



CTI SERVER 5

TFB TECHNOLOGY
FOR BUSINESS

ADMIN GUIDE



Liability Disclaimer

Technology for Business, Corp. reserves the right to change the specifications, functions, or features, at any time, without notice.

Technology for Business, Corp. has prepared this document for the exclusive use of its employees and customers. The information contained herein is the property of Technology for Business, Corp. and shall not be reproduced without prior written approval Technology for Business, Corp.

CTI Server is a registered trademark of Technology for Business, Corp.

NEAX is a registered trademark of NEC Corporation.

UNIVERGE is a trademark of NEC Unified Solutions, Inc.

© 2006 Technology for Business, Corp.

All other brand or product names are or may be trademarks or registered trademarks of, and are used to identify products or services of, their respective owners.

CONTENTS

INTRODUCTION - CTI Server 5 and Media Server Configuration	6
The Right <i>Configuration Path</i>	6
What are <i>CTI Server 5</i> and <i>Call Center Suite</i> ?	6
<i>CTI Server 5</i> Features	8
<i>CTI Server 5</i> Administration and Configuration Overview	10
WAIT! Are You Doing things in the Right Order?	11
Using <i>CTI Server 5 Configuration Manager</i>	13
MODULE 1 Agent, Queue, and General Configuration	17
Managing and Configuring Users, Team, Queues	18
Setting Logon ID and Personal Parameters	18
Setting the DN Report	22
Creating and Managing Teams	23
Creating and Managing Queues	26
Creating and Managing Schedules	29
Creating and Managing Prompts and Announcements	32
MODULE 2 Feature and Option Configuration	34
Connecting ACD Calls to CTI Server Features	36
Configuring and Managing Queue Announce, and Callback	38
Configuring Web Callback	46
Configuring Call Campaigns	51
Configuring Routing	70
Configuring Auto Attendant Routing	73
Configuring Screen Pop	104
Configuring <i>CTI Server 5</i> Chat	113
Configuring Reporting and Monitoring	115
Fine Tuning GOS and ASA	115
Configuring Monitoring – <i>Contact Director</i>	118
Configuring Reporting – <i>ACD Reports</i>	119
MODULE 3 System Setup at Install	121
Proper ACD Preparation	122
Proper CTI Server Preparation	124
Configuring IP Addresses	124
Configuring Drives	126
Configuring ACD Connectivity	127
Configuring SMDR	129
Configuring Dialing Rules	130
Configuring IVR Ports	134
Configuring CUS	135
Configuring Mailing Lists	136
Reading Configuration Reports	137
MODULE 4 System Maintenance	139
User Responsibilities	140
Hard Drive Maintenance	140

INTRODUCTION

CTI Server 5 Configuration



This chapter provides a brief introduction to the TFB feature-set, as well as background information on the principle concepts underlying the configuration and implementation of features. The following topics are covered.

- § What is *CTI Server 5* and Call Center Suite?
- § *CTI Server 5* Specifications and Requirements
- § Configuration Overview
- § Preliminary Configuration

The Right *Configuration Path*

This manual is primarily focused on administration and configuration of features after installation has been completed. However, section 5 contains system configuration instructions for new installations. If you are installing a new system, be sure to configure system parameters before features.

What are *CTI Server 5* and *Call Center Suite*?

CTI Server 5 is a robust CTI/IVR platform for call centers using NEC's NEAX2400, NEAX2000, and SV7000 ACD platforms. *CTI Server 5* is the platform for modular *Call Center Suite* Features, designed to enhance the familiar telephony functions you already use in your PBX/ACD.

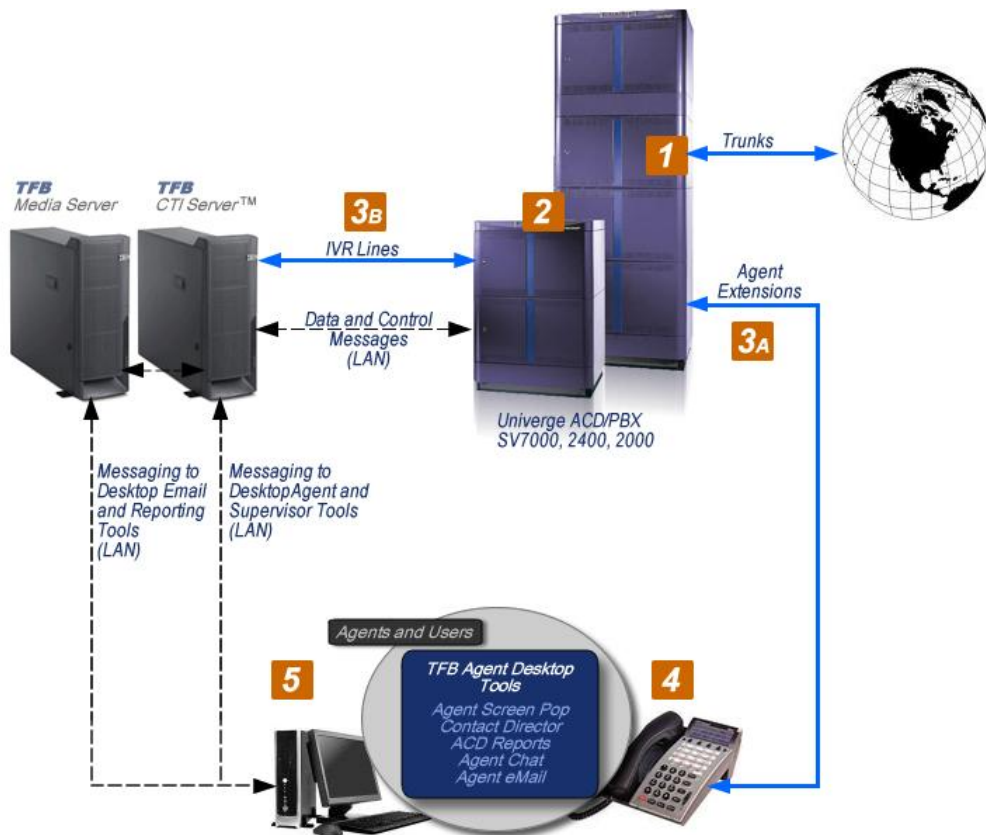
Call Center Suite software isn't just IVR; it's next-generation reporting, monitoring, and control, along with full automation of routing, customer transactions, and outbound campaigns, integrated with your data processing and telephony environments. By "blending" all inbound, outbound, email, and chat contact features, integrating automated services, and dynamically managing agent activity, *CTI Server 5* provides such benefits as:

- § Improved Customer Service
- § Enhanced Call Center Productivity
- § Integrated Telephony/Data (CTI) Functionality
- § Reduced Costs

Depending on your selected license options, *CTI Server 5* capacities can accommodate thousands of agents, hundreds of IVR ports, and thousands of user-recordable announcements and prompts. Software features reside on the CTI Server 5 CTI Server, and CTI Server 5 Media Server, both Windows-based PC platforms. While *CTI Server 5* provides the *features*, it relies on the Servers

CTI Server 5 software features reside on the CTI Server, and Media Server, both Windows-based PC platforms. While *CTI Server 5* provides the *features*, it relies on the Servers to provide the *connectivity*, via the LAN to your ACD and to any integrated systems such as your existing databases or voice loggers. The CTI Server also has direct voice port (IVR) connections to your phone switch. These ports provide the voice connection to callers for callback offers, auto attendant prompts and touch tone input, and any IVR applications that have been installed on your server.

If you require reporting on PBX line activity, you should also have a serial or IP SMDR connection from the switch to the CTI Server.



The NEC Univerge/NEAX ACD with TFB CTI and Media Servers

CTI Server 5 Features

Each *CTI Server 5* module provides specific CTI features, and each can be individually installed and configured. Most modules install and run directly on CTI Server, although agent/supervisor tools may be run on agent PCs, or any other PC on the LAN.

CTI Server 5 includes such sophisticated features as:

- § Automated “blending” of inbound and outbound call traffic.
- § Sophisticated cradle-to-grave reporting
- § Real-time monitoring and call/agent control
- § Email and Web chat capability
- § Automated call routing.

§ Automated Callback that provides callers the opportunity to hang up, yet remain in queue. Callback features improve the customer's experience while simultaneously reducing inbound tolls costs.

§ Automatic callback/campaign-call queuing when there's a lull in inbound calls, distributing agent workload more efficiently.

... each integrated into your call center without impacting your existing ACD functionality. All this adds up to improved customer service, tangible savings on inbound toll costs, greater flexibility, more efficient use of agent resources, and improved customer service.

CTI Server 5 includes such sophisticated features as:

§ Automated "blending" of inbound and outbound call traffic, email, and web chat.

§ Sophisticated cradle-to-grave reporting

§ Real-time monitoring and call/agent control

§ Automated call routing.

§ Automated Callback that provides callers the opportunity to hang up, yet remain in queue. Callback features improve the customer's experience while simultaneously reducing inbound tolls costs.

§ Automatic callback/campaign-call queuing when there's a lull in inbound calls, distributing agent workload more efficiently.

