Bid Document

Bid Details	
Bid End Date/Time	24-07-2020 12:00:00
Bid Opening Date/Time	24-07-2020 12:30:00
Bid Life Cycle (From Publish Date)	90 (Days)
Bid Offer Validity (From End Date)	60 (Days)
Ministry/State Name	Ministry Of Defence
Department Name	Department Of Defence
Organisation Name	Border Road Organisation
Office Name	***********
Total Quantity	1
Item Category	pabx system-EPABX **(PAC Only)**
MSE Exemption for Years of Experience and Turnover	No
Startup Exemption for Years of Experience and Turnover	No
Bid to RA enabled	No
Inspection Required	No

EMD Detail

Required	No

ePBG Detail

Required	No

Splitting

Bid splitting not applied.

Pabx System-EPABX (1 set) (Under PAC)

Make	coral
Model	coraldx2000(s0292)

Technical Specifications

Specification	Specification Name	Values	Bid Requirement (Allowed Values)
EXTENSION AND TRUNK / JUNCTION	**EPABX system Implementation Technology/Architecture**	Hybrid (Microprocessor based also supporting SIP extension)	Conventional (Card/microcontroller based), Hybrid (Microprocessor based also supporting SIP extension), Server Based (Switching through Call Server Application)
	Number of Analogue Extensions / FXS Ports	96	*
	Expandable Upto (TDM / FSX Ports)	128	*
	Number of Digital Extensions	NA	4, 8, 16, 24, 32, 64, 128, NA
	Number of Analogue Junction/FXO ports	8	*
	Number of SIP Extensions	NA	*
	SIP Extensions expandable upto	NA	*
	Number of SIP Trunks	NA	4, 8, 16, 32, 64, 96, 128, 256, NA
MAIN DISTRIBUTION FRAME(MDF)	**MDF(Number of pair)**	100	*
	Integrated Protection Module(IPM)	Yes	Yes, No
	If YES,number of Integrated Protection Module(IPMs)	NA	*
CARDS CARDS	**Type of Cards Supported**	BRI,PRI,E1,E&M,Radio Interface,GSM	BRI, PRI, E1, E&M, Radio Interface, GSM, NA
	Number of Ports per Card Supported	4	1, 2, 4, 6, 8, 12, 16, 24, NA
GATEWAYS	Type of Gateways Supported	Universal Gateway,SIP, FXO,FXS,PRI,Radio,GSM ,E1,E&M	*
	Number of Ports per Gateway Supported	NA	*

CONSOLE	**Type of Operator Console**	Key phone based	PC based, Key phone based, Server Based, NA
	Number of Operator Console	1	*
SERVER SPECIFICATIONS / REQUIREMENTS	**Total Number of Servers Included in the Supply**	NA	*
	"Number of Hot Standby Servers out of Total Servers, included in the Scope of Supply"	0	*
	Server Form Factor	NA	*
	Rack Size (RU) / Space Required for each Server	NA	*
	Processor Make	NA	*
	Processor Configuration & Description	NA	*
	Total Number of processor	NA	1, 2, 4, 6, 8, 10, 12, NA
	Number of Redundant Processors Included in the Total Number of Processor	NA	1, 2, 4, 6, 8, 10, 12, NA
	Number of Cores per Processor	NA	*
	Type of RAM	NA	*
	RAM Size (in GB)	NA	4, 8, 16, 32, 64, 128, 256, NA
	T ype of Hard Disk Drive	NA	*
	Capacity of Hard Disk Drive (in TB)	NA	*
	Hot Swap Components	NA	Power Supply Unit, Fans, HDD, NA
	Network Interface	NA	*
SOFTWARES	**Applcation Software Type / Capabilities**	NA	Call Server Software, Hot StandBy Server Software, Unified Communication Server Software, Network Management Server Software, NA
	Type of Licence	NA	Perpetual, Subscription Based, NA

