

Automated Appointment Confirmation

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



A TFB Whitepaper

T F B W H I T E P A P E R

Executive Summary

For organizations that rely on appointments with partners and customers, no-shows can mean thousands or even millions of dollars in lost revenue and staffing inefficiencies. Physicians, financial planners, sales professionals, and service technicians, to name a few, all benefit by tight control of appointments with their clients. Often, missed appointments are the result of avoidable scheduling mistakes. The rate of missed appointments can be significantly reduced by proactive confirmation and reminders, but without automation, the process can be labor intensive and expensive.

TFB's *Automated Appointment Confirmation* increases staff efficiency by reducing the rate of missed appointments while simultaneously reducing the manual labor required for appointment confirmation. Customers with scheduled appointments are automatically dialed and offered touch-tone options to confirm, reschedule, or speak to an agent if one is available. Reports delineate results of confirmation calls, and optional features allow the system to update status within your existing appointment database.

Alternate outbound confirmation messages can be customized based on both the department and the individual staff member associated with the appointment. Answering machine detection is included and the system can be configured to leave a message as required.

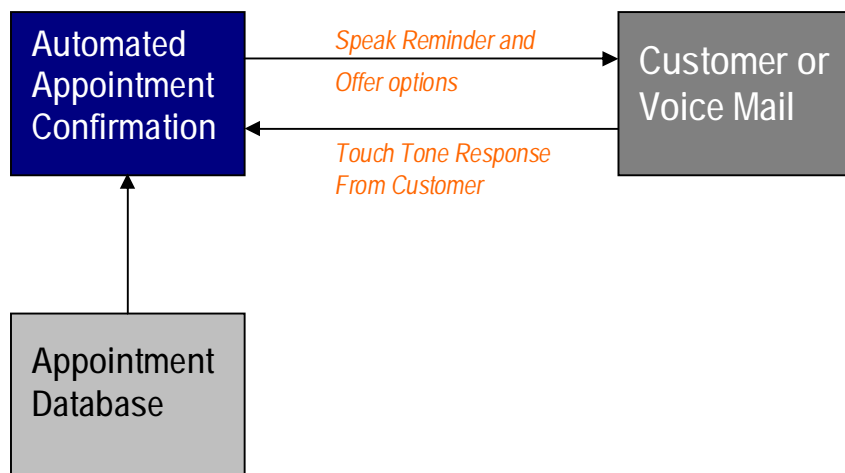
Features

The system delivers fully automated outbound confirmation calls to customers with prescheduled appointments, in the desired time frame. Each appointment confirmation can be uniquely configured for a specific department or staff member, each with its own message. Users may re-record the outbound messages as required.

Features Summary

Features On a confirmation call

- Targeted Message – Speaks pre-recorded message based on individual staff member or type of staff, and speaks message based on department
- Voice Detection – Performs standard analysis to detect voice or answering machine
- Option to Leave Message – Option to leave message based on detection of answering machine
- Touch Tone Response – Offers call recipients options – *confirm, reschedule, speak with agent*
- Flexible Messages – Allows users to record and update outbound messages



Configuration and Control Features

- **Remote campaign manager** – Allows administration staff to monitor and control campaigns from anywhere on the LAN
- **Automatic Start and Stop** – Allows users to configure start and stop times for outbound confirmation ‘campaigns’ to run automatically

Optional Features

- **Text-to-Speech** - If non-numeric data must be spoken to customers from a database
- **Appointment Status Update** – Send/Update confirmation to database

Variables specified within the customer database determine which targeted prompts are spoken by the system. Parameters include appointment location, name, and department. By design, TFB’s *Automated Appointment Confirmation*, is readily customized by TFB’s professional services staff. The customization fee can be quoted based on specific user requirements, which typically fall into the following categories.

Customization of Features

- **Appointment Data** – If the user desires interaction or call flow branching based on data beyond the default appointment dataset.
- **Call Flow** – If the user desires interaction or call flow branching based on data beyond the default appointment options.
- **Database Interaction** – If users require TFB to automated interaction with the appointment database.

Benefits

By automating appointment confirmation, companies benefit from immediate improvements in efficiency. Resources previously used for manual appointment confirmation are freed for other tasks, and time wasted on missed appointments is reduced.