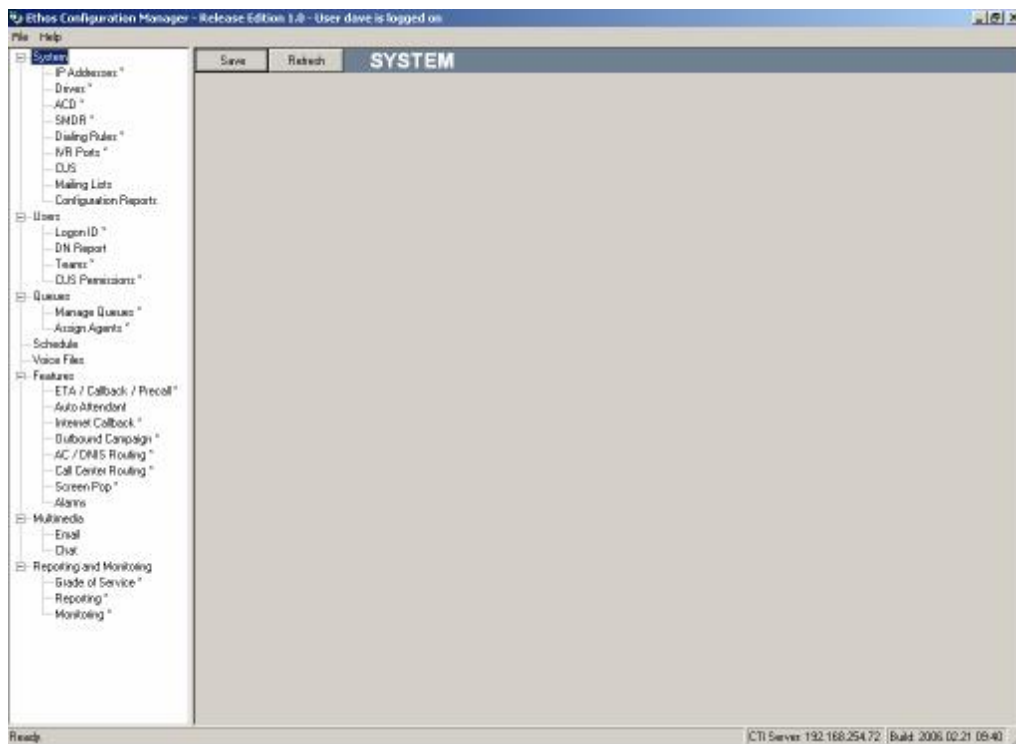
§ Email and Web chat capability

... each integrated into your call center without impacting your existing ACD functionality. All this adds up to improved customer service, tangible savings on inbound toll costs, greater flexibility, more efficient use of agent resources, and improved customer service.

The chapters that follow detail the configuration and administration of each *CTI Server 5* feature.

CTI Server 5 Administration and Configuration Overview

CTI Server 5 is configured through the password protected *CTI Server 5 Configuration Manager (Config Manager)*. Users can enter data while the system is in production, although the *CTI Server 5 CTI Server* software should be reset to read configuration changes. The configuration is stored on the server in a Microsoft SQL database.



FOR INSTALLATION TECHS: Notes on Configuration

§ If this is a new installation *CTI Server 5*, be sure to complete ACD configuration, including split, agent, and pilot setup, prior to configuring *CTI Server 5*.

Also be sure to add pilot, agent, and queue names and numbers in *CTI Server 5 Configuration Manager* so administrators, who may not know all the pilot assignments in the switch are allowed to make configuration changes more easily. *CTI Server 5 Configuration Manager* serves to bridge the gap between switch configuration and options available to administrators and call center managers. If pilots are available in the switch, consider pre-configuring extra pilots with queued and non-queued *@IVR Announce 9* steps to allow users additional flexibility from *Configuration Manager*.

§ You should install the *CTI Server 5 Configuration Manager* on a secure server.

WAIT! Are You Doing things in the Right Order?

This guide is used both at initial system installation, and for ongoing feature setup. If this is a new installation, you must first set up the ACD and CTI Server system parameters before configuring features.

FOR A NEW INSTALLATION

§ **First you must set up system parameters! Refer to section 3.**

FOR ADMIN AND FEATURE CONFIGURATION

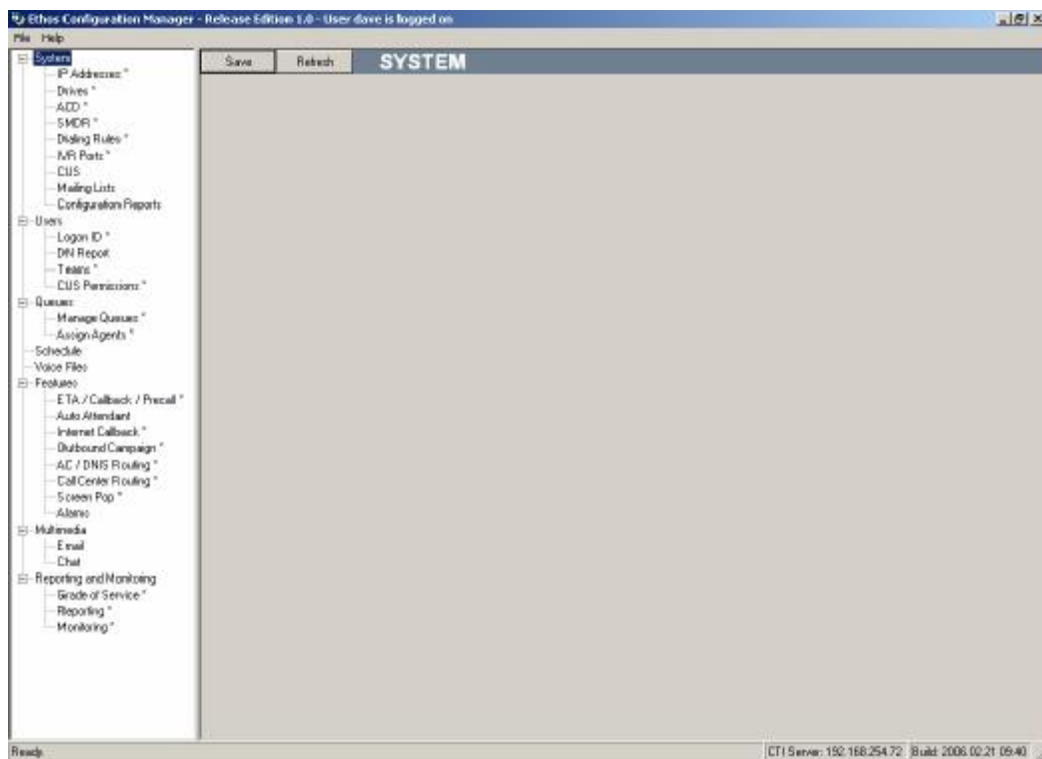
§ **To add users or change user permissions and set up, refer to section 1**

§ **To change feature configuration, or reporting preferences, refer to section 2.**

Using CTI Server 5 Configuration Manager

Because the *Config Manager* stores and manages all *CTI Server 5* features, it is important to use it from a secure area. It can run on the server desktop or any Windows 2000/2003 PC on the LAN.

- § **Make Sure to Save Settings!** Each feature uses a *form(s)* to configure preferences. Always click ‘Save’ before exiting a *form*.
- § **Use the Navigation Tree!** The left hand window is the *navigation tree*, where you select which configuration *form* to edit.
- § **Undoing Mistakes.** If you make a mistake entering data into a form, click the *Revert* button to reload the configuration stored on the server. (*Revert* is called *Refresh* in some versions).
- § **Multiple Users.** You can assign multiple users but if more than one person is logged in, the system allows only one of them to make changes. By default this is the first person who logged in. You may install Config Manager on up to 5 PC’s on the LAN



To start and navigate Config Manager

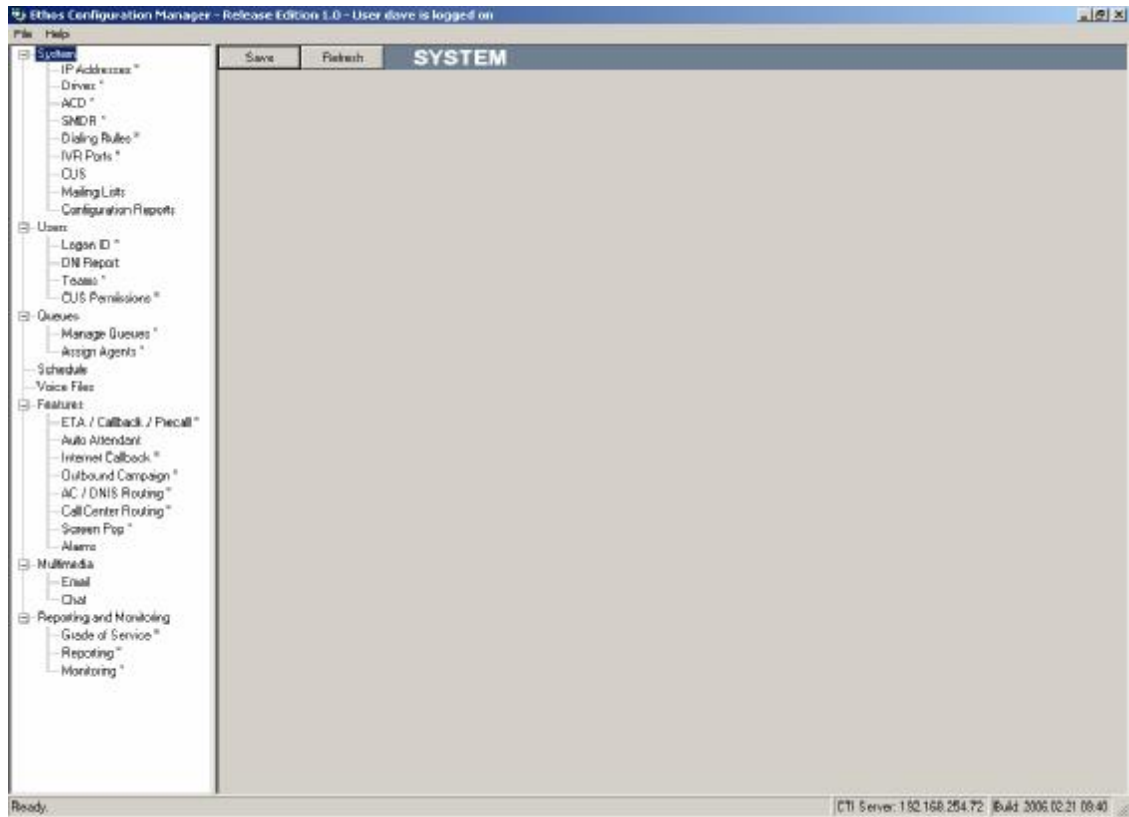
- 1 Click the CTI Server 5 Configuration Manager icon on the desktop.