		Name of Softwares	CORAL DX 2000	*
		Name of the OEM	CORAL	*
		OEM Model / Part Number	DX 2000	*
		Software Description	LATEST	*
		Software Version	01.06.2019	*
		Date of Launch of Version	01.06.2016	*
		Free supports/updates during validity of license	YES	*
SOFTWARE FEATURES	**Analog Extention/FXS (If Yes, Number of Software / Licences shall be Commensurate / Equal to the Number of Analog Extension/FXS Offered under ""EXTENSION AND TRUNK / JUNCTION"")**	NO		YES, NO, NA (For Convensional PBX)
	"Digital Extension (If Yes, Number of Software / Licences shall be Commensurate / Equal to the Number of Digital Extension Offered under ""EXTENSION AND TRUNK / JUNCTION"")"	NO		YES, NO, NA (For Convensional PBX)
	"Analog Junction/FXO (If Yes, Number of Software / Licences shall be Commensurate / Equal to the Number of Analog Junction/FXO Offered under ""EXTENSION AND TRUNK / JUNCTION"")"	NO		YES, NO, NA (For Convensional PBX)
	"SIP extension (If Yes, Number of Software / Licences shall be Commensurate / Equal to the Number	NO		YES, NO, NA (For Convensional PBX)

of SIP Extension Offered under ""EXTENSION AND TRUNK / JUNCTION"")"		
"SIP trunk (If Yes, Number of Software / Licences shall be Commensurate / Equal to the Number of Offered under ""EXTENSION AND TRUNK / JUNCTION"")"	NO	YES, NO, NA (For Convensional PBX)
"PRI Trunk (If Yes, Number of Software / Licences shall be Commensurate / Equal to the Number of PRI Trunk Offered under ""EXTENSION AND TRUNK / JUNCTION"")"	NO	YES, NO, NA (For Convensional PBX)
"Radio Interface (If Yes, Number of Software / Licences shall be Commensurate / Equal to the Number of Radio Interface Offered under ""EXTENSION AND TRUNK / JUNCTION"")"	NO	YES, NO, NA (For Convensional PBX)
"GSM (If Yes, Number of Software / Licences shall be Commensurate / Equal to the Number of GSM Offered under ""EXTENSION AND TRUNK / JUNCTION"")"	NO	YES, NO, NA (For Convensional PBX)
"E1 Trunk (If Yes, Number of Software / Licences shall be Commensurate / Equal to the Number of E1 Trunk Offered under ""EXTENSION AND TRUNK / JUNCTION"")"	YES	YES, NO, NA (For Convensional PBX)
"E&M (If Yes, Number of Software	NO	YES, NO

	/ Licences shall be Commensurate / Equal to the Number of E&M Offered under ""EXTENSION AND TRUNK / JUNCTION"")"		
GENERAL FEATURES of EPABX SYSTEM	**Number of Conference Participants Supported**	NA	8, 16, 24, 32, 64, NA
	Number of Direct Station Selection Keys per Console	NA	*
	Number of Media Channel/Ports Supported	NA	8, 16, 24, 32, 64, 128, 256, 512, NA
	Number of IP-TDM Concurrent Calls(2 users per call) Supported	NA	*
	Call Buffer Memory System	Yes	Yes, No
	If Call Buffer Memory Available,Number of Records	2000	100, 250, 500, 1000, 2000, NA
	Hot Standby Redundant CPU	No	Yes, No
	If YES,Number of Hot Standby CPU Cards	NA	1, 2, NA
	Hot Standby Redundant PSU (Power Supply Unit)	No	Yes, No
	If YES, Number of Hot Standby Redundant PSU Cards	NA	1, 2, NA
	Inbuilt Voice Mail for EPABX System	No	Yes, No
	If Voice Mail Available, Number of Voice Mail Channels	NA	4, 8, 16, 32, 64, NA
	Available for Voice Mail, Number of Hours of Recording	NA	4, 8, 16, 32, 64, 128, 256, 512, NA
	Auto Attendant Facility	No	*
	If Available, Number of Auto Attendant	NA	*

