certain revenue streams could be created to offset part of the costs.

2.3 Department of IT has also taken note of the proliferation of optical fibre communication lines across the country and of the fact that some States have made use of the Right of Way (ROW) to negotiate broadband network capacity from the service providers and are in a position to avail themselves of free/ concession-priced bandwidth as part of their SWAN infrastructure.

2.4 Keeping the above background in view, the following issues have been considered while formulating these guidelines for technical and financial assistance to States for establishment of State Wide Area Networks.

a) Implementation options for States including
(i) Using the NIC to establish the SWAN by suitably extending the existing NICNET upto Block level.
(ii) To engage a competent private/ public sector agency through an appropriate competitive bid process under a suitable service level agreement (BOO/BOOT etc.) to establish and run the SWAN.

(iii) To establish and own the SWAN infrastructure directly by the State and use a private service provider for operations and facility management.

(iv) Any other PPP model considered appropriate by the State

b) Upfront capital investment required to establish the SWAN

c) Recurring costs (bandwidth cost, other operational costs such as maintenance cost and cost of operational personnel)

d) Issues relating to obtaining and using the OFC bandwidth from service providers

e) Sharing of cost between the GOI and State Governments for capital, recurring and manpower costs.

f) Other generic issues that need to be taken into account including Monitoring of Service Levels of SWAN.

g) Issues related to Standardization, Security, seamless interconnect requirements between NICNET and SWANs and also between SWANs.

h) Issues regarding Organizational Structure, Command and Control.

2.5 Accordingly, these Guidelines also include the Norms for complete outsourcing of the SWAN Network to a private/ public sector service provider. The following paragraphs lay down the guidelines for technical and financial support of the Department of Information Technology, Government of India to the States for establishment of the SWANs, including some of the technical and administrative norms to be followed by the States, depending on the implementation option adopted by the State to establish the SWAN.

3.0 Implementation Options

3.1 State would need to establish the SWAN using either of the two Options indicated below. All the parameters of these Guidelines are defined in the subsequent paragraphs with respect to these two Options.

Option I State to identify a suitable PPP model (BOO, BOOT etc.), select an appropriate agency through a suitable competitive process for outsourcing establishment, operation and maintenance of the Network. The State will need to designate an appropriate Central/ State agency to take overall responsibility for receipt of funding support, implementation and rendering accounts/ Utilization Certificates. The entire process of outsourcing, including advising on the most appropriate PPP model, could be managed by an appropriate consultancy organization to be engaged by the designated agency through a transparent process under the direction of an implementation committee to be established by the State.

Option II Designate NIC as the prime implementation agency for the SWAN for establishment, operation and maintenance of the Network as an integral part of NICNET, with an appropriate end-to-end Service Level Agreement (SLA). In this alternative, funds would be released to NICSI by Department of IT and execution would be carried out by NIC.

4.0 Eligibility conditions for States for DIT funding support for establishment of SWAN

4.1 States would need to enter into firm agreements regarding bandwidth with operators in order to avail of DIT support for establishing SWANs. A State may opt for coverage up to district level only initially, or up to block level. Minimum bandwidth to be made available would be 2 Mbps up to district level as well as up to block level on a dedicated basis (leased lines/ satellite**).** DIT would separately indicate Norms for leasing of bandwidths in consultation with DOT and BSNL. States could utilize these Norms as benchmarks for contracting. The State would need to make available the 2 Mbps bandwidth (which is negotiated from the service provider) to the PPP vendor or to NIC depending on the implementation Option adopted for establishment of the SWAN.

4.2   A State would need to have undertaken implementation of at least three major statewide e-governance projects that require such connectivity of which at least one should have been completed in order to be eligible for funding support.