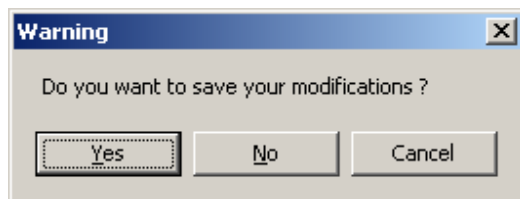
- 2 Enter your user name and password. If you are starting Config Manager for the first time, enter the CTI Server IP address.
- 3 Select the desired form from the Navigation Tree in the right hand window.
- 4 Select the '+' next to any branch in the navigation tree to open subforms.
- 5 Click the **SAVE** button in the top left of any form to save your changes
- 6 Click the **REVERT** button, prior to saving, in the top left of any form, to erase your changes and reload the configuration from the database.
- 7 To exit *Config Manager*, select *Exit* from the *File* menu.

This section provides important information that informs configuration-related tasks. As you implement specific *CTI Server 5* features, you may find it useful to refer back to this section for additional help with these topics.

The initial screen you should see when you open *Configuration Manager* should look *Configuration Manager* something like this.



If you try to exit any configuration form without saving, you'll see this dialog.



Click the **Yes** button if you want to retain your changes, otherwise click No, or Cancel to return to the form for more editing.

Some Important Capacities

The following are maximums and ranges of some common configuration options.

OPTION	USE
Queue Priority	1-255 is allowed (chat and email). 0 Means don't change priority that was previously set.
Agent Preference	1-99 is allowed.
Agent Break Modes	1-99 is allowed.
Agent Work Modes	1-99 is allowed.
Split Number	1-999 is allowed. You can use duplicate split numbers in different channels. For instance you can have a Chat split of 7 and a phone split of 7.
Auto Attendant Menu Number	1-9999 is allowed.
Agent Team Number	1-256 is allowed.
Agent Team Member Number	1-256 is allowed, per team.

Agent, Queue, and General Configuration



Most of the configuration options in this section are set at installation, but you'll revisit some of these items as you make changes to staff structure, add new agents, or change voice files.

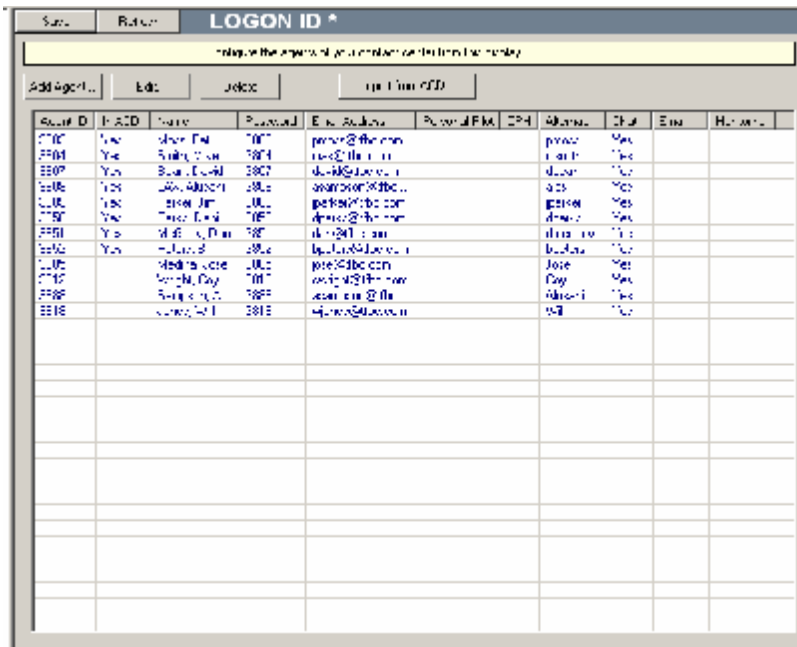
The following areas of configuration are covered in this section.

- § Logon ID's
- § Agent DN
- § Teams
- § Queues for Chat and Email
- § Schedules
- § Voice Files

Managing and Configuring Users, Team, Queues

Setting Logon ID and Personal Parameters

CTI Server 5 enhances the ACD but doesn't interfere with its functionality. You probably already have ACD agents configured in the ACD MAT, and that's important to maintain. But *CTI Server 5* lets you extend that configuration to manage agents and their access to feature modules like reporting, chat and email.



Agent ID	Is ACD	Name	Password	E-mail Address	Personal Email	IP#	Alternate	Chat	Email	Home
2200	Yes	John Doe	1000	john@the.com			john	Yes		
2201	Yes	John Doe	1001	john@the.com			john	Yes		
2202	Yes	John Doe	1002	john@the.com			john	Yes		
2203	Yes	John Doe	1003	john@the.com			john	Yes		
2204	Yes	John Doe	1004	john@the.com			john	Yes		
2205	Yes	John Doe	1005	john@the.com			john	Yes		
2206	Yes	John Doe	1006	john@the.com			john	Yes		
2207	Yes	John Doe	1007	john@the.com			john	Yes		
2208	Yes	John Doe	1008	john@the.com			john	Yes		
2209	Yes	John Doe	1009	john@the.com			john	Yes		
2210	Yes	John Doe	1010	john@the.com			john	Yes		
2211	Yes	John Doe	1011	john@the.com			john	Yes		

Users in the system are typically a mix of ACD agents and users who are not ACD agents, such as managers who might need to access reporting. If you're setting up users for the first time, or if you have just added agents to the ACD, you can, and should, import them automatically into this system.

It is highly recommended that you first configure as many agents as possible in the ACD, then use the Import feature on this screen to bring them in. Otherwise you'll be entering the same data twice.

To configure Agent Logon options

- 1 Select Users › Logon ID in the navigation tree.
- 2 If you have agents already configured in the ACD, start by importing them into Config Manager by clicking the **Import from ACD** button. Highly recommended.
- 3 Click the **Add Agent** button, or select an existing agent and click Edit to change parameters.
- 4 Enter or edit the agent ID. If this is an ACD agent it **MUST** match the ID in the ACD. For non-ACD agents, enter any unique number, first and last name. Note that if this agent ID is in the ACD, the name fields will be overwritten with those in the ACD on the next Import.
Recommendation: Use a range of numbers for non-ACD users that clearly distinguished them from ACD agents.
- 5 Enter or edit the agent first and last name. Note that if this agent ID is in the ACD, the name fields will be overwritten with those in the ACD on the next Import.
- 6 Enter a password for the user to access TFB desktop applications.
- 7 Enter their email address. This is used as an address to send alarms that pertain to this agent from TFB Contact Director, and for agents using TFB Agent Email who want their direct email to be included in their replies to customers. Even if you specify an email here, it doesn't mean the agent must use either alarms or agent email. You can selectively allow or inhibit either feature.
- 8 **OPTIONAL** Enter CPH, cost per hour. This field is not currently used by packaged software but is available for custom applications or future enhancements.
- 9 If this agent will use Agent Chat, enter the screen name that customers will see for this agent.
- 10 Select the features you would like this agent to have access to. For Agent Chat, select Chat, for Agent eMail, select Email, for ACD Reports, select Reporting, for Contact Director, select Monitoring. Note that if the agent was imported from the ACD, the Is ACD Agent box should automatically be checked.

IMPORTANT Avoid using the **Add Agent...** button to add agents already in the ACD. Use **Import from ACD** instead.

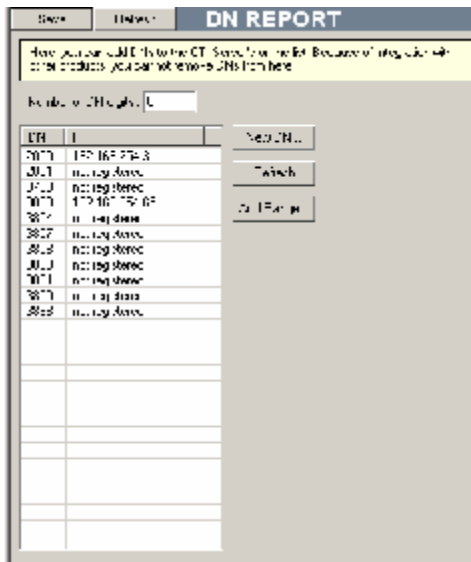
OPTIONS LIST – User Permissions Dialog

OPTIONS	USE
Agent ID	This is the ID of the agent in the ACD or for users not in the ACD, any unique identifying number you assign. Recommendation: Use a range of numbers for non-ACD users that clearly distinguished them from ACD agents.
In ACD	'YES' if this user is an ACD agent.
Name	Last name, first. If this agent ID is defined in the ACD, this field will be imported when you click the Import from ACD button. Otherwise, it can be entered manually when you add or edit a user.
Password	This users numeric password for logging into the ACD or TFB desktop applications.
Personal Pilot	If your ACD supports personal pilots, and the user is an ACD agent, you can enter that pilot here.
CPH	Agent cost per hour. This is implemented for future reporting use and custom applications.
Alternate Name	This is the screen name for this agent in Agent Chat.
Chat	Select this to give this agent access to Agent Chat.
Email	Select this to give this agent access to Agent eMail.
Monitoring	Select this to give this agent access to Contact Director.
Reporting	Select this to give this agent access to ACD Reports.

IMPORTANT If you modify an agent manually be sure to click the **SAVE** button before importing from the ACD! This will ensure your changes are saved except for the agent name which for a given agent ID is always written with whatever is in the ACD when you import.