		Channels		
	ASMDR/CDR	Yes	Yes, No	
	Voice Logger	NA	Inbuilt, Inbuilt External Connecting facility, NA	
	If YES, Number of Simultaneous Calls that can be Recorded in Voice Logger	NA	*	
	Security Feature(for server based)	NA	*	
	Supported Functionalities (for server based)	NA	*	
	Supported Codecs	NA	*	
	Any other features	IP BASED EXCHANGE	*	
SYSTEM/EXTENSION/ATTENDANT CONSOLE FEATURES	**System Features**	Automatic Route Selection facility,DID facility(Direct inward dialing),DOD facility(Direct outward dialing),DISA facility(Direct inward station access),DOSA facility(Direct outwards station access),Multi Level Voice DISA facility,Privacy of Call,Facility for connecting recorded voice answering,ASMDR/CDR,Programmable class of service for (STD/ISD/LOCAL) dialing as per need,Caller ID information for both internal and external callers (over Analogue, ISDN PRI),unique authorization codes for every users,Automatic call back,Call waiting,Music-on-hold facility,Call budgeting,Least cost routing,Mix-mode dialing,Provision for remote logins,Interactive Voice Response System(IVRS),Extension to Extension dialing	*	

	Extension Features	Call forwarding,Consultation Hold,Brokers Call,Automatic call transfer,Conference call,Call pick up,Call re routing,Auto call disconnection,Dynamic STD Lock,Paging on key phone,Background music,Password control,Virtual Telephony,Howler Tone,Call parking,Auto answer/Auto off,Emergency call facility,Missed/Dialed/Received Call Lists,Last Caller Call back,Password display suppression,Personal Identification Number,Hotline,Preset Conference Calls,Direct Call billing in rupees,Call billing printout,Calling line identification(CLI)	*
	Attendant Console Features	Answering an incoming call,Call queuing,Serial Call,Call waiting display,Automatic Call Distribution,Call Hold,Trunk offering,Night service,Head phone connectivity,Other Attendants console Features	Answering an incoming call, Call queuing, Serial Call, Call waiting display, Automatic Call Distribution, Call Hold, Trunk offering, Night service, Head phone connectivity, Other Attendants console Features
	Voice Prompts and Announcement	No	*
	If yes, Number of Levels of IVRS	NA	1, 2, 3, 4, 5, 6, 7, 8, NA
POWER SOURCE	**Supply Voltage**	230V AC,50HZ	230V AC,50HZ, 48V DC, NA
	Provision for Inbuilt Battery Charging Arrangement for providing Battery Backup	YES	*
	FCBC	NO	YES, NO, NA
	If YES, minimum current Rating of	NA	10A, 12.5A, 25A, 50A, NA

	FCBC at chrging voltage of 48V (Ampere)		
	Protection against over current and accidental reversal of polarity on the input side and against over current, over voltage on the output side	YES	*
OPERATING CONDITIONS	**Minimum Operating Temperature (Degree C)**	0	10, 5, 0, -5, -10
	Maximum Operating Temperature (Degree C)	45	35, 40, 45, 50, 55
	Operating Humidity (RH) (%)	85	80, 85, 90, 95
TEST REPORT DETAILS AND TESTS	TEC approval as per the latest TEC specifications	YES	*
	TEC approval Certificate number	TEC/NR/I/PBX-004/03/1 16.APR17	*
	Availability of the test report from Central Government/ NABL/ ILAC acredited lab to prove conformity to the specification including Environmental Test Sequence	Yes	*
	Test Report Number and date (not a part of biddable parameter)	ERTL(N)/90(04)-2016-1 7/Q0531 DATE 16-MAR-2017	*
	Name and Address of the Test lab(not a part of biddable parameter)	ELECTRONICS REGIONAL TEST LABORATORY(NORTH)	*
	Test reports consist of verification of all the features & functional parameters & environmental tests	Yes	*
	conformity to Dry Heat for 16 hours at maximum specified temperature degree C in accordance with IS:9000/part-3/sectio n-5/1977 latest	Yes	Yes, No
	conformity to Cold Test for 4 hours at	Yes	Yes, No

