E3-E4 CFA
TECHNICAL

IPTAX in BSNL

WELCOME

- This is a presentation for the E3-E4 CFA TECHNICAL Module for the Topic: IPTAX IN BSNL.
- Eligibility: Those who have got the Upgradation from E3 to E4.
- This presentation is last updated on 15-3-2011.
- You can also visit the Digital library of BSNL to see this topic.

AGENDA

- Introduction
- What is IP TAX?
- IP TAX In BSNL

INTRODUCTION

“IP TAX is the first step towards the Evolution of Current Generation Network to Next generation Network”.

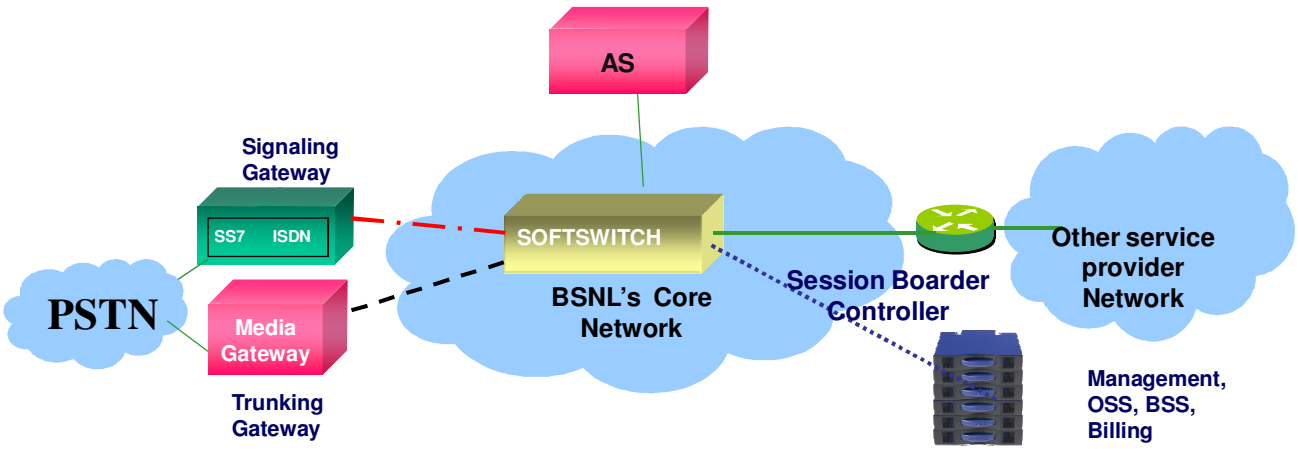
What is IP TAX?

IP TAX is the replacement of existing Level–1/Lev-II TAX exchanges to IP based network (Packet switching network) and rest all the network still remaining circuit switched network.

Existing Scenario

Presently IP TAX will be installed in parallel to the Level-I/Lev-II TAX and then it will replace circuit switched TAX completely with IP TAX. And it comes under class4 NGN.

IP TAX Architecture



IP TAX IN BSNL

Basic elements are:

- Softswitch
- Signalling Gateway
- Trunk Media Gateway

Functions of softswitch

- Based upon Open Architecture
- Provide all existing services available in TDM network
- Performs Media Gateway Control Function

Functions of soft switch

- Performs Call control, signalling and interworking, Traffic measurement and recording functions
- Provides Addressing, Analysis, routing and charging facilities
- Interacts with Application Server to supply services not hosted on Softswitch

Functions of Signaling Gateway

- Provides interworking function between SS7 network and IP network
- This involves providing various types of User Adaptations so that the SS7 signalling can be terminated in SGW and can be translated and messages transported over IP Network

Functions of Trunk Gateway

- Voice encoding & Compression
- Packetization of voice channels
- CNF (Comfort Noise Generation)
- VAD (Voice Activity Detection)
- Echo Cancellation

Functions of Announcement Server

- Announcement server performs the function of giving the announcements as per requirements in the network

IP TAX In BSNL

- In BSNL there was an initial plan of 200K IPTAX pilot project.
- Out of this 200K capacity only 40K at New Delhi and 16 K at Chennai was installed. The equipment was supplied by M/s ZTE through M/s SOTL.
- Both of these sites were validation sites.
- After this a big project of 6476 K IPTAX lines project was planned by BSNL.

IP TAX In BSNL

- In this new project the L1 bidder is again M/s ZTE.
- Till date only 2212 K capacity of IPTAX equipment has been supplied and installed in BSNL at about 119 locations.
- NMS has been installed at Chennai with FCAPS (Fault, Configuration, Accounting, Performance, Security) capabilities.

IP TAX In BSNL

- In this project no separate NTP server is being used in IP TAX, the existing NTP server of our data network will be used for synchronization.
- In BSNL stand alone Signalling gateways will not be purchased, the available SSTP network will be used as Signalling gateways.

Protocols used

- Between Softswitch and media gateway – H.248/MGCP
- Between two Softswitches - SIP(T) or BICC
- Between Softswitch and Signalling gateway - Sigtran suite of protocols.

Protocols used

- Between Softswitch and Application server- sip, parley etc.
- Between two media gateways for actual packet transfer- RTP/RTCP


Thank You!