Adding a DN

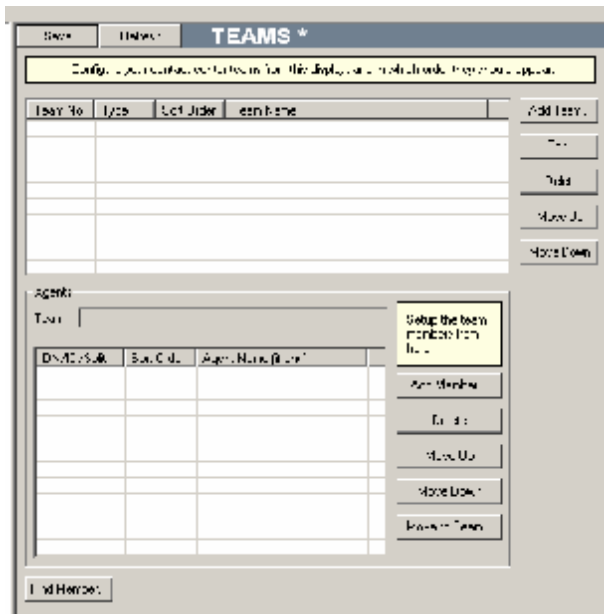
For screen pop and Soft Phone to work properly and be associated with a specific DN/STN, it must be entered here.



Creating and Managing Teams

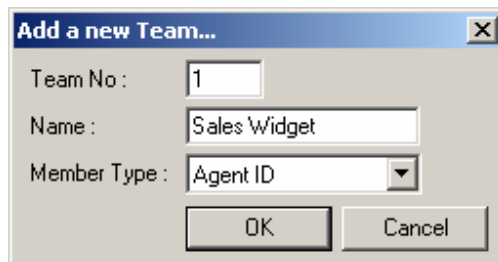
Teams are merely optional agent groupings for real-time monitoring in *Contact Director*. A team consists of a group of agents and a designated supervisor. You can create multiple teams, and organize any team based on *either* position (DN) or agent ID (but not both). Team assignments don't affect anything the agent does directly, but allow for convenient grouping of agents or positions in the real-time screens presented by *Contact Director*. You don't have to configure teams at all if don't find them useful.

If you're new to using Contact Director, you may want to become more familiar with it, and create teams later.



To create a new team

- 1 Click the **Add Team** button
- 2 Enter a Team number that is not already in use, a team name, and what type of team



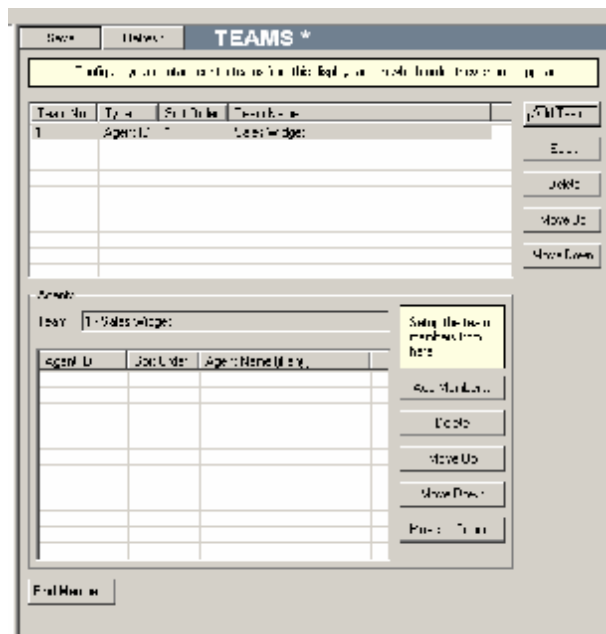
Team No : 1

Name : Sales Widget

Member Type : Agent ID

OK Cancel

- 3 Click **OK**. After creating the team, it should appear in the team list. You can now add members.



Team No.	Type	Sub Code	Description
1	Agent ID		Sales Widget

Team: 1 - Sales Widget

agent ID Job Code Agent Name (Last, First)

Full Screen

To add and manage team members

- 1** To add a team member, click the **Add Member** button
- 2** Fill in agent information.
- 3** Click **OK**.

To manage team members

- 1** To *change the position* of team members in the list, select a member and click the **Move Up** or **Move Down** button.
- 2** To *delete* a team member from the list, select a member and click the **Delete** button.
- 3** To move a member to another team, select the member and click the **Move to Team** button.

Creating and Managing Queues

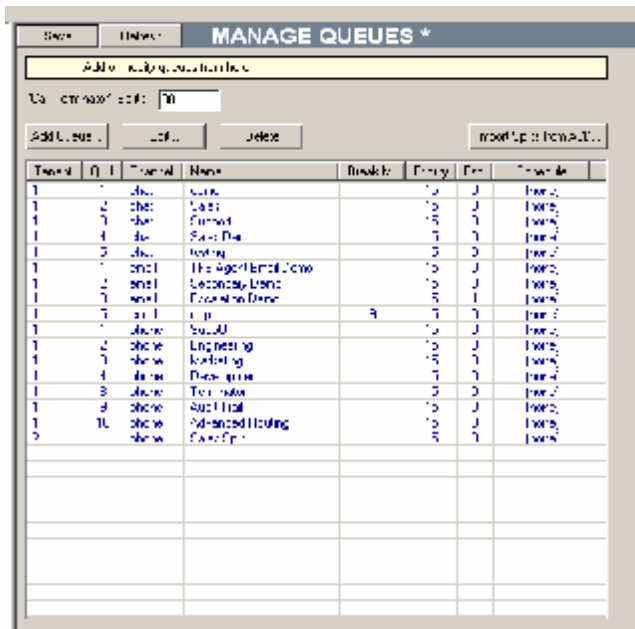
If you are adding *CTI Server 5* to an existing ACD, you likely already have queues and agents defined within the ACD. If not, you should define them in the ACD prior to doing so in *CTI Server 5* Configuration Manager. The *CTI Server 5* configuration manager can import queues and assignments from the ACD, then lets you add additional queue assignments for Web Chat and Email.

Queues for chat and email are just like ACD phone queues. They have unique numbers, priorities, and names. Email and chat queues must be configured prior to deployment of *CTI Server 5* Email and *CTI Server 5* Chat.

IMPORTANT The Call Terminator Split must match that used in the ACD, and must be reserved for that purpose with no agents assigned to it. If you are configuring *CTI Server 5* for the first time, ensure the split number here matches that used in the ACD CCV's.

Each queue (split) is assigned a channel, either phone, chat, or email, and a default priority from 1 to 255. The lower the number, the higher the priority.

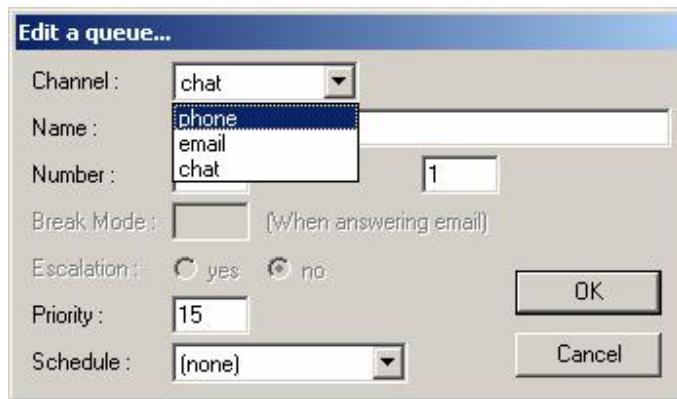
Schedule only applies to the Chat channel. It is not applicable to eMail, and the ACD is where you manage pilot schedules that control phone splits.



Queue ID	Channel	Name	Buskch	Priority	Type
1	phone	Call		1	Phone
2	chat	Web		1	Web
3	chat	Support		1	Web
4	chat	Self-Dir		1	Web
5	chat	Testing		1	Web
6	email	The Agent Mail Queue		1	Web
7	email	Secondary Mail		1	Web
8	email	Exception Drive		1	Web
9	split		9	1	Phone
10	phone	Support		1	Phone
11	phone	Engineering		1	Phone
12	phone	Marketing		1	Phone
13	phone	Development		1	Phone
14	phone	Test Queue		1	Phone
15	phone	Technical		1	Phone
16	phone	Advanced Routing		1	Phone
17	phone	Call Center		1	Phone

To add or edit a queue

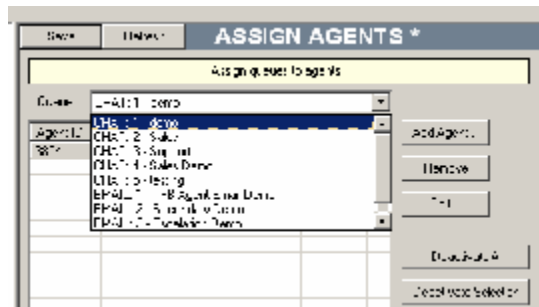
- 1 Select a queue from the list or click the **Add Queue** button to add a new queue.
- 2 Click the **Edit** button



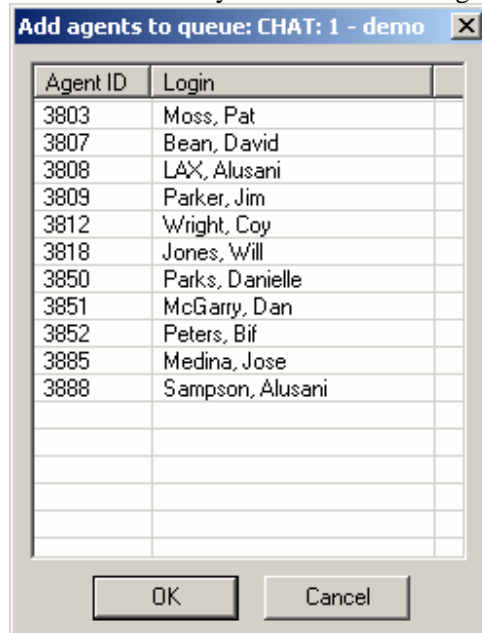
- 3 From the *Edit a queue...* dialog, select the type of queue, phone, chat, or email.
- 4 Select a descriptive queue name to be used in reporting. Keeping the name as short as possible will help make reports easier to read.
- 5 Enter an unused queue number
- 6 Assign a priority from 1 to 255 if it is a Chat or Email queue. You cannot change the priority of an ACD phone split from here.
- 7 Click **OK**.

