

Healthcare Solutions Summary

Healthcare Solutions for NEC, Nortel, Avaya, Mitel, and Siemens telephony platforms



A TFB Whitepaper



Executive Summary

The mergence of communications and information processing technologies has resulted in a wide range of opportunities for healthcare. The benefits accrued enable healthcare organizations to keep pace with the rapid evolution of patient, physician, insurance, and regulatory requirements.

Among the areas where TFB has enhanced through use of technology are:

- § Patient Accounting
- § Transcription
- § Online Health Information Access
- § Monitoring and Notification of Lab Results
- § HMO Information and Transaction Processing
- § Patient Status and Transport

Optimization of technology begins with an emphasis on identifying business processes, as well as staff and systems utilization, to ensure that technology-based solutions support the healthcare process, and do not dictate it. To achieve this important goal, Technology for Business offers a range of prepackaged solutions representing common needs in the healthcare industry. Importantly, TFB provides a wide range of customization services, including systems integration and custom designed applications. Moreover, TFB's integrated approach means that centralized applications can benefit many departments simultaneously, leading to uniformity in processes and procedures and efficiencies that generate cost savings.

The approach of taking full advantage of the opportunities offered by technology, begins by defining the unique user goals within the existing operating environment. Following are application opportunities identified, tested, and implemented by TFB in a variety of healthcare organizations. These should act as a primer for defining those areas where technology can best serve your healthcare organization.



Benefits

By automating routine and repetitive tasks, your customers get better service, staff efficiency is improved, and provision of information is streamlined. What's more, multiple departments within your organization can often benefit from the system without significant addition of equipment or infrastructure.

As a technology investment, TFB systems are designed to give you options. Systems easily scale to accommodate additional call volume, and because we integrate with your existing database systems, you remain in control of the data.

Benefits Summary

- **Enhanced Patient Servicing** by offering instant, 24X7 access to information and transactions.
- **Reduced Transaction Costs** by reducing manual intervention required to service customer requests.
- **Streamlined utilization of people, processes and systems.**
- **Remote Information access** for offsite vendors, physicians, and related healthcare providers.
- **Proactive Notification and Delivery of Vital Information.**
- **Centralized reporting** to help assess performance, and meet regulatory requirements.





Features

In general, healthcare organizations share similar systems, processes, and procedures. But your specific workflow, and unique combination of data and telephony systems must be accommodated uniquely, and within your budget. TFB's solutions combine prepackaged applications with custom features, call flow, data connectivity, and voice prompts to provide comprehensive solutions that suit the way your organization already works. This ensures a solution that is matched to your requirements, your data environment, and your telephony systems. The following applications are offered,

- § HMO Eligibility Verification
- § Lab Results
- § Room Status Manager
- § Express Pharmacist
- § Patient Account Manager
- § Health Information Library
- § Automated Appointment Reminder
- § Patient Status and Transport



Increasingly, customers demand fast, automated information transactions from a touchtone phone. The above applications offer a common set of integrated, customizable modules in several categories:

- § Inquiry and Information By Phone
- § Transaction Processing
- § Automated and Self-Service Routing
- § Reporting and Notification
- § Call Center and Multimedia

Features are organized into applications based on requirements. The applications are tailored to your needs,

building on proven application modules that handle generic call flow, data, and integration functions.

Inquiry and Information By Phone

Your customers expect information on demand. TFB integrates with your open database systems through standard interfaces such as ODBC or IP sockets messages. Data that already exists in your IT environments can be spoken to callers over the phone, 24 X 7. This includes information such as account balances, insurance status, eligibility, lab results, policies and procedures, and directions.

This feature is used in applications such as,

- § HMO Eligibility Verification
- § Lab Results
- § Express Pharmacist
- § Patient Account Manager
- § Pay by Phone
- § Patient Status and Transport
- § Health Information Library

Transaction Processing

By offering automated transaction processing to customers, you not only improve service, but you remove your staff from many tedious and repetitive tasks. Transactions can include accepting credit cards by phone, requesting prescription refills, or confirming a scheduled appointment.