Benefits Summary

- **Improve staff efficiency by reducing time wasted on no-shows**
- **Save staffing resources by reducing manual intervention in confirmation**
- **Centralize reminder process for multiple departments/staff members**

Solution

The *Automated Appointment Confirmation* system is designed to help reduce the rate of missed appointments by delivering fully automated outbound reminder calls to customers, using prerecorded messages tailored to appointments for specific staff members and specific departments.

Variables specified within the customer database determine which targeted prompts are spoken by the system. Parameters include appointment location, name

Vertical Market Application

Automated Appointment Confirmation delivers tangible benefits for multiple vertical markets, from Healthcare to Banking. Any organization with a heavy dependency on appointment-based contact can reduce staff inefficiencies by confirming appointments before they become no-shows.

- Healthcare
- Cable TV Repair and Installation
- Public Utility Service Organizations
- Legal Services
- Financial/Consulting

Determining ROI

Each service-based organization accounts for the cost of missed appointments in its own way.

Exact return on investment is typically based on these primary factors,

- Current staffing costs of manual appointment confirmation
- Costs of missed appointments

Significant cost savings can accrue in environments where the above factors are large.

Technical Specifications

Automated Appointment Confirmation is a software application that runs on TFB's *CTI Server* 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, and ultimately the telephony connection between the application and call recipients. CTI Server is typically be located in the switch room adjacent to the PBX, and is connected to the LAN.

Requirements Summary

Switch Requirements

- NEAX 2000 or NEAX 2400 with or without ACD*
- Available Analog / Digital Ports

CTI Server Requirements

- CTI Server Hardware Platform(s)
- Dialogic Ports
- TFB Automated Appointment Confirmation Application

Optional

- TFB Alarm Manager
- TFB Screen Pop
- TFB ACD Reports

*Configuration without ACD does not allow option to transfer to agent groups

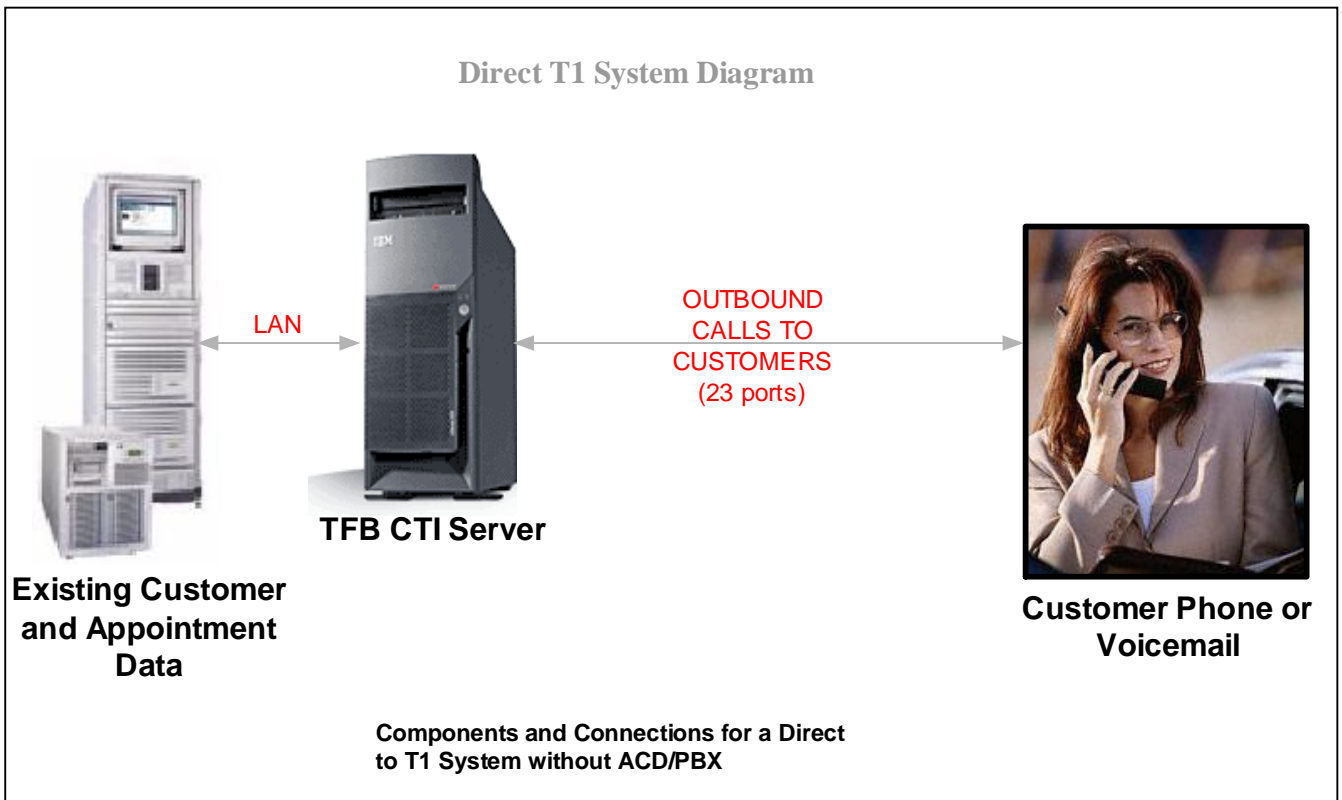
Environment and System Component Details

