CHAPTER-V
PUBLIC SECTOR UNDERTAKINGS UNDER THE MINISTRY

5.1 Imprudent procurement of network equipment by Bharat Sanchar Nigam Limited (BSNL)

Imprudent action on the part of BSNL in procurement of Digital Cross Connect System equipments resulted in idling of interface cards and blocking of funds amounting to ₹ 22.80 crore in two Project circles.

Internet Protocol Trunk Automatic Exchange (IP TAX) is a packet-based network able to provide telecommunication services and able to make use of multiple broadband, QoS-enabled transport technologies and in which service-related functions are independent from underlying transport-related technologies. It offers unrestricted access by users to different service providers. It supports generalized mobility which will allow consistent and ubiquitous provision of services to users.

M/s Bharat Sanchar Nigam Limited (BSNL) invited (September 2007) tender for IP TAX project which envisaged setting up multiple Soft-switch domains to provide Media Gate Trunk Media Gateways (TMG) supporting 4,868 Kilo Circuits of Time-Division Multiplexing [1] (TDM) terminations coming from Public Land Mobile Network (PLMN). IP TAX was the first step towards the Evolution of Current Generation Network to Next generation Network i.e. IP TAX was the replacement of existing Level–I TAX exchanges to IP based network. Purchase Order for IP TAX project was placed (January 2009) and equipments were to be supplied and commissioned within 12 weeks of the placement of the order.

BSNL also placed (June 2009) a Purchase Order (PO) on M/s Prithvi Information Solutions Limited, Hyderabad for procurement and supply of OEO based Digital Cross Connect System (DXC) equipment at a total cost of ₹ 228.94 crore. DXC ensures reliability of the backbone links for various services of BSNL like Multi Protocol Label Switching (MPLS) network, Broadband (BB) services, Internet leased circuits, Mobile services, etc. DXC is a kind of circuit switched network equipment used in telecommunication network and provides improved manageability, reliability and maintainability of the transmission equipment and networks deployed.

[1] Time-division multiplexing (TDM) is a method of transmitting and receiving independent signals over a common signal path by means of synchronized switches at each end of the transmission line so that each signal appears on the line only a fraction of time in an alternating pattern.

The PO for DXC equipment included 59,504 interface cards worth ₹ 31.86 crore to be supplied to BSNL Southern Telecom Project (STP) and Western Telecom Project (WTP). Audit observed that 24,590 cards out of 28,044 interface cards worth ₹ 11.52 crore supplied to STP and 25,525 cards out of 31,424 interface cards worth ₹ 11.28 crore supplied to WTP received along with the DXC equipment remained unutilised as of March 2015.

As BSNL had already placed order for IP TAX equipments in January 2009, requirement of equipments for DXC systems should have been assessed with reference to supply/implementation plan of IP TAX at the Project offices before placing order for DXC equipments in June 2009[2]. Non-assessing the requirement and placing orders for DXC equipments in a routine manner resulted in the interface cards supplied being rendered surplus in two project circles and consequently, funds amounting to ₹ 22.80 crore was blocked.

STP replied (February 2015) that BSNL Corporate Office (CO) had started planning for the procurement of DXC equipment from 2006 and PO was placed in June 2009. Considering various types of traffic depending on the importance and the reliability level required, the loading of Synchronous Transport Module level-1 (STM-1) interfaces were fixed. But due to changes of technology, the loading did not increase in STM-1 ports. BSNL was aware of the change from TDM to IP and sufficient ports were provided at Gigabyte Ethernet (GE) level. The migration of old Trunk Automatic Exchange (TAX) exchanges to new IP exchanges resulted in more utilization of GE interface and unloading of STM 1 interface.

WTP replied (March 2016) that planning and procurement of quantity of various types of interface cards was done by Corporate Office and WTR had no role. It further stated that due to fast changes in technology, requirement of interface ports was also changing and in view of high capacity Dense Wavelength Division Multiplexing (DWDM) systems in the core network, requirement of STM1 ports in DXC was very less.

Reply of the Project Circles clearly indicate that BSNL Corporate Office neither considered the technological changes taking place in the transmission technologies nor the actual requirement of the projects while placing the order for DXC equipments. Consequently, imprudent action of the BSNL management in procurement of interface cards resulted in an avoidable blocking of capital to the tune of ₹ 22.80 crore.