These features are used in applications such as,

- § Automated Appointment Reminder
- § HMO Eligibility Verification
- § Room Status Manager
- § Express Pharmacist
- § Patient Account Manager
- § Payment by Phone



Automated and Self-Service Routing

Getting to the right department, individual, or automated application should be an easy task for your callers. TFB routing packages include Automated Attendant, Enhanced Call Center Routing, Skills Routing, and Split Director. By using these product in tandem, you get a system of automated and supervisor controls that allow you to route callers most effectively. For example, supervisor can drag calls between ACD queues, and callers can be automatically routed back to the same agent to allow continuity of service on a particular issue. Again, service is improved, and customers can get to the right department or information without manual intervention.

These features interact with most applications, providing a framework for making your organization and services accessible to your callers.

Routing features include,

- § Self service touch tone access to routing and applications
- § Routing based on caller ID
- § Routing to the best available agent based on skill profile
- § Supervisor override to drag and drop calls between queues
- § Real time reassignment of agents to splits
- § Automatically routing callers back to the same agent
- § Priority routing

Reporting and Notification

All applications create centralized transaction reporting in TFB *ACD Reports*. Call details are available by split, pilot, DNIS, and ANI. You can also view call activity by agent. But *ACD Reports* is only part of reporting. Often, your existing systems can be used to write back transaction and request results. It can be desirable, for instance, to record scheduling information back into your existing database as scheduling transactions are completed by touchtone.

Reporting can also be augmented by proactive notification. Prescription refill requests can write back to your database, but can also send an email notification for each request, or for requests that meet particular criteria.

Reporting and Notification features can be used in applications such as,

- § Automated Appointment Reminder
- § HMO Eligibility Verification
- § Room Status Manager
- § Express Pharmacist
- § Patient Account Manager
- § Lab Results
- § Payment by Phone

Reporting and Notification options include,

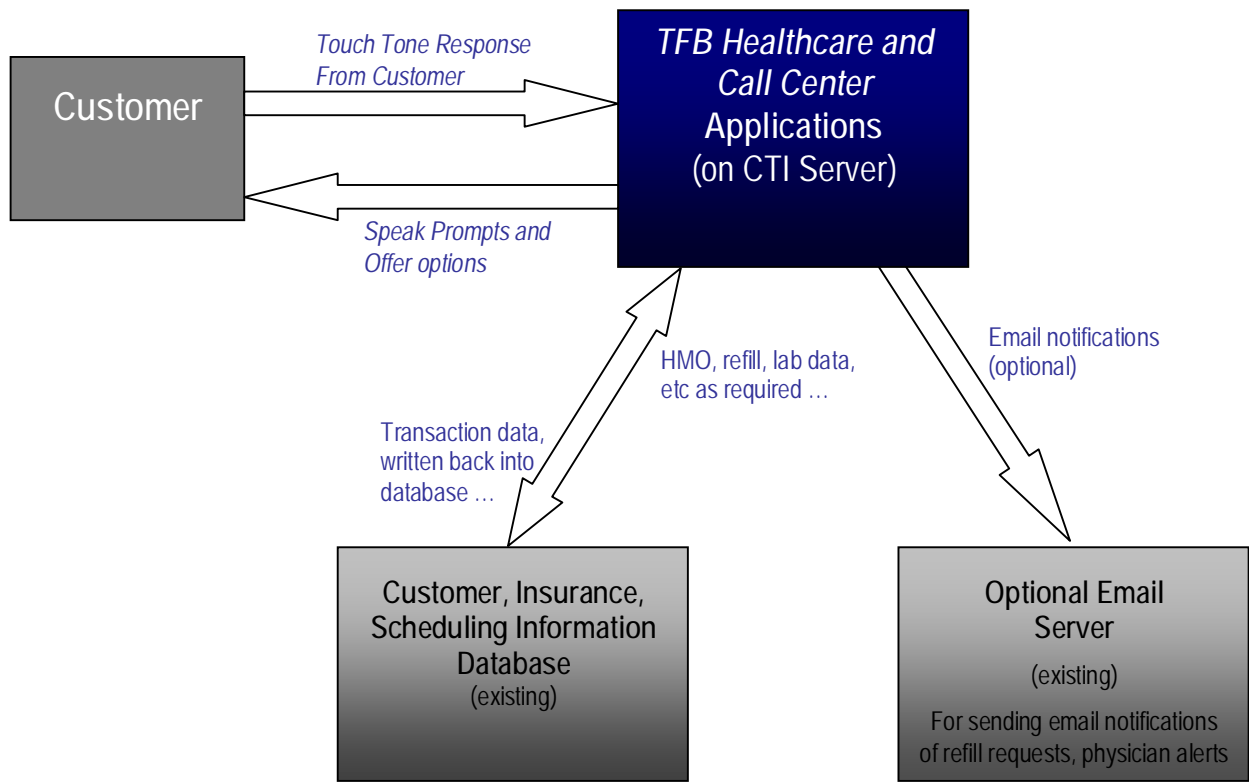
- § *ACD Reports* package
- § Transaction records in your database
- § Email notification
- § Pager notification
- § Log Reports
- § Fax
- § Desktop alarms