	minimum specified temperature degree C in accordance with IS:9000/part-2/section-4/1977 latest		
	conformity to Damp Heat (Cyclic)Test for 2 Cycles of 24 h each at a temperature of 40 degree C & 95% RH in accordance with IS:9000/part-5/section-1/ 1991 latest	Yes	Yes, No
INSTALLATION AND MAINTENANCE	**Installation and Commissioning**	With	With, Without
	Chemical Earthing to achieve resistance < 2ohm	No	Yes, No
	Recommendation / Information regarding Supporting Hardware Required to meet the Performance / Capabilities of the System	DUST FREE ENVIRONMENT WITH PROPER POWER SUPPLY	*
OPERATION & MAINTENANCE SUPPORT	The scope of supply include one set of operation and maintenance manual for each equipment	YES	*
	Operation & Maintenance terminal	Provided	*
	Training provided to buyers	Yes	Yes, No
	If YES,Details of training	On site training for 3 days	On site training for 3 days, On site training for 5 days, NA
	Packing List	EXCHANGE WITH BASIC ACCESSORIES	*
SERVICES	**Warranty**	1	1, 2, 3, 4, 5, 6, 7, 8, 9, 10 Or higher
	Recommendation / Information regarding Supporting Hardware Required to meet the Performance / Capabilities of the System,	YES	*
	Compliance to STC of the Product	Yes	*

 * Specifications highlighted in bold are the Golden Parameters.

* Bidders may note that In respect of non-golden Parameters, the specifications 'Values' chosen by Buyer will generally be preferred over 'Bid requirement (allowed Values) by the Buyer.

Additional Specification Documents

Consignees/Reporting Officer and Quantity

S.No.	Consignee/Reporting Officer	Address	Quantity	Delivery Days
1	***********	***********PAPUM PARE	1	45

Special terms and conditions for category pabx system-EPABX

1. STC FOR pabx system - EPABX In addition to general terms and conditions of the GeM following special T&C shall be applicable:
    1. SYSTEM FEATURES FOR EPABX SYSTEM :
        1. The EPABX System is Digital PCM/TDM (non-blocking) technology.
        2. Tone and Ringing: The System to provide the standard tones and ringing current as in the Public Telephone Network as follows :
            1. Ringing 75 V AC , 25 Hz.
            2. Ring back tone 400 Hz. 0.4 sec ON, 0.4 sec OFF.
            3. Dial tone 400 Hz modulated by 25 Hz.
            4. Busy tone 400 Hz, 0.75 sec ON, 0.75 sec OFF.
            5. Line feed voltage 48 V +/- 4 V DC.
        3. The equipment and circuits for tones and ringing are part of main PABX equipment.
            1. The equipment is with Automatic Route Selection facility to determine least cost route automatically based on class of service.
        4. Extension-to-Extension Dialing: It is possible to establish internal calls automatically by dialing any number without assistance of the attendant.
        5. Direct Outward Dialing: It is possible to establish external calls automatically by dialing any number without the assistance of the attendant (subject to class of service).
        6. Provision of DID & DISA: It has facility for direct inward dialing and direct inward station access.
        7. Direct Outwards Station Access (DOSA): Any Extension can access the trunk lines of the System through personal pass code to make outward calls. All DOSA calls remain in account of that particular Extension.
        8. Direct Station Selection (DSS): Just pressing a single key the operator or extension can directly call an extension or access the trunk line without hassles of pressing multiple digits.
        9. Multi Level Voice DISA: When ordered as an extra feature/card, this will enable the systems to provide auto attendant service to outside callers to directly access the desired extension by surpassing the operator. The caller is to be step wise guided by multi-level voice messages.
        10. Access To Exchange Network: It is possible for an extension to get access to public network with or without the attendant in such cases, facility to exist for the attendant to either dial the required No. or to merely extend the junction to the extension and permit the subscriber to dial the number.
        11. Privacy Of Call: Full privacy of conversation is available on all calls whether

established directly or by the attendant. A warning tone of a specified frequency is applied when trunk-offering facility is exercised by the attendant on an extension user.