2 While IP Tax was soft switch based, DXC was circuit switch network equipment hence not compatible with IP-TAX.

5.2 Non-Billing of Short Message Service Termination charges

BSNL signed 'Addenda to Interconnect Agreement' for IUC for SMS with three telecom service providers viz. Bharti Airtel, Ideal Cellular and Vodafone without technical arrangement for billing of SMS termination charges. Due to non-preservation of SMS data, non-verification and non-reconciliation of bills (claims) received from Bharti Airtel and Vodafone, BSNL was exposed to one-sided liability.

The framework of Interconnect Usage charge (IUC) was established by TRAI through the Telecommunication IUC Regulations 2003 in January 2003 which was implemented from 1 May 2003. At that time, the focus was on voice related charges and Short Message Service (SMS) termination charges were kept under the forbearance. Though the regulation of January 2003 scheme was revised from time to time, the policy of forbearance on IUC for SMS was continued. In IUC Regulations dated 9 March 2009, TRAI again decided to continue with the policy of forbearance in the matter of IUC for SMS with the proviso that SMS termination charges, if any, should be transparent, reciprocal and non-discriminatory.

As per the calculation of M/s Bharat Sanchar Nigam Limited (BSNL), BSNL was the net receiver of approximately ₹ 3.79 crore per month at the rate of ₹ 0.10 per SMS as per the present SMS traffic trend. Based on the above calculations, approval was accorded (September 2009) by the Chairman and Managing Director of BSNL for entering into agreement with private operators on reciprocal basis for SMS termination charges at the rate of ₹ 0.10 per SMS.

BSNL entered into Addenda agreements with M/s Bharti Airtel (February 2010), M/s Idea (February 2010) and M/s Vodafone (April 2010). Though the remaining operators were requested (November 2010, December 2010, January 2011, July 2011 and January 2013) to sign the agreement to facilitate implementation of IUC charges, the operators did not respond and thus, no agreements were entered into.

As per Clause 6.7.1 of the Addenda Agreement, the operators shall pay an Interconnect Usage Charges (IUC) of ₹ 0.10 per SMS to BSNL for termination of SMS at BSNL network in the same Service Area. On reciprocal basis BSNL shall also pay IUC charges at ₹ 0.10 per SMS to Cellular Mobile Telecom Service (CMTS) for termination of its SMS on their network.

BSNL received claims for ₹ 14.60 crore from M/s Bharti Airtel towards SMS termination charges for the period from April 2011 to August 2012 and ₹ 9.70 crore from M/s Vodafone for the period from April 2011 to September 2012. The claims were in wide variance with the calculations made by BSNL as per which BSNL was to receive the amount from the operators. No action was taken on these bills/claims.

BSNL Corporate Office issued instructions (June-2013) for implementation of Short Message Services (SMS) termination addenda agreements executed with M/s Bharti Airtel, M/s Idea and M/s Vodafone during 2010. The instructions inter-alia provided that:

- Bills to all operators including M/s Bharti Airtel, M/s Idea and M/s Vodafone shall be raised for SMS Termination Charge at the rate of ₹ 0.10 per SMS as per Clause 6.7.1 of the addenda agreement;
- The addenda agreements with the above three operators were to be given effect from 16 December 2012 to 31 May 2013. Thereafter from 1 June 2013 the SMS Termination charges were to be raised in accordance with the Short Messaging Services Termination Charges Regulations, 2013.
- The bills for SMS termination charges to all other operators were to be raised for the period from 1 April 2011 to 31 May 2013.

Vodafone alleged (January 2014) that BSNL practiced discriminatory treatment differently to different group of operators and BSNL constituted (June 2014) a Committee to examine and recommend the resolution of the issue. The Committee observed (October 2014) that SMS Call Detail Record (CDR) Data for the period from 1 April 2011 to 31 May 2013 was not available with BSNL and decided to hold meeting with the three operators who had signed the addenda agreements for discussing the options due to absence of data. The following recommendations of the Committee made in March 2015 were approved by the competent authority in May 2015:

- Withdrawing the decision to raise bills to all the operators who had not signed the Addenda Agreement;
- Withdrawing the decision to give effect to the Addenda Agreement signed with the three operators with effect from 16 December 2012;
- Neither BSNL shall raise bills nor consider bills raised or to be raised by the private operators;

- Committee also recommended to communicate to the three operators that BSNL was not in a position to implement the Addenda Agreement on the ground that the remaining operators have neither signed Addenda Agreements nor raised any bill on BSNL.

