

PPCS

(Prison Prepaid Card System)





"A *Voice* Processing Company"

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November 2000

First Edition

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Prison Prepaid Card System Overview

The Prison Prepaid Card System is an Interactive Host Voice Response Prepaid Telephone value-added service for subscribers who wishes to make prepaid pre-determined calls via the PSTN direct distance-dialing network from any touch-tone telephone location within the area of service coverage. This system is a fully automated and non-operator assisted system.

The system also provides callers the convenience in being able to make long distance calls anytime to pre-defined telephone numbers. For the Service Provider, it is revenue generating value-added service that eliminates the risks of unpaid long distance calls.

Among the functionalities are:

- It allows cardholders to place domestic or international long distance call without operator assistance, anytime and any place using a normal telephone set.
- It provides automated non-operator assisted calls by the cardholder.
- It has the capability to process up to 120 simulation calls without operator assistance.
- Designed as disposable and/or rechargeable prepaid calling card.
- It incorporates extensive Back Office management reporting.
- The system's database is initially designed to process up to 100,000 card subscribers and has an expansion capability of up to 99,000,000 cards.
- Designed to operate 24 hours a day, 7 days a week with schedule maintenance of the equipment.

The Prison Prepaid Calling Card System consists of three (3) major sub-systems compliant to digital 2 Mbit E1 interface.

- Voice Response Unit (VRU)
- Back Office System
- Nice Logger

Line		Card Number	Time			Telephone Number Called
In	Out		Start	Duration	Balance	
1	90	0018365859	17:20:00	00:02:41	00:03:19	5649872
14	15	5621946587	17:21:00	00:01:41	00:04:19	6985624
3	9	0032649521	17:20:56	00:01:45	00:04:15	2316598
4	13	0000654952	17:21:30	00:01:11	00:04:49	2356849
5	5	3264958135	17:20:13	00:02:28	00:03:32	3265984

Voice Response Unit (VRU)

The module that answers and processes the call providing callers with various multi-lingual menus and prompts on how to use the system. It handles interaction with the caller, ensures that the system interfaces with the local PSTN and long distance gateways via system digital telephone interface network card and digital matrix switch. It uses ODBC Adapter for card validation and verification, table look ups and verification of area code and country code numbers. It also performs complex data computation and conversion of allowable call duration corresponding to the dialed number by the subscriber. In addition, it also maintains and supports various communication protocols such as RS232. It also has a capability of sending signal to the nice logger using the RS232 protocol.

The system software architecture is modular in design and incorporates various telephony and processing and serial integration parameters allowing the DiaVox IVRS48 system to integrate with a local host computer for the Prepaid Calling

Card subscribers via TCP/IP and access remote computer databases for other Telecommunication Carrier/ Telephone Company Cards, Credit Cards and Back Cards.

The system is designed to be fault resilient with hot-pluggable selected components, allowing on-line servicing and maintenance without bringing the system out of service ensuring a high system up time availability. System expansion is the most economical in the industry providing an upgrade of voice line card in increment of 30 or 60 channels per chassis per node.

Back Office System

This system is responsible for maintaining the various databases and records of the Debit Card Telephone System with a comprehensive back office function. The Back Office System communicates with the VRU via Ethernet TCP/IP.

Services Provided by the Back Office System:

- Preparation of prepaid cards
- Confirmation of prepaid cards
- Activation of prepaid cards
- De-activation of unauthorized cards
- Maintenance of card databases
- Maintenance of domestic and international table rates
- Database management and administration
- Automatic encryption of PIN numbers
- Report generation
- Maintenance of holiday tables
- Inventory function of all active cards and de-activated cards

Nice Logger

The system handles the recording of the entire call conversation. The Voice Response Unit (VRU) sends signal to the Nice Logger to start the recording using the RS232 gateway.

System Features

The DiaVox Prepaid Calling Card System is a full turn-key stand alone 60/port digital telephone service voice response automation which will be used to provide automated national and international calling services to the card subscriber without operator assistance.

The proposed system has a capacity to process 60 incoming simultaneous calls and 60 outgoing calls to dial the called number. Authorization and access to the network is facilitated through the DiaVox Prepaid Calling Card System. The system's database is initially designed to process up to 100,000 card subscribers and has an expansion capability of up to 99,000,000 cards. The system is also designed to operate at a 24-hour per day, seven days a week and 365 days a year with scheduled maintenance of the equipment.

DiaVox Technologies, Inc., proposes a fully redundant DiaVox Prepaid Card System, a fully integrated voice processing system which is expandable up to 480 ports using industry standard components fully compliant to Bellcore, LSSGR and NEBS standard.