Call Center and Multimedia

For organizations with NEAX based call centers, TFB offers an extensive, feature-rich application suite, fully integrated with NEC Infolink. TFB is the premiere Infolink developer, with call centers across North America. Many features offer a quick return on investment, instantly improving customer service and increasing staff efficiency.

Call Center Suite applications include,

- § Screen Pop
- § Automated Callback
- § Automated Transcriptions
- § Automated Campaigns
- § Enhanced Automated Attendant
- § ETA/Queue Position
- § Agent eMail
- § Agent Chat
- § Internet Callback



MAJOR SYSTEM COMPONENTS

Optional Feature Enhancements

- Text-to-Speech - If non-numeric data must be spoken to customers from a database
- ACD Reports (NEC NEAX ACDs ONLY) - Comprehensive reporting designed for call center environments.
- TFB Alarm Manager - Notification should there be errors in critical systems, such as the database connection.
- Credit Card Pay By Phone - For businesses that would like to offer convenient pay by phone, TFB can integrate to your existing credit card processor through the appropriate open API.



Technical Specifications

TFB's healthcare applications run on TFB's *CTI Serverä* platform, a Pentium-based PC running Windows NT or Windows 2000. CTI Server uses Dialogic telephony boards, which provide the phone port interface to the switch or to trunks. CTI Server is typically located in proximity to your telephone switch, and is on the LAN to provided connectivity to local databases.

Requirements Summary

Switch Requirements

- NEAX 2000 or NEAX 2400 with ACD
- Available Analog / Digital Ports

CTI Server Requirements

- CTI Server Hardware Platform(s)
- Dialogic Ports
- Enhanced Automated Attendant

Optional

- TFB Alarm Manager (required for email notification)
- Text to Speech
- TFB Screen Pop (NEAX environments only)
- TFB ACD Reports (NEAX environments only)
- Credit Card by Phone (requires additional integration)

*Configuration without ACD does not allow option to transfer to agent groups. Also restricts other CTI features.