No two users have exactly the same requirements, so the system is designed to be highly customizable. By default, the application reads comma-delimited text files on CTI Server with all the required information to run an appointment confirmation ‘campaign’. Regardless of the original format in which customer data is stored, using text files for input provides data in a *lowest common denominator* format that nearly any system can accommodate.

Environment Assumptions

- Required Data exists to run appointment confirmation (name, time, date, phone)
- Data is provided by end-user in ASCII format
- No outbound dialing restrictions on the switch





Environment without PBX/ACD

The application also runs in an environment without a PBX/ACD, using direct T1 lines. This configuration significantly limits the addition of other applications, and prohibits the system from transferring callers to agent groups.

Application Limits

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

Application Maximums	
Maximum Appointments per Campaign	50,000
Maximum Simultaneous Campaigns	1,000
Maximum Length of each Recorded Reminder	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)

Other maximums are determined by system configuration and sizing, and are not inherent to design. For example the maximum number of outbound calls that can be made is entirely dependant on the number of IVR ports and number of trunks available for outbound calls.

Data Required By the System

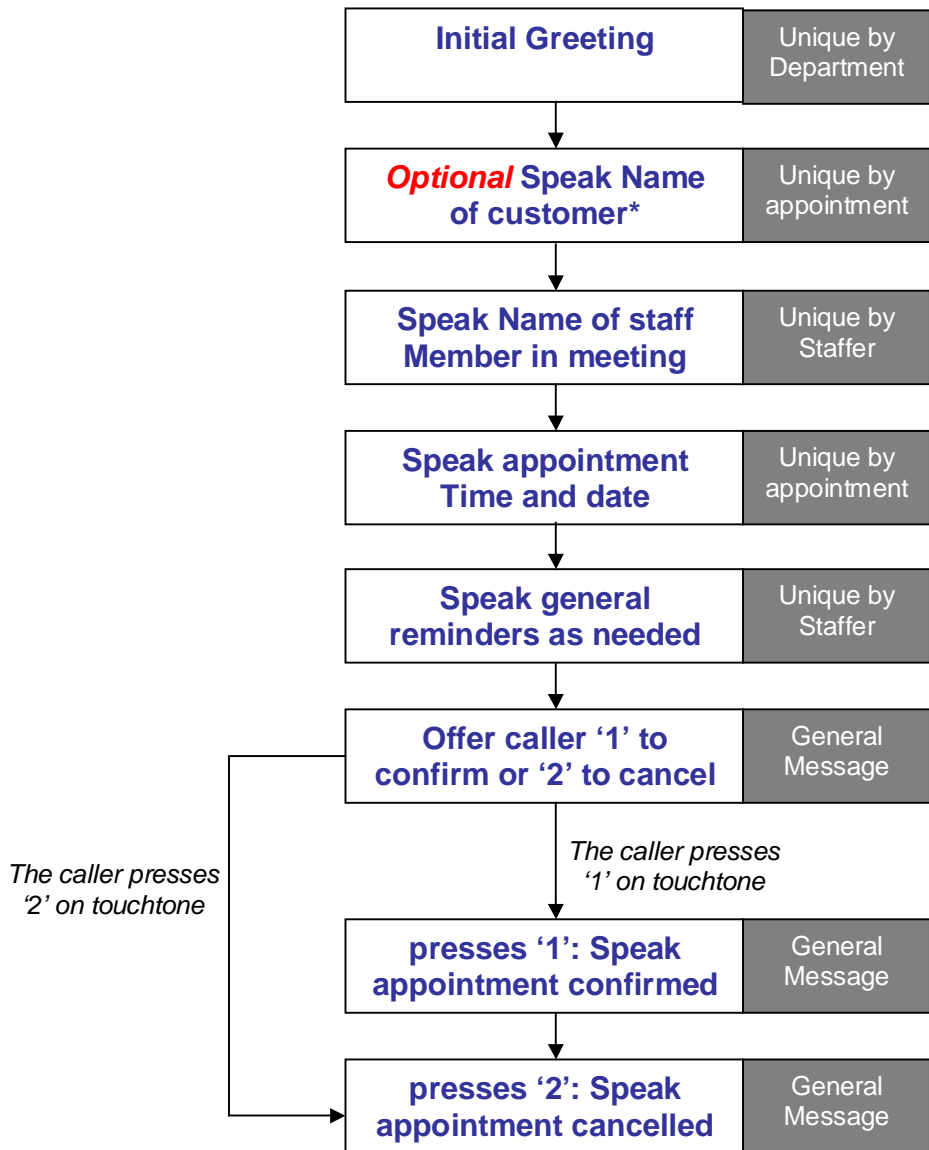
By default, the system reads a comma-delimited text file on CTI Server that contains all the required information to run an appointment confirmation ‘campaign’. This file must be uploaded to CTI Server by an external process, determined by the end-user, although this process may optionally be automated as part of the TFB solution on a for fee basis.