To assign agents to Chat and eMail queues

- 1 Select Queues -> Assign Agents from the navigation tree.
- 2 Select a Queue from the dropdown list.



- 3 Click the **Add Agent** button.
- 4 From the Add Agents dialog, select an agent to add. To select multiple agents hold the CTRL key and click on each agent.



- 5 Click **OK**.

Creating and Managing Schedules

Several *CTI Server 5* features offer the ability to control how they work based on the time of day and day of week. Features like Callback and Call Campaigns can be configured to activate and deactivate at specific times. Because they really only affect optional behavior of specific features, you may not require schedules, and there are no systems that require you to set a schedule in *CTI Server 5*.

As you configure other features, you can return here to create schedules for convenience.

To access configuration: Open the schedules configuration from the Schedules branch on the navigation tree.

SCHEDULE

Is a display when you are in the editing mode.

New Edit... Delete

Schedule ID	Schedule Name
1	Normal

Schedule Settings:

Schedule Name: Normal

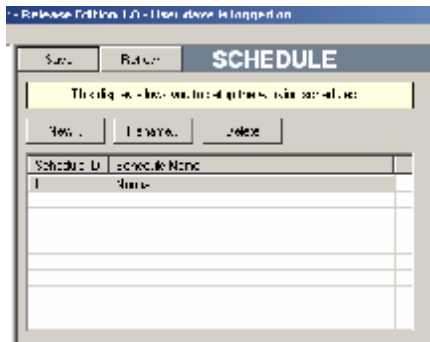
Work Week: Friday

Day	Start Time	End Time
Sunday	00:00	17:00
Monday	00:00	17:00
Tuesday	00:00	17:00
Wednesday	00:00	17:00
Thursday	00:00	17:00
Friday	00:00	17:00
Saturday	00:00	17:00

Add Day
Delete Day
Add Days...
Edit Block
Delete Block

To add a Schedule

- 1 Click **New** to add a new schedule.
- 2 Enter a name and click **OK**.



To Add or Edit Dates and Times in a Schedule

- 1 Select an existing schedule from the list

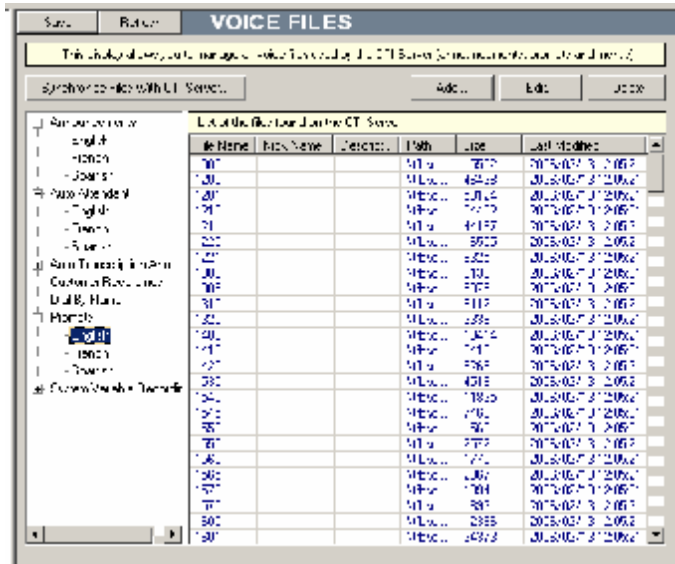
Schedule ID	Schedule Name
1	Normal
2	Ad run

- 2 From the Schedule Settings *Work Week* tab click **Add Day**.
- 3 Select the *Holidays* tab to associate specific work holidays with this schedule.

The screenshot shows a window titled "SCHEDULE" with a "Schedule Name" field set to "Normal". The "Work Week" tab is selected, displaying a table with columns "Day", "Start Time", "End Time", and "Add Day...". The table contains three rows: Monday (08:00 to 12:00), Wednesday (08:00 to 04:00), and Friday (08:00 to 12:00). Buttons for "Add Day...", "Add Times...", "Fill Blank...", and "Delete Break" are visible on the right side of the table.

Day	Start Time	End Time	Add Day...
Monday	08:00	12:00	
Wednesday	08:00	04:00	<input type="button" value="Add Day"/>
Friday	08:00	12:00	
			<input type="button" value="Add Times"/>
			<input type="button" value="Fill Blank"/>
			<input type="button" value="Delete Break"/>

TIP Add a nickname to indicate the content of the voice file. When you're configuring other features that play prompts or announcements the nick name makes it easier to select the most appropriate file from feature configuration.



When a file is displayed in red it means that file is referred to but does not actually exist on the server. You can either rerecord the associated prompt or delete its record.

Recording Voice Files

The system uses Windows WAV files for prompts and other prerecorded announcements. You can record them from any phone extension on the switch, or if you prefer, you can create them in any of the many commercially available recording packages. Either way, the resulting WAV file must be 8kHz, 8-bit, mono. Mu-Law format is preferred, but the system will playback PCM format also. If you record from a studio or in Windows software, make sure that you convert all files to 8kHz, 8-bit, mono and either Mu-Law or PCM, before putting them on the system.

What folder are the voice files in?

Voice files are stored on the primary drive on CTI Server in the DVPS folder.

Feature and Option Configuration



This section describes how to configure and maintain features. Because features are modular, you'll have access to only those features installed on your system. Be sure system configuration is complete prior to setting up features.

Typically general configuration happens at installation, and only minor changes are needed as you add splits or change agent assignments.

The features configured from the *CTI Server 5* Configuration Manager are,

- § Queue Announce
- § Callback
- § Web Callback
- § Call Campaigns
- § Call Center Routing
 - § ANI Routing
 - § Auto Attendant Routing (menus are configured in the Auto Attendant tool)
 - § AC/DNIS Routing
- § Screen Pop
- § Agent Email
- § Agent Chat
- § *Contact Director*
- § *ACD Reports*

IMPORTANT Please ensure that system configuration is complete prior to configuring features! See section 5 of this manual.

Connecting ACD Calls to CTI Server Features

The next subsections discuss configuring each feature. Before that, however, you should know how to connect calls in the ACD to a CTI Server IVR port, because most features require that.

You can connect callers to a unique feature based on pilot. Here are some important things to be aware of.

§ **How calls are connected to an IVR port?** Calls are connected to the IVR when they hit a '@ IVRAnnounce n' step in the CCV for their pilot.

§ **Which IVR port Does a Given Call Connect To?** The '@ IVRAnnounce n' step connects the call to the next available IVR port in the main IVR hunt group.

§ **How Does CTI Server Determine Which Feature to use or how to handle the call?** There are 2 things that determine how the CTI Server handles a call that connects to it.

1. The value of 'n' in the '@ IVRAnnounce n' step that connects the call
2. The feature and settings configured for the Pilot number the call is on when connected.

§ **Connecting queued calls.** A call can be connected to an IVR port whether it is already queued or not!

BUT... to use the Queue Announce or Callback features properly, the call MUST be queued prior to connecting to an IVR Port

AND ... if a call is queued and on an IVR port when an agent becomes available, the call will be disconnected from the IVR port and connected to the agent!

§ **Safe CCV Design.** Don't assume that a transfer to CTI Server is the last step in the CCV. Some features, like Queue Announce or Callback, are designed to transfer control back to the next step in the CCV. Although rare, equipment or LAN issues can also prevent the transfer from happening at all. Always include CCV steps after the '@ IVRAnnounce n'

step to handle calls transferred back from the CTI Server or those not transferred properly.

§ **Starting Proper call registration for Reports.** As you design a CCV be aware that a call that enters the ACD for the first time is not tracked by reporting until it encounters either

§ An '@ IVRAnnounce 9'. MUST BE 9!
OR

§ A 'queue to n' (queue to any split) step.

This means that if you're not queuing the call to a live split OR transferring to the CTI Server with '@ IVRAnnounce 9', you must queue to a dummy split and dequeue prior to doing anything else.

Refer to this list as you set up each CCV to ensure your design matches the desired performance.

Configuring and Managing Queue Announce, and Callback

You can play callers information about where they are in queue, and offer to call them back. Callbacks are automatically dialed and connected to agents based on your configuration, and on the options selected by the caller.

To access configuration: Open the configuration from the ETA/Callback branch on the navigation tree.

KEY CONCEPT The Callback and Queue Announce features can behave uniquely according to the ACD *Pilot* of the call that is routed to them. That way you can offer your callers different options, messages, and features depending on where they are in your phone switch when they are queued to a split.

At installation, each pilot must be set to route to these features, so all of the appropriate pilots should be added here in configuration so administrators can easily modify them.

ACD Configuration

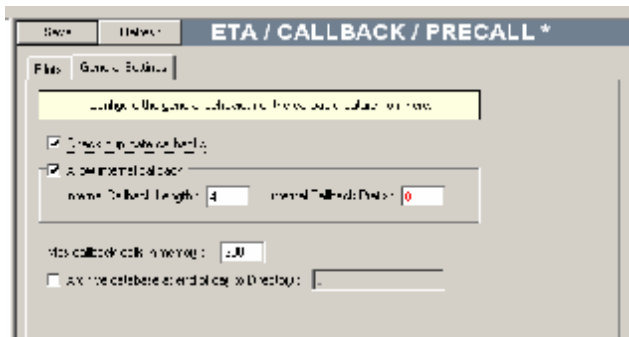
@IVR Announce 9 in the CCV for each pilot using this feature.

The ETA/Callback Configuration Form

If you are adding *CTI Server 5* to an existing ACD, you likely already have queues and agents defined within the ACD. If not, you should define them in the ACD prior to doing so in *CTI Server 5* Configuration Manager. The *CTI Server 5* configuration manager can import queues and assignments from the ACD, then you add additional queue assignments for Web Chat and Email.

There are two main tabs in this form – the *Pilots* tab and the *General Settings* tab.

General Settings tab



Typically, you only have to change the *General Settings* tab at installation.