In accordance with the above decision, BSNL intimated the three operators about the BSNL's decision of not implementing the Addenda Agreement. Aggrieved by the decision, M/s Airtel and M/s Vodafone filed appeals before Hon'ble Telecom Disputes Settlement and Appellate Tribunal (TDSAT) impugning BSNL for non-payment of SMS termination charges.

Hon’ble TDSAT directed (March 2016) the petitioners (M/s Vodafone and M/s Bharti Airtel) to provide the necessary details, including bifurcation of SMS data (promotional and other than promotional), for the period from 16 December 2012 to 31 May 2013 to BSNL and BSNL was directed to complete the reconciliation of data within four weeks of the receipt of these details. Based on the reconciliation, the amount found payable was to be paid within period of four weeks. The details from Bharti Airtel and and Vodafone were yet to be received by BSNL (May 2016).

It was seen that BSNL had not maintained SMS CDR data and had therefore no means to make counter claims from Airtel and Vodafone.

Management replied (August 2015) that

- SMS CDRs data in BSNL for the period from 01 April 2011 to 31 May 2013 was not available and bills raised by Private Operators could not be reconciled by BSNL;
- Implementation of Addenda Agreement does not seem to be feasible as except these three Operators, no Operator had come forward to sign the Addenda Agreement nor they had shown any interest in raising bills on BSNL; and
- The matter had become complicated in view of varied and diverse decisions conveyed by BSNL, Regulator and the Private operators from time to time and BSNL adopted a non-discriminatory approach in line with the TRAI directions.

The reply confirms that though BSNL had entered in to agreement with three operators which was to be adhered in line with TRAI direction as they were transparent, reciprocal, and non -discriminatory, on account of lack of preservation of required SMS data, non verification and non-reconciliation of bills (claims) received from the Bharti Airtel and Vodafone, BSNL was exposed to one sided liability in view of Judgment of TDSAT.

5.3 Delay in billing of Multi Protocol Label Switching (MPLS) link

BSNL Southern Telecom Region (STR) had not raised bill for 1 Gbps E link from MPLS to National Knowledge Network (NKN) Point of Presence (POP) provided to MHRD. This resulted in accumulation of arrears of ₹ 6.07 crore.

A Memorandum of Understanding (MOU) was signed (2013) between Ministry of Human Resources Development (MHRD) and BSNL for developing a special relationship to cater to MHRD's connectivity requirements across the country for the Institutes- both Universities and colleges coming under National Mission on Education through Information and Communication Technology (NMEICT). The objective of the proposed relationship was to enable BSNL to help MHRD fulfill the connectivity requirement of 419 Universities and 32,000 colleges under NMEICT which included providing these institutes with connectivity solution that enable them to connect on Virtual Private Network (VPN), access internet and also download/upload educational content from any of the servers in the Network.

The financial obligation of the MOU, *inter alia* defined the charges for interconnectivity with National Knowledge Network (NKN) through 1Gbps Multi Protocol Label Switching (MPLS) "Best Effort link" as ₹ 2 crore *per annum* and BSNL being a stake holder had to bear 10 *per cent* of the cost. This was to be implemented by raising bill for 90 *per cent* of annual rates and 10 *per cent* was to be passed on as trade discount. Respective BSNL Maintenance regions were the billing authority and Broad Band Network (BBN) circles were collecting authority for annual rates of the link at selected places[3]. The billing was to be done on yearly basis on first of December every year to the MHRD.

Audit observed (April 2015) that Southern Telecom Region (STR) had not raised bills for 1Gbps E link from MPLS to NKN POP provided at Hyderabad for the period from December 2012 to November 2015.

STR accepted the fact and replied (July 2015) that one 1 Gbps E link from MPLS to NKN provided at Hyderabad remained unbilled and was now billed (May 2015) to the tune of ₹ 6.07 crore.

Non-raising of the bills as per the billing schedule indicates weak internal controls and results in delayed realization of amount due besides loss of interest on amount unbilled.

[3] Only one 1Gbps MPLS link provided for the connectivity to NKN which is at Hyderabad.

It is worth mentioning that the company has been passing through severe financial crisis and was incurring losses for several years. In such a scenario, the officials should be more cautious so that no service remains unbilled. No recovery has been made till April 2016.

New Delhi	**(P K Tiwari)**
Dated : 09 September 2016	**Director General of Audit**
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Countersigned

New Delhi	**(Shashi Kant Sharma)**
Dated : 16 September 2016	**Comptroller and Auditor General of India**