12. Class Of Service: It is possible to allow an extension control over the telephone usage by providing him suitable class of service.
13. The coding technique to be used is ALAW/CODEC per channel.
14. During night, when the board is shut, external lines is be linked to any pre-defined extensions.
15. Provision for connecting recorded voice / answering to make available extensions to an incoming call without the help of operator.
16. Flexible Numbering Scheme: System has provision for flexible numbering plan up to four digits/six digits for extensions.
17. Trunk Support: The system supports Analog trunks,GSMtrunks,ISDN BRI,VOIP and SIP trunks.Generally,system supporting ISDN PRI is also compatible to E1 connectivity.
18. Universal slots Configuration: All slots of the System are identical to facilitate flexible configuration of the System as per user needs.
19. Discriminate Ringing: The System supports discriminate ringing to indicate internal &external calls.
20. Multiple Consoles: The System supports multiple numbers of consoles for large EPBAX Systems.
21. Mixed Station Dialing: To support all the features irrespective of type of telephone instruments i.e., DTMF or DECADIC.
22. Versatile ASMDR/ CDRThe System supports ASMDR/CDR, which is a call accounting application that can record suitable number of calls and print as applicable without dedicated printer.
23. Power Failure Transfer: In the case of power failure all P&T / CO lines become available on the pre-set Extensions. Provision for Availability of Junction Lines are as under: System of 4 & 8 Junctions: Availability of 2 Junctions System of 24 & 32 Junctions: Availability of 4 Junctions System of 64 Junctions: Availability of 8 Junctions.
24. Programmable Class Of Service: The System supports programmable class of service for P&T (STD/ISD/LOCAL) dialing as per need.
    1. Direct Call Billing In Rupees: The System supports direct call billing (near value) through parallel/serial port printer without computer or through Call billing software with computer.
    2. Call Billing Printout Options: The System supports versatile multiple combinations of direct printout options with total amount viz., Extension wise, Trunk wise. Todays call print out, Group wise printout, Particular date, Particular Month, Particular Time, Particular Phone etc.
    3. This is an optional feature and when ordered it enables the incoming calling No. is displayed on Key/Analog Phone even if the call is transferred by the operator, it is compatible to DTMF (Optional).
    4. Remote Maintenance: The System programming can even be done from remote locations.
25. PABX System is suitable for flexible numbering scheme. It is support at least 6 digits numbering scheme. System also allow mixed numbering scheme.
26. System has abbreviated dialing feature configurable for system wise and individual user basis.
27. Caller ID information for both internal and external callers (over Analogue, ISDN PRI) is available to endpoint users. It is possible to capture the CLI coming from the digital and analog trunks in the Network and display the same on following :
    1. IP Phones
    2. Digital Phones.
    3. Analog Phones with DTMF and FSK CLI with Name unit (inbuilt CLI

unit). It is possible to provide CLI on all analog extensions simultaneously without any limitation on the number of extensions on which this facility would be available.

28. Every subscriber has his own authorization code to make outgoing calls thereby ensuring no misuse of the system. Unique authorization codes is possible for every subscriber & the user to have a complete flexibility to dial his identification or authentication code from any location & thus utilize all his facilities from there.

29. Automatic call back for any of the dialed extension within the exchange in case of busy.

30. Direct seizure of PSTN junction using a code or a key of digital phone.

31. Reservation of access to PSTN junction line for certain user.

32. Limitation for certain user to access PSTN junction line depending on time of the day.

33. Fully Restricted Extensions - Extensions must be able to be barred from all forms of outgoing access, except calls to Emergency Service like Helpdesk, Fault Control, Fire service through class of service programming. This will restrict the extension to receiving incoming calls only.

34. Time Based disconnection on PSTN calls which can be user group based.

35. The system may have option to support connectivity to third party applications like call billing system, voice mail, IVR (Interactive Voice Response) System etc.

36. Class of restriction facility to define different class of call origination and termination facilities.

37. Call Waiting - System allow users to have "Call waiting" for internal caller and external caller or operator. Subscribers with digital or IP- telephones with display is able to override an ongoing call for a waiting call. In the busy state, the callers receive the call connect signal, the subscriber receives an alerting tone and the caller ID is shown on the display. Without terminating the existing call, it is possible to take the waiting call and toggle between the two calls. The caller hear a call waiting tone in case to be informed about his call waiting.