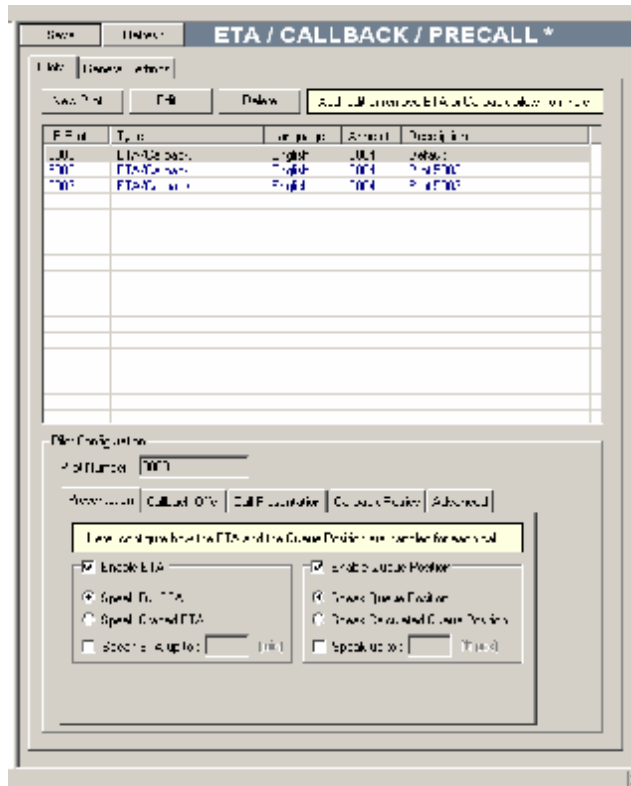
To disallow multiple pending callbacks to the same phone number, check the **Check Duplicate Callbacks** box.

If you have internal departments calling into this pilot, you may want to allow callbacks to internal extensions by checking the **Allow internal callback** box. If you do so, make sure to enter the number of digits your switch uses for extensions in **Internal Callback Length**, and any required prefix in **Internal Callback Prefix**. The length is the number of digits NOT including the prefix. The prefix can be numeric, but can include '*' or '#' if required. If there is no prefix, leave it blank.

Max callback calls in memory determines the maximum total callbacks to support in all queues simultaneously. The default is 300. Generally it is recommended that you set this to roughly twice your anticipated peak callback volume or to exactly the total queue capacity of the switch, whichever is lower.

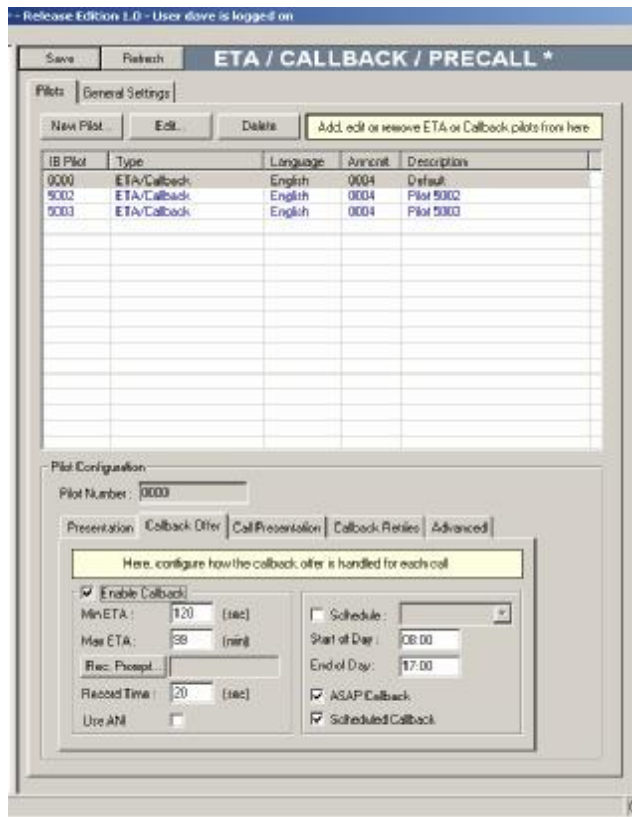
FOR INSTALLATION TECHS: Notes on Configuration

§ If you're unsure of peak callback volume, you can set **Max callback calls in memory** to exactly the total queue capacity of the switch. It should not be set higher.



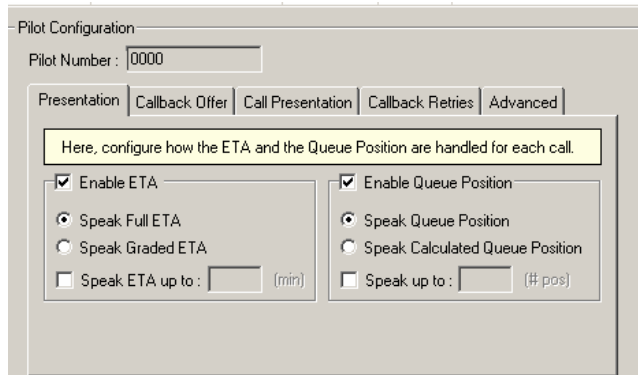
To configure Queue and ETA Announcements for a Pilot

- 1 Select the *Presentation* tab.
- 2 To speak *estimated time to agent* to callers, check the **Enable ETA** box
- 3 Select the appropriate options. See the Options List.
- 4 Click **Save** if your done. Otherwise you can configure callback for the same pilot or select another pilot to configure.



To configure Callback for a Pilot

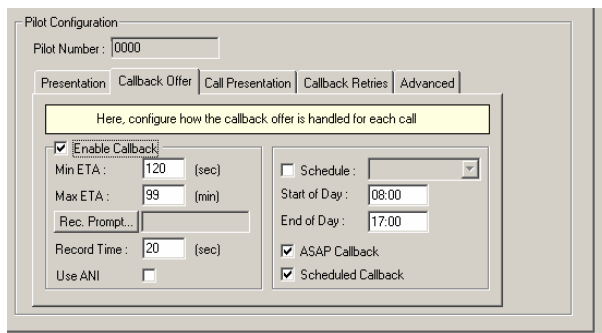
- 1 Select the *Callback Offer* tab.
- 2 Check the **Enable Callback** box
- 3 Select the appropriate options. See the Options List for each tab.



The Presentation tab lets you control what queue information the caller hears prior to a callback offer. ETA is the estimated time to an agent. This is calculated in the ACD and is only an estimate based on previous call times and the current staff and queue levels. The queue position tells callers how many other callers are ahead of them.

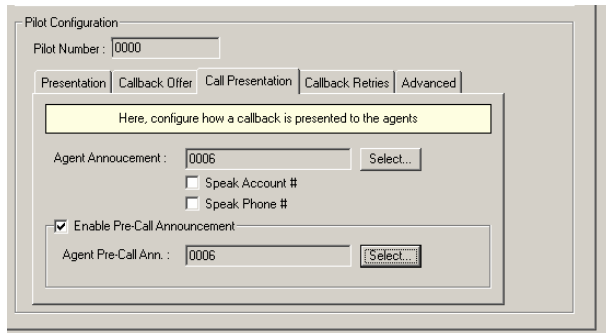
OPTIONS LIST – Presentation Tab

OPTIONS	USE
Enable ETA	Click to speak <i>estimated time to an agent</i> to callers on the selected pilot
Speak Full ETA	Select to speak the ETA as calculated
Speak ETA Up To	Select to speak ETA up to the value entered. If ETA is higher, the announcement says “your ETA is greater than...” then speaks the value entered.
Enable Queue Position	Click to speak <i>position in queue</i> to callers on the selected pilot
Speak Queue Position	Select to speak actual queue position
Speak Calculated Queue Position	Select to speak queue position normalized for number of agents logged in



OPTIONS LIST – Callback Offer Tab

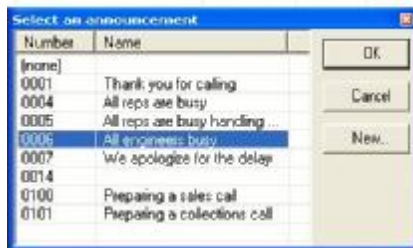
OPTIONS	USE
Enable Callback	Click to offer callers callback on the selected pilot
Min ETA	Enter the minimum ETA value, in seconds, to enable callback offers for this queue. If the ETA is less than this value, callers will not be offered a callback.
Max. ETA	Enter the maximum ETA value, in minutes, for which callbacks will be optional. When the ETA is above this value, callbacks will be the only option for the caller.
Rec. Prompt	Enter the number of the prompt you want to use to instruct callers on what kind of message to record. Your agents hear the callers recorded message prior to the callback so make sure you use a prompt that tells callers exactly what information to leave. Ie, account number name, etc.
Record Time	Enter the maximum message length to allow callers, in seconds.
Use ANI	Select to offer the callback to the callers ANI.
Schedule	Select to use a preconfigured schedule to determine the time of day callbacks will be offered. Then select the appropriate schedule from the dropdown box.
Start of Day	The time of day to start offering callbacks. Only active if you are NOT using a preset schedule.
End of Day	The time of day to stop offering callbacks. Only active if you are NOT using a preset schedule.
ASAP Callback	Select this to offer ASAP callback. This type returns calls as soon as an agent becomes available.
Scheduled Callback	Select this to offer scheduled callback. This type queues a return call at a time specified by the caller.

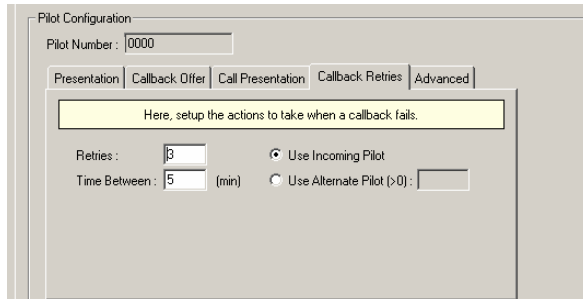


OPTIONS LIST – Call Presentation Tab

OPTIONS	USE
Agent Announcement	Enter the announcement to speak to agents prior to the callback being dialed
Speak Account #	Select to speak the caller account number (if available)
Speak Phone #	Select to speak the caller phone number (if available)
Enable Precall Announcement	Select to play an announcement to the agent prior to the call. Needs callback
Agent Pre-call Ann	Enter the announcement to speak to agents prior to calls on this pilot. It is mutually exclusive with callback. Does not speak on CB.