5.0   Norms for Sharing of Cost between Department of IT, GoI and State Govts.

5.1   DIT support will cover the entire cost of establishment, operation and maintenance of the SWAN for a period of five years on 100% grant basis. In case of Option I, cost of personnel hired by the operator selected through a bid process, will also be covered by the grant support. In case of implementation by NIC (Option II), it is envisaged that no extra manpower cost would be required at NIC Headquarters to establish SWAN at the States. At the District/ Block level, NIC may outsource personnel for maintenance/ operation of the Network. The cost of such personnel would be included in the project cost. DIT grant support will cover the cost of entire Terminal Equipment at each Point of Presence (POP). Support for the SWAN would cover only one point (Point of Presence) at each location (State/ district/ Sub-division/ block HQs) covered by the SWAN and for which bandwidth arrangements have been tied up by the State. The cost of consultancy for undertaking Technical Feasibility Study, advising on most appropriate PPP model, preparation of EOI, RFP, SLA, etc. and managing the bid process in case of Option I, will be provided as 100% grant by DIT to the agency designated by the State to undertake the selection of the consultant. A representative from DIT and NIC should be included in the selection committee to be constituted by the State to select the consultant and later, the operator. Cost of UPS, generator and air-conditioning equipment could be included for support by DIT for the first five years. Cost of monitoring of performance under SLAs would also be covered by DIT support, including cost of engaging a third party for such monitoring.

6.0   Exclusions from DIT funding support

6.1   Cost of terminal equipment at any location other than the POP and all related costs required for dialing into or connecting to the SWAN, cost of connectivity to any other such location, last mile connectivity costs, both capital and revenue, have to be met by the State Government/ Department concerned. Cost of personnel directly hired by the State or its designated agency for any task relating to establishment of the SWAN, will be met by the State. Bandwidth cost, as may be applicable through the Norms being finalised in consultations with DoT and BSNL, will have to be met by the State Government in full, for the entire period. State must provide the physical sites for the SWAN Nodes and bear the initial and recurring cost for the physical (civil) infrastructure such as premises, site preparation, furniture, power connection, etc. required for the SWAN. State Government has to meet cost of upgradation of the SWAN within the initial 5-year period and the cost of renewal of the infrastructure after 5 years.

7.0   Standardization & Interoperability

7.1   NIC will formulate suitable Guidelines for Standardization, Interoperability and Interconnect requirements between NICNET and the SWANs and also between different SWANs. The Core Group on Standards set up by DIT would vet these standards before notification by DIT. A SWAN set up under Option I would be outside NICNET, but it would be connected to NICNET through a gateway established by NIC for this purpose. NIC would issue necessary Guidelines in this regard. Irrespective of the implementation Option adopted, existing NICNET infrastructure should be used as a back-up for emergencies and disasters.

8.0   Application Profile on the Network

8.1   It is envisaged that while dedicated SWANs being established for the State, NICNET will separately operate with upgraded technology upto district level. Central

applications may ride on NICNET upto district level and further upto block level through the SWAN or through dial up into NICNET from the block or other level below district, or through dedicated lines leased by the Department concerned, depending on the requirement (including security requirement) of the applications and distribution of delivery points. In case of usage of SWAN by central applications, appropriate terms would be mutually agreed upon between the State and the Department concerned.

8.2 For States adopting any of the two Options, all State applications will ride under the supervisory control of "State Application Control & Management Centre", to be established by States. For State applications requiring delivery points beyond POP, dial-up equipment and costs should be charged to the application and met by the Department concerned.

9.0 Service Availability & its Monitoring

9.1 End-to-end service availability on the SWAN and its independent monitoring is a prime requirement to have reliable, seamless networking across the States and to meet the objectives of this core e-Governance infrastructure. It is therefore necessary that appropriate Service Level Agreements (SLAs) be worked out between the States and the Implementing Agency and that an Independent Agency be appointed to monitor the performance with reference to the SLA and related aspects.

10.0 Security of Network

10.1 NIC will issue Security Guidelines for all the SWANs. States are required to strictly adopt and adhere to these Security Guidelines. In Option I, maintaining security on the network in accordance with the Guidelines to be issued by NIC would be the responsibility of the State to be met through the operator and monitored by the independent agency appointed for monitoring. Security requirements should be a part

of the Request for Proposal (RFP) for Option I. For Option II, NIC will incorporate the necessary security requirements.

11.0   Management and Administrative Control

11.1   In Option I, the State will have total administrative and technical control of the SWAN and will be responsible for compliance with all guidelines through its designated Department/Agency. Appropriate agreements to give effect to this may be worked out between State and PPP Vendor. For Option II, an appropriate MOU will be worked out between NIC and the State with mutually agreed roles and responsibilities. A State-designated entity will supervise and control State applications and data on the network. Any connectivity requirement by the State will go through a pre-defined approval procedure of NIC before complying with the request.

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