38. System has built-in music-on-hold facility. The system provide internal/external music and recorded announcement information to callers on hold.

39. Voice Prompts and Announcement - The system supports a plug-in voice announcement board with minimum 30 announcements.

40. Call Detail Recording - System supports versatile call charging system. Details of extension numbers date, time, called number, duration of call and call charges to be provided. The system has an inbuilt billing system, which is capable of calculating the call charges without the need for any additional external hardware or software systems.

41. Call Budgeting - The system has call budgeting feature, wherein the call charge budget for each extension of the system can be defined and if for any user, the budget exceeds, all outgoing trunk calls will be barred. This feature is inbuilt in the system.

42. Least Cost Routing - The system has inbuilt Least Cost routing (LCR) which can be configured as Dialed number based or Time based or call charges based.

43. Multiple Operator Positions. - Multiple Operator positions to be provided, and Exchange lines and functions may be grouped to be handled by one or more operator positions. The system has a provision to support operator consoles as per the capacity and configuration. The operator consoles to be equipped with PC based consoles with headgears.

44. The system has the function of gateway and gatekeeper for IP telephony. The hardware should be on board capable of going into any universal slot.

45. The system supports mix-mode dialing. The system automatically detect the

type of analog phone connected to the subscriber card and support PULSE/DTMF dial without changing the parameters in the switch.

46. The system has provision for remote logins for maintenance. These Logins are password protected. Also there it is possible to create different maintenance logins with different privileges.

47. The system administration and maintenance should be using GUI based software.

48. Closed User Group : The system may at least 16 closed user group with maximum of 30 subscribers in each group.

2. EXTENSION FEATURES FOR EPABX SYSTEM :

1. Automatic Call Back: Facility exist for an extension user on encountering a busy signal on a called extension, to invoke the automatic call back feature by dialing a code before hanging up. When both the calling and called parties are free, the call is be automatically put through and in case of no-answer the call may be disconnected after a specified period.

2. Call Forwarding: An extension with this class of service is able to transfer all incoming calls, temporarily to another pre-selected extension. Such requests to be registered by dialing a code followed by the extension No. Facility also exist for cancellation of a request registered earlier.

3. Consultation Hold: An extension engaged on an external call (incoming or outgoing) is able to hold the call while making internal call for private consultation. The external subscriber not to overhear such consultation. There must be facility of music during hold condition.

4. Brokers Call: An extension engaged on an external call (incoming or outgoing) is able to hold the call while making another call than alternate between the two. The other party not to over hear such consultation. There must be facility of music during hold condition.

5. Automatic Call Transfer: It is possible for an extension user to transfer incoming calls to another extension with or without help of the attendant.

6. Executive/Secretary: A combination of call forwarding, consultation & hold to provide for executive to selectively/answer calls.

7. Executive Over-Ride: There must be facility offering priority to 5 minimum extensions to over-ride on going conversations.

8. Conference Call: It is possible for an extension user to set up a conference call with other extension users or outside callers as per system capacity and configuration. One of the extension user or by the attendant may set up the conference call.

9. Call Pick-Up : It is possible for an extension user to pick-up incoming calls ringing on another extension without the help of the attendant. The system is support the following types of call pickup :
   1. Group Call Pickup
   2. Directed call pick-up.

10. Call Re-Routing : It is possible for a call to be re-routed, without help of the attendant, to other pre-defined extensions when certain conditions apply.

11. Auto Call Disconnection: System to facilitate to fix the time of call beyond which it will be automatically disconnected.

12. Dynamic STD Lock : The System supports individual extension that can lock outward dialing (STD/ISD/LOCAL) by a personal secret pass code to prevent misuse by others.

13. Paging On Key Phone: The caller can activate speaker phone of the called extension to communicate in urgency in own voice when Extension is idle.

14. Call Name & Extension number on Display (Internal CLI): Name as well as Extension No. of the caller is displayed on the Key Phone, facilitating to respond accordingly.