When adding announcements, you can select from a list of available voice files. To manage and add names to your list of voice files, use the *Voice Files* branch from the navigation tree.





OPTIONS LIST – Callback Retries Tab

OPTIONS	USE
Retries	Enter the number of times to retry a failed call.
Time Between	Enter number of minutes to wait before putting call back into queue for a callback.
Use Incoming Pilot	Forces retries to use the original pilot the caller accepted the callback offer on. Note that NBD must use alternate
Use Alternate Pilot	Retries will use this pilot. Must be specified for Next Business Day CB.

KEY CONCEPT – Failed calls and retries. Failed calls consist of tri-tone (numbers not in service), busy signal, or ring with no answer. Retries configured above happen only when the previous outbound call failed for one of these reasons. Because agents are connected to the call as it is dialed, they will hear everything that happens on a call. Agent using the *CTI Server 5* screen pop interface have the option to override these retry settings while on the call. So, based on what they hear, they can choose to inhibit a retry or force a retry again. See the Agent User guide for more information.

Configuring Web Callback

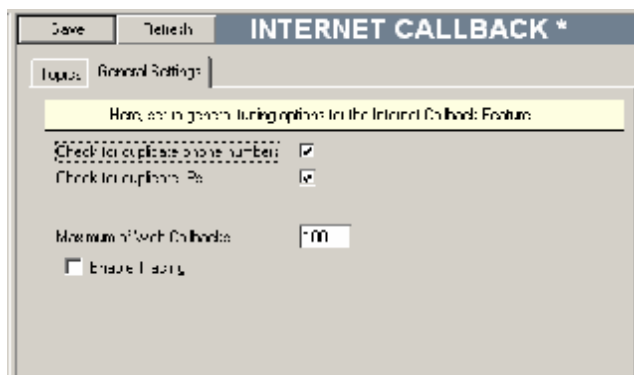
Your existing web site can also generate a callback – an actual call in queue that automatically dials an outbound call from the next agent available in the specified queue. This can be a more cost effective way to initiate contact if you have inbound toll free lines. Callback can be sent to different queues based on where the request was made on the web site. If you have a dedicated web programming staff, they have unlimited options to initiate a callback to a particular pilot based on information entered, or options selected, by your web users.

To access configuration: Open the configuration from the *Web Callback* branch on the *navigation tree*.

KEY CONCEPT Web Callback is the same as other callback features, except there is no initial inbound call. Rather, your web users click a callback link on your existing web site, and CTI Server 5 puts a virtual call in queue!

At installation, each pilot that will be used for callback *must* be set in the ACD to route queue callbacks to the appropriate split based on topic.

General Settings tab



You typically only have to change the *General Settings* tab at installation.

To disallow multiple pending callbacks to the same phone number, check the **Check Duplicate Callbacks** box.

To disallow multiple pending callbacks initiated from the same IP address, check the **Check for Duplicate IPs** box. This is NOT recommended because completely distinct web users can appear as the same IP as determined by their ISP.

Topics tab

The screenshot shows the 'INTERNET CALLBACK' configuration window with the 'Topics' tab selected. The window title is 'INTERNET CALLBACK *'. Below the title bar, there are 'Back' and 'Refresh' buttons. The 'Topics' section includes a text area for adding CD Topics, 'Add an CD Topic...', 'Edit', and 'Delete' buttons. A table lists existing topics:

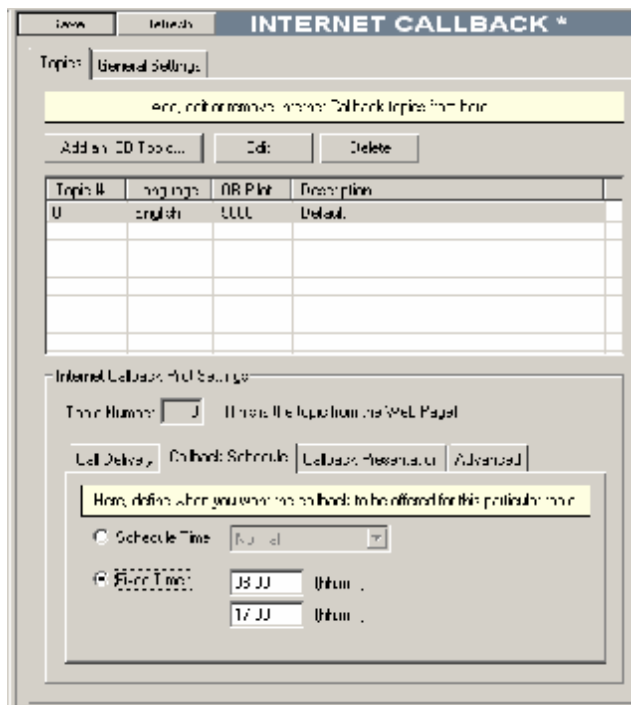
Topic ID	Language	OR Pilot	Description
0	english	0000	Default

Below the table, there are tabs for 'Call Delivery', 'Callback Schedule', 'Callback Reservation', and 'Advanced'. The 'Call Delivery' tab is active, showing a text area for instructions and configuration fields: 'Deliver to Pilot' (0000), 'Split' (1), and 'Priority' (10).

Web callback is configured by topic. The topic is set on the web page where the callback was initiated. You can send web callbacks to individual pilots based on topic, to ensure the most appropriate agent group handles that topic. At installation, each pilot that will be used for callback *must* be set in the ACD to route queue callbacks to the appropriate split based on topic.

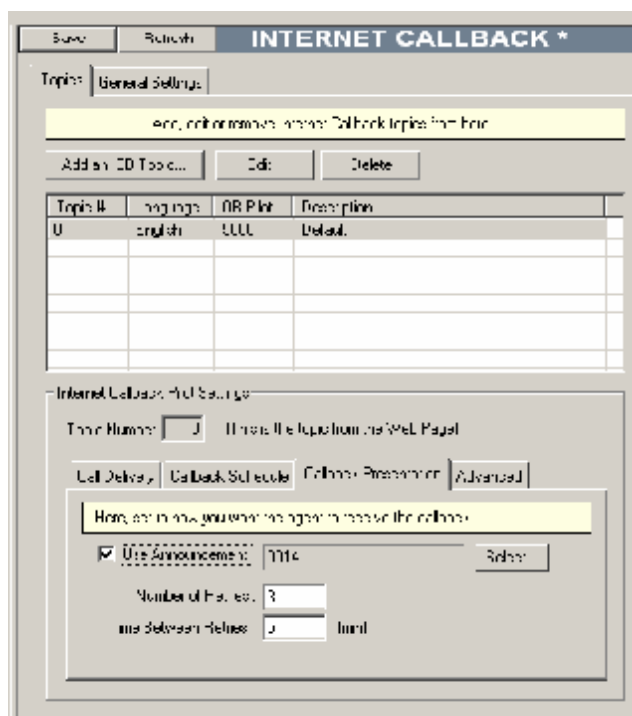
OPTIONS LIST – Call Delivery Tab

OPTIONS	USE
Deliver to Pilot	Enter the pilot that queues calls to the split of agents that will handle web callback on the selected topic.
Split	Enter the split calls are queued to on the pilot you entered in the previous field.
Priority	Enter the ACD call priority from 1 to 255 that web callbacks should default to when queued to this split.



OPTIONS LIST – Callback Schedule Tab

OPTIONS	USE
Schedule	Select to use a preset schedule.
Fixed Time	Select and enter start and end time that web callback will be accepted.



OPTIONS LIST – Callback Presentation

OPTIONS	USE
Use Announcement	Select the announcement to speak to the agent prior to the outbound call being dialed from their ACD phone.
Number of Retries	Number of times to retry dialing a callback when the call does not go through.
Time Between Retries	Number of minutes to wait from the previous try at dialing the outbound call to the next.

Configuring Call Campaigns

To access configuration: Open the configuration from the *Features/Call Campaign* branch on the *navigation tree*.

Benefits of Automated Outbound Campaigns

The typical campaign application pays for itself quickly by reducing the labor required for notification, *and* reducing the cost to your organization of missed appointments, late payments and similar burdens.

- **Fast ROI** – Cut costs, collect bills, confirm appointments, and notify customers in emergencies or when crucial systems change
- **Two main types of campaigns** – Direct to Agent, Direct to IVR (Agent-less)
- **Agent-less campaigns** – Use IVR to speak prerecorded messages to customers, such as account balances, due dates, appointment times. With optional Text-to-Speech module, speak names and other information from your data that is not pre-recordable
- **Blending** in a call center environment – Direct to Agent campaign calls can be blended with inbound calls and other traffic to ensure efficient use of agent resources
- **Pre-record Messages**– Direct to IVR campaigns allow authorized users to record and re-record the script as they see fit
- **Run multiple simultaneous campaigns** of both types. Each campaign can be configured uniquely.
- **Automatic or Manual** – Schedule campaigns to run automatically or start manually from any PC on your LAN

Typical Applications

From the Financial sector to Healthcare, and across industry, IVR campaign applications can enhance or replace many of the functions performed by your staff. Here are just a few of the applications.

- Healthcare appointment reminder
- Billing and collections
- Absentee Notification
- Emergency Notification
- Service and Installation appointment reminder
- Touch tone customer surveys

These are just a few examples, and each organization has its particular requirements and priorities, so applications are customizable.

Sizing – Calculating the Number of IVR Ports Required

For Direct to IVR campaigns, where messages are delivered to the customer or their voice mail through IVR, you must reserve IVR ports exclusively for campaigns. Note that campaigns can be shared across these IVR ports, but other applications can't use them.