Environment and System Component Details

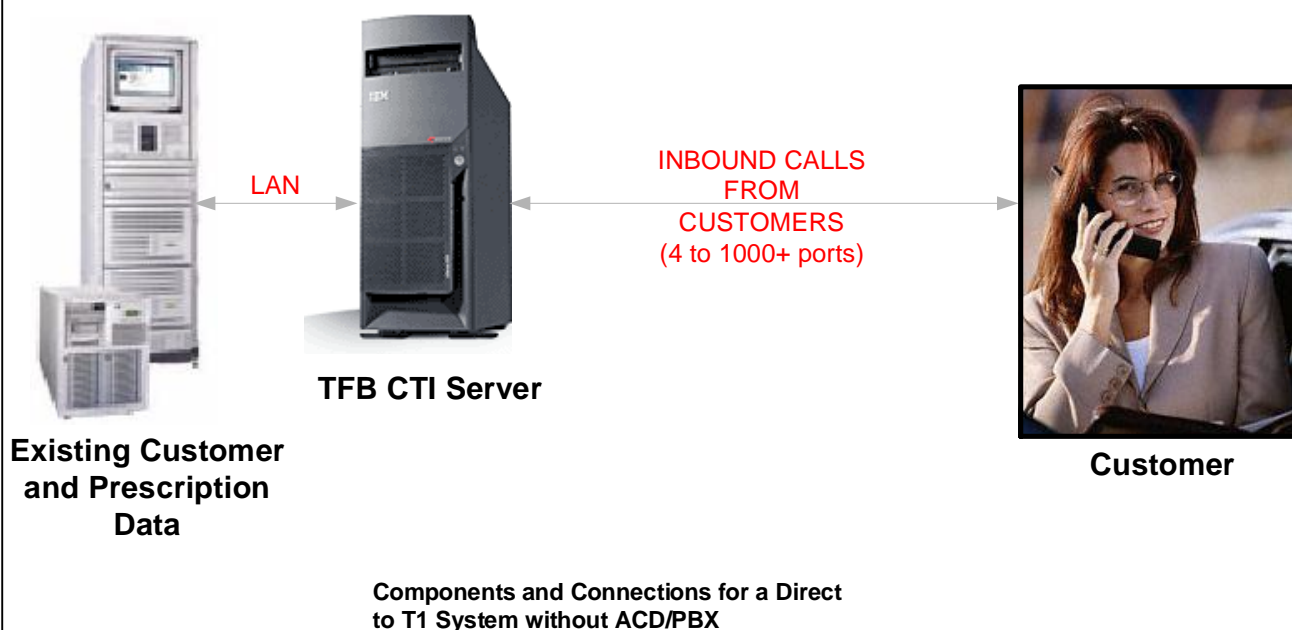
No two users have exactly the same requirements, so the system is designed to be highly customizable. By default, the system is designed to read your existing database either via ODBC or through sockets messages. The user has responsibility for maintaining the database and ensuring the required data is available to the application. Because data structures are typically unique to users, some customization is usually required for database integration.

Environment Assumptions

- Database exists and is accessible on the LAN with necessary information available to run required refill functionality
- Data is provided by end-user in documented format



System Connectivity Diagram



Environment without PBX/ACD

The application also runs in an environment without a PBX/ACD, using direct T1 or analog lines. This configuration limits the addition of applications that are related to ACD and Infolink functionality. Using the system in an integrated NEAX environment is recommended.

Application Limits

By design, all system maximums generally exceed the requirements of practical applications.

Application Maximums	
Maximum Ports Supported	Limited only by ACD ports
Maximum Length of each Recorded Message	20 min.
Maximum Simultaneous Calls	1 per port

CTI Server Hardware Limits	
Maximum Ports on first CTI Server	36 (24 T1)
Maximum Ports on subsequent CTI Servers	48 (48 T1)
Maximum Total Ports in CTI Server system	Unlimited by TFB, only by ACD Ports

Data Required By the System

By default, the system is designed to read information your existing databases either via ODBC or through sockets messages. The user has responsibility for maintaining the database and ensuring the required data is available to the application. Because data structures are typically unique to users, some customization is usually required for database integration.

The exact data required is dictated by the application specification details. That is, all applications are driven by available data, so implementation of all features is restricted by the information stored in your *existing* database.