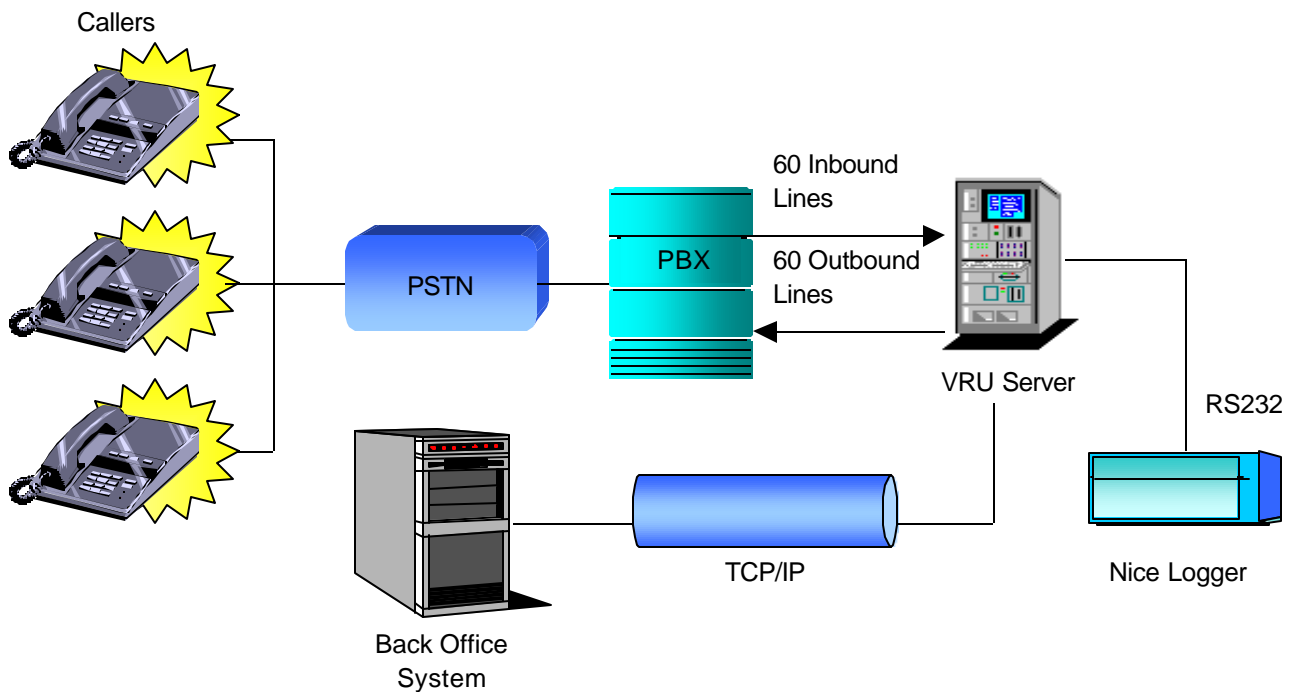
The fully redundant digital E1 Prepaid & Calling Telephone Card System is capable to answer up to will 240 simultaneous calls within a one (1) second time frame without system degradation and proven reliability of its performance in a Central Office environment.

The system consist of multiple Voice Response Unit of 120-Channel capacity per node handling 60 inbound and 60 outbound lines connected to a fully redundant Application Processor Unit responsible for validation, verification and various calculations of required of the system. The "Heart" of the system is the Back Office Processing System, client server-based processor which processes all the management functions, such as card number generation, PIN encryption and decryption process, maintenance of various tariff rates and tables, real time updating of prepaid and calling card balances and various management and performance report generation. The system uses ODBC Adapter to access the system databases.

The back office operation is a networked based system, allowing multiple workstations and connects to the Voice Response Unit (VRU) via an Ethernet LAN using 10base2 connection. This allows the whole system function seamlessly without affecting the real-time processing of callers direct distance dialing. Total management control is performed within this unit, which is our HOST computer. The system administers and maintains the system's databases, tables and report generation.

The system also has the PCS Call Status Display Screen, which provides the information on the Prepaid Card System scenarios as the runtime engine is executing them.

The system also allows speech development to create multi-lingual speeches, prompts or messages. System administration of the Prepaid & Calling Telephone Card System can be done locally or via a remote terminal including the monitoring of the system's performance through its system diagnostics module.



System Requirements

A. Hardware Requirements

1. Computer Equipment

- Server type
- Intel Pentium II 450 Mhz Processor
- 256 MB RAM
- 4 GB Hard Disk
- Network Interface Card (10/100 Mbps)
- 56K Modem
- 2 Serial Ports
- Parallel Port
- 2 ISA Slots for Full-length Cards
- CD-ROM Drive
- Floppy Drive
- VGA Monitor
- Keyboard
- Mouse

2. Network Interface & Voice Line Card:

- D/600SC-2E1

3. Peripheral:

- RJ45 shielded UTP cables to connect Dialogic D/600SC-2E1 card to MD110, 4 pieces
- RJ11 Telephone Cable to connect modem to phone jack
- Software Protection Key

B. Software Requirements

1. Operating System

- SCO UNIX Open Server Release 5.0.5
- Windows NT Server 4 (Service Pack 4)

2. Telephony Network Interface and Voice Line Card Drivers

- Dialogic Release 2 for SCO OpenServer
- Global Call API
- E1/T1 Call Control Library

3. Voice Process run-time engine

- IVRS48 –Server 4 for SCO Unix
- IVRS48 3.30 for NT