15. Background Music: The Key Phone user can enjoy the light background music.

16. Auto-Answer / Auto-Off : Key Phone can be programmed for auto-answer after

pre-set number of incoming rings. The Key Phone is automatically disconnected when caller disconnects.

17. Extension to extension calls, Operator assisted calls
18. Direct inward dialing (DID), Direct outward dialing
19. Programmable Class of Service features for local/STD/ISD dialing as well as for system features with dynamic locking facility.
20. Discriminative ringing for internal, external and VIP calls.
21. Abbreviate dialing - Individual extensions are able to at least program 10 abbreviated call numbers for regularly called numbers.
22. Call Transfer -
    1. Transferring external calls
    2. Transferring internal calls
23. Camp On -
    1. Camp On Busy
    2. Camp On Idle
24. Call Parking - It is possible to park calls and retrieve from both analog and digital/IP extensions.
25. Line â€" lockout
26. Trunk camp on, Wake up alarm, Do not disturb
27. Last number redial
28. Voice mail interface server
29. Emergency Call - The system has the facility for the user to broadcast simultaneously on at least 5 end point users irrespective of their state in event of any emergency through message dialing a feature code.
30. Missed/Dialed/Received Call Lists - It should be possible to view at least last eight dialed/received/missed calls on display equipped terminals.
31. Last Caller Call back - For an analog subscriber without CLI phone, it is possible to dial the last incoming caller, by dialing a specific code. This would enable the analog subscriber to call back any missed call on his/her extension.
32. Hotline - Direct inward system access
33. Password Display Suppression - When a password is entered in a display equipped terminal the display should suppress the digits so that no one present can deduce the password.
34. Personal Identification Number - This feature is also called as Floating Password. Through this feature subscribers is able to go to any extension in and across the network and make that extension as his extension for a Call or for certain time period.
35. Password Control - It is possible to assign Passwords to telephone from both Maintenance Terminals as well as telephone to prevent misuse of telephone.
36. Virtual Telephony - It is possible to give subscribers a virtual account code, which can be used for making outgoing calls from any extension. All such calls made are to be accounted to the virtual account.
37. Hunt Groups - It is possible to have both Cyclic and Linear Hunting of extensions.
38. Howler Tone - It is possible to give a howler tone on the extension in case the handset is kept off hook after a timeout.
39. One Number Service - The system supports One Number Service. This feature allows the calls coming in to extension to ring after administered numbers of rings (follow me) at a predefined Mobile phone number or PSTN Number. It is then be possible to use the predefined handset as a remote extension.
40. Add on conference (three parties)
41. Preset Conference Calls: It is possible to dial out a pre-defined group of participants/numbers by simply pressing the pre-assigned key on the digital phone or by code from any of the analog phone. It is also possible to have multiple such groups. Additionally, each preset conference must have its own

unique dial number. When this group number is dialed, all the number stations will ring simultaneously. As members join the conference, all actively-participating members will hear a warning tone indicating that another participant has entered the conference. Stations that go un-answered will continue ringing without disturbing the conference until the ring time out is completed.

3. ATTENDANTS CONSOLE FEATURES FOR EPABX SYSTEM:
   1. Stand-alone or P.C. based Attendant Console with the following features :
      1. The operator console has easy to view display,multiple keys and busy lamp field for extensions. It has easy handling facility for all internal & external calls.
      2. Answering an Incoming Call: Facility exist for answering an incoming call, whether from an internal extensions or external junction. It is possible to identify the type of call that is internal, external line etc.,
      3. Call Queuing : All incoming calls are presented to the console in order of the arrival. Facility exist for giving preference to junction calls over calls from internal extensions.
      4. Serial Call : Facility exist in Large systems to extend an incoming call as serial call, which is come back to attendant on completion of call and permitting the attendant to route the call to another extension and so on.
      5. Call Waiting Display : An indication is be given when there is an unanswered call waiting in the queue.
      6. Call Selection : Facility exist to the attendant to select which incoming call to be answered first.
      7. Call Hold Facility : It is possible for the attendant to place an incoming junction call on hold pending further processing.
      8. Setting Up External Calls : Facility exist for enabling the attendant to set up the external calls for the extensions, which are allowed to access the public network. The attendant may either dial the number himself or merely extend the junction to the authorized extension user.
      9. Trunk Offering : The attendant is able to offer an incoming call to busy extension. A tone however, alert the talking parties when the attendant barges-in on a connection.
      10. Position Busy : When a console is too busy, all the waiting calls queued for the particular console are transferred to other console/extensions. Incoming calls in cases where two consoles exist are equally distributed. Facility exist during absence of the attendants for incoming external calls to be forwarded to one common or several individual extensions.
      11. Night Service : It is possible for all incoming calls to be transferred to certain pre-fixed extensions, in case this option has been exercised during the night.
      12. Head Phone Connectivity : The operators can plug-in headphone to handle the call traffic efficiently while keeping her/his hands free for other jobs.