Purchase and Installation

The purchasing process is straightforward, and is guided by a TFB sales representative or authorized dealer. Installation of turnkey features typically takes less than a couple of days. Implementation of custom features and applications is accomplished according to an agreed upon schedule. In general the steps are as follows.

- **Requirements evaluation**
Determine and evaluate user's requirements, including the need for customization of the application and for number of IVR ports. Include requirements for data security and customer privacy.
- **Determine Time Frame for Production**
Determine customer's desired cutover schedule.
- **Purchase Order**
User or dealer issues PO for Hardware, Software, and Labor as determined by requirements evaluation.
- **Installation and configuration**
By arrangement, TFB may come on site to complete total turnkey installation, or TFB may install software remotely, working in partnership with the onsite telephony vendor.

List of Required and Optional Components

To help account for in a purchase items the following list delineates software, hardware, and labor components that are typically relevant to a purchase of TFB healthcare solutions. The user or telephony vendor has the option of providing the server hardware. It is assumed that the user provides and maintains the pharmacy database, as well as an SMTP server for sending email notification should that be part of the solution requirements.

HARDWARE	Fee Structure	Notes
CTI Server	Based on number of ports	Specification available from TFB. Server provided by TFB, Vendor, or User.
Port License Key	License per port	
SOFTWARE		
Healthcare Applications	Flat Fee	Determined by customer requirements, core application
ACD Reports	License per port	Optional, provides enhanced reporting in NEAX environment
VF Edit	Included	Required, provides editing of messages
Screen Pop	Quote based on evaluation	Optional, 'pops' your existing desktop applications for agents
Alarm Manager	License per port	Optional, provides system alarms and email notification
Credit Card Pay by Phone	Quote, based on your credit card payment processor	Optional, provides editing of messages
Text-to-Speech	License per port	Optional, to speak names of customers
LABOR		
Professional Services	Based on requirements	For customization, integration to database
Installation	On-site or remote	Arranged according to requirements
Voice Recording	Based on requirements	Optional
Cutover coverage	On-site or remote	Optional
Project Management	On-site or remote	Optional

Exact fees for each item are available from TFB. Note that CTI Server may be purchased through an alternate vendor provided TFB specifications are met.

Application Customization

TFB offers customization of all applications through professional services. As part of the requirements evaluation, it is important to identify desired features that are outside the scope of the turnkey application. Requirements for customization typically fit into the following categories.

- **Call Flow**
Messages spoken can be customized through the bundled TFB Recording Utility. Menu choices offered can be customized through the bundled Enhanced Automated Attendant, a GUI based tool. This allows you to have unlimited spoken messages and transfer options.
- **Data Integration**
Each data environment is unique. TFB applications are designed to let TFB customize the link to your data through ODBC, IP sockets, or an open API you provide. The data stays in your environment, while the TFB application reads and writes only the information required.
- **Reporting**
Applications record transaction information as individual records and as PEG counts of total transactions. Customization options allow users request additional reporting detail, or to have transaction detail written directly back to an existing database.
- **Credit Card Processing Integration**
TFB IVR Applications are designed to accommodate a module for credit card payment. Typically this is an integration to your existing credit card service provider. For an accurate quote TFB sales engineers can assist your provider or your technical staff with determining the exact information needed for integration.

Installation and Cutover

Because TFB sells through authorized vendors, and our products are typically part of a switch installation, responsibility for project management, cutover, and configuration is often shared with the telephony or switch vendor.

TFB offers a range of on-site and off-site services to facilitate and manage the installation process. Services provided depend on the requirements and preferences of the end-user, and upon arrangements between the telephone switch vendor and TFB.



Demo By Phone

TFB provides IVR demos toll free at 1-877-612-4TFB. These demos change frequently and voices are usually not professionally voiced because they are often customized for a specific audience. The purpose is to give prospective buyers a feel for how the application typically works, even though your prompts and call flow will be specific to your organization.

To use the demo, dial 1-877-612-4TFB, press 5 for the demo menu, then select the desired demo.



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