Data for Each Appointment	Notes
Appointment Date	required
Appointment Time	required
Appointment Location	optional
Name of Staff	optional
Department	optional
Customer Phone Number	required

Each entry is on a single line in the file, representing a single appointment, with each field separated by a comma. Optional fields may be NULL.

Standard Message Template

The standard message template allows for pre-recorded prompts that are specific to either the staff member involved in the meeting, or the department involved. If the number of possible staff members is large, it may be difficult to pre-record names, so the Text-to-Speech option must be added to the system. The template may be customized if required.



*Requires Text-to-Speech module.

Purchasing and Installation

The purchasing process is straightforward, and is done in partnership with a TFB sales representative. In general the steps are as follows.

- **Requirements evaluation**
Determine and evaluate user's requirements, especially for customization of the application and for number of ports.
- **Determine Time Frame for Production**
Determine customers 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 thoroughly account for line items in a purchase the following list delineates all software, hardware, and labor components that are typically relevant to a purchase of Automated Appointment Confirmation.

HARDWARE	Fee Structure	Notes
CTI Server	Based on number of ports	Specification available from TFB
Port License Key	Based on number of ports	
SOFTWARE		
Automated Appt. Confirmation	Based on number of ports	Required, core application
ACD Reports	Based on number of ports	Optional, provides enhanced reporting
Screen Pop	Quote based on evaluation	Optional, 'pops' application for agents
Alarm Manager	Based on number of ports	Optional, provides system alarms
VF Edit	Flat Fee	Required, provides editing of messages
Text-to-Speech	Based on number of ports	Optional, to speak names of customers
LABOR		
Professional Services	Based on requirements	To customize application
Installation	on-site or remote	
Message 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. For Automated Appointment Confirmation, customization requirements typically fit into the following categories.

- **Message Template**
Messages spoken are driven directly by appointment data such as department and staff. The logic used to determine which portion of the reminder message is driven by which data item or items, can be tailored to the user's requirements.
- **Data Template**
Some users may require that additional fields be added to the standard appointment data format, and then used to determine messages spoken to customers, or options offered.
- **Touchtone Options**
By default, the system allows callers to confirm or cancel an appointment. It is possible to offer additional touchtone options, including customer verification by PIN or account number.
- **Database**
TFB applications can write to or read from any ODBC compliant database to update appointment records or to provide an alternative to retrieval of appointment campaign data.
- **Reporting**
As determined by the requirements evaluation.

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.



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