4. SERVICE OBJECTIVES FOR EPABX SYSTEM:
   1. Following service objectives are to be met:
      1. Under overload conditions, the lost call figure applicable is one in 200 for extensions to extensions call and one call in 100 for junction calls, overload being defined as 10% increase in occupancy of speech network and simultaneous 25% increase in the number of calls.
      2. The selection time under full load is defined as the time interval between the instant at which the required information for selection of the outlet has been received at the inlet and the instant at which outlet is ceased not to exceed in 99% of the cases under traffic

overload 1.5 seconds.

3. The assumption to be made while deciding the dimension of the links, junctions and attendants console are following :
   1. Total junction traffic per extension 0.1 erlang during peak busy hour.
   2. Average holding time of calls 0.90 seconds.
   3. The switching network provides access to the links & junction on fully non-blocking basis.
   4. The equipment design is such that any special case and precaution on the part of maintenance personnel are kept to an absolute min. And no preventive maintenance is required.
   5. The System has inherent capability to monitor its own performance and to detect, analyze and locate faults.
   6. Fault repair at site normally consist of only replacing the faulty card or plug-in modules.
   7. The System has remote maintenance facility.

5. GENERAL FEATURES FOR VOICE MAIL:
   1. System to be provided with in-skin voice mail system or Standalone (Integrated with software) or PC based voice mail system. The Voice Mail System with necessary Hardware and Software to work in conjunction with the Hybrid PABX is part of the system. The Voice Mail has all the traditional voice mail features as follows :
      1. To record, delete, play, forward and reply to voice messages.
      2. To send group messages for many mail boxes simultaneously.
      3. Personal Greetings (Name or Mail Box Number). Users are able to record/change their names, greetings etc from their phone itself
      4. Different Greetings to External & Internal Caller.
      5. Password or Personal Identification Number (PIN) to access VM boxes.
      6. To select next message and previous message.
      7. The system inform/indicate the availability of messages in the Mail Boxes to the users either -
         1. Audibly - Tone/Voice Prompt.
         2. Visually - by illuminating the message waiting lamp on the telephones.
      8. Programming/reconfiguration and creation of mailboxes of the VM system is possible by utilizing the maintenance administration terminal.
      9. Administration Interface- The system provides direct access to the system database through a PC interface, from which traffic and usage reports can be generated.
      10. Automatic Message Scan - The system allows the subscribers to scan all message headers and/or messages by simple feature codes.
      11. Call Answer - The system provides the facility of answering calls and recording messages for unavailable or busy subscribers. It also enable the subscribers to listen to or intercept call answers as they are being left by callers.

6. SCOPE OF INSTALLATION AND COMMISSIONING FOR EPABX SYSTEM:-
   1. Mounting/Fitting of the EPABX System.
   2. Suitable electric wiring up to 3 meters length between EPABX and Power Socket.
   3. Suitable connection of extension and trunk lines between MDF and EPABX with in 3 meters length.
   4. Connection of telephone instruments and demonstration of extension features/working of EPABX to the buyers.

7. BUYER OBLIGATION :

Bid Specific Additional Terms and Conditions

1. Scope of supply (Bid price to include all cost components) : Supply Installation Testing and Commissioning of Goods

This Bid is also governed by the General Terms and Conditions

---Thank You---