The number of ports required will depend on the length of the script AND the hours the campaign is to be run. This can be calculated using the following guidelines. This is an estimate and actual port usage may vary.

- 1** Time the length of the script in seconds by speaking it out loud. Factor in additional time if they ask the caller a question or perform a database update. Include time for at least one retry of any question asked of the caller.
- 2** Take the seconds in step 1 and add 45 seconds, this is for call progress overhead as well as retries needed for unsuccessful calls such as a busy signal.
- 3** Take the figure from step 2 and multiply by the number of calls to be made for this campaign. This will yield the total number of seconds of port time needed for this campaign. Divide by 60 to calculate the port usage minutes required.
- 4** Now, determine the call window. For example, if the call window is 3 hours, each port allocated will yield 180 minutes of usage.
- 5** Divide the port minutes required (step 3) by the port minutes available in this call window (step 4). The answer will yield the ports required to run this campaign. Repeat this calculation for each campaign.

Sample port sizing scenario

- 1 Assume that Campaign 1 takes 60 seconds to speak the message, no questions asked of caller.
- 2 Add 45 seconds for overhead. (105 seconds)
- 3 Let's say you would like to make approximately 500 calls per day
 $((500 * 105) / 60) = 875$ minutes of port usage.
- 4 Calls will be placed between 6:00pm and 9:00pm, 3 hours = 180 minutes.
- 5 $(875 / 180) = 4.86 = 5$ ports required for Campaign 1.

Automated Outbound Campaign FAQs

Q **What type of dialing is it designed for? Predictive dialing? Power Dialing?**

A The Direct to IVR type is straight power dialing, with the option to leave a message based on voicemail detection. Direct to Agent campaigns are a form of preview dialing, which allows integration of the outbound call to *TFB Screen POP* and an option to whisper a prompt campaign specific to the campaign.

Q **What is in the base package?**

A The package includes a GUI configuration screen to set up campaigns, the campaign manager, and daily campaign reports in text format. Options include custom scripts for speaking information from you data, and Text-to-Speech for speaking non-numeric data like names and addresses.

Q **What is unique about the TFB system?**

A Unlike standalone black box dialers, TFB allows full call blending in conjunction with the ACD and other packages. TFB reporting and screen pop packages also integrate easily with the application.

Q **What if no one answers the call?**

A For Direct to IVR, the system can leave a message on voice mail. TFB also allows the option to prompt for customer touchtone input to confirm the presence of a live person. Direct to Agent campaigns are fully integrated with ACD functionality, so the agent decides how to handle a busy or no answer. TFB provides desktop control for agents to mark calls for retry.

Q **Is there an upper limit to the number of calls the system makes?**

A There is no practical limit inherent to the system. External limitations are the primary concern – the available trunks, your IVR port capacity for Direct to IVR calls, and the number of available agents for direct to agent calls. See the section above to calculate port usage for Direct to IVR campaigns.

Q How do we get a list of names and telephone numbers into the IVR system?

A The campaigns are driven by *your customer data*. Right from the box, the outbound campaign system will accept a comma-delimited ASCII file, a format that can be exported from nearly every database package.

```
0001,3105551212,Jane Smith,20041215|1115AM|Dr. Johnson,1112222,
```

```
0001,3105551213,John Smith,20041215|1130AM|Dr. John Carp,2223333,
```

```
0001,3105551214,Jane Doe,20041215|1145AM|Dr. Roch Smith,3334444,
```

```
0001,3105551215,John Doe,20041215|1315PM|Dr. Jules Beamer,4445555,
```

```
0001,3105551216,Brett Johnson,20041215|1330PM,Dr. Wayne Miles,5556666,
```

The first field is simply a 4-digit campaign number you assign, followed by the phone number, and then user fields that allow you to maintain data associated with the call.

Automated Outbound Campaign Configuration

The *CTI Server 5* Call Campaigns module offer automated outbound dialing. Each campaigns runs in one of two modes,

§ Agent mode

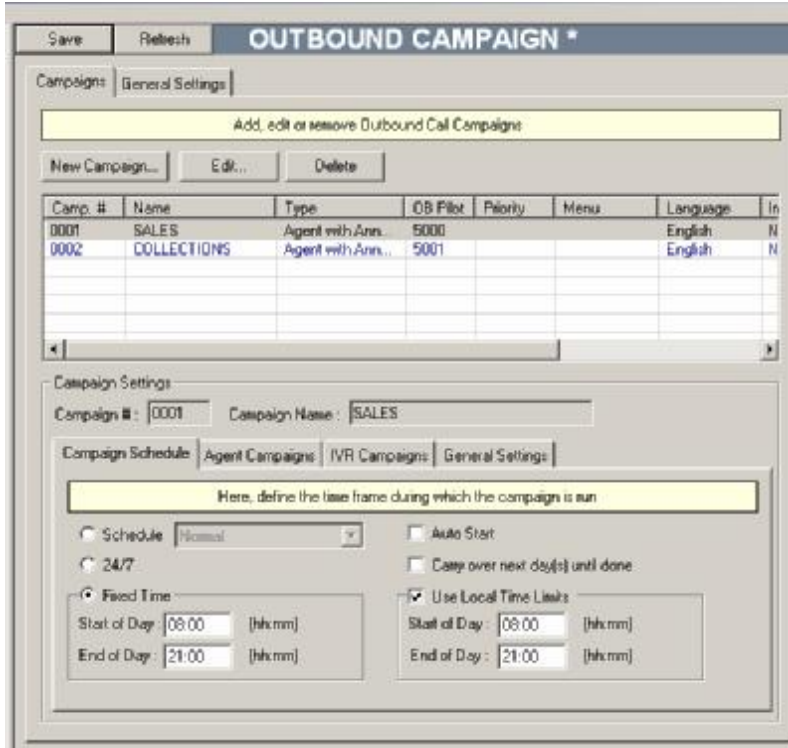
Calls are placed into a designated ACD queue as a virtual queue position, then each is dialed automatically from the ACD phone of the next available agent.

§ IVR mode

Calls are dialed directly from an IVR port and prerecorded messages are played to the caller. Touch tone options can be offered.

Each call campaign is driven by *campaign data file*, which is a simple text file of phone numbers and other data. created by the user from their existing customer data. In addition, a Campaign Template file, in plain text, allows users to specify and customize the call flow for an IVR mode campaign.

For IVR campaigns, the system offers user configurable templates that let you customize call flow, play specific messages, and get specific touch tone input.



OPTIONS LIST – Campaigns tab

OPTIONS	USE
Campaign #	Displays the number of each campaign
Campaign Name	Displays the name of each campaign
Type	Displays the type of each campaign
Priority	Displays the priority in queue assigned to calls in each campaign
Menu	Displays the name of each campaign
Language	Displays the language set for each campaign
Campaign Settings	
Campaign #	Displays the number of the currently selected campaign
Campaign Name	Displays the name of the currently selected campaign

To enter or edit a campaign

- 1 Click the **New Campaign** button or select an existing campaign from the list and click the **Edit** button
- 2 The *Edit Campaign* dialog appears. Enter or edit a 4-digit campaign number and a campaign name as desired. Note that the campaign number must be unique to this campaign AND it must match the campaign number in the *campaign data file*.
- 3 Enter form information on the right according to the description in the options list.

Campaign Type 0 - Direct to agent, with announcement.. Works similar a callback – the agent phone rings, and they hear "preparing an outbound campaign", then a pause while they are connected to customer.

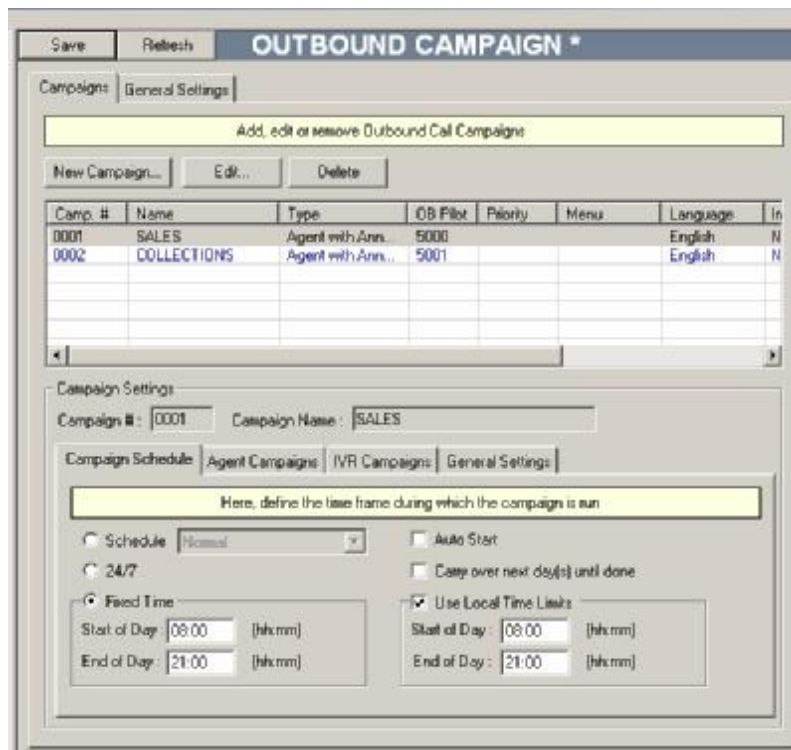
Campaign Type 1 - Stand alone IVR campaign with no carry over. IVR port dials customer, plays prompt, or follows template. No agent involved in the initial call, although a template allows for transfer to agent or extension. This campaign requires a reserved *Outbound IVR port group*.

Campaign Type 2 - Direct to agent, with no announcement, and no carry over. Similiar to type 0 , but no message involved (preparing an outbound campaign). agents gets connected directly to customer

Campaign Type 100 - Direct to agent, with announcement and carry over. Similiar to type 0 , but carries left over calls to the next day. Any records that remain after end of day time carryover and requeue the next day and start of day time set in configuration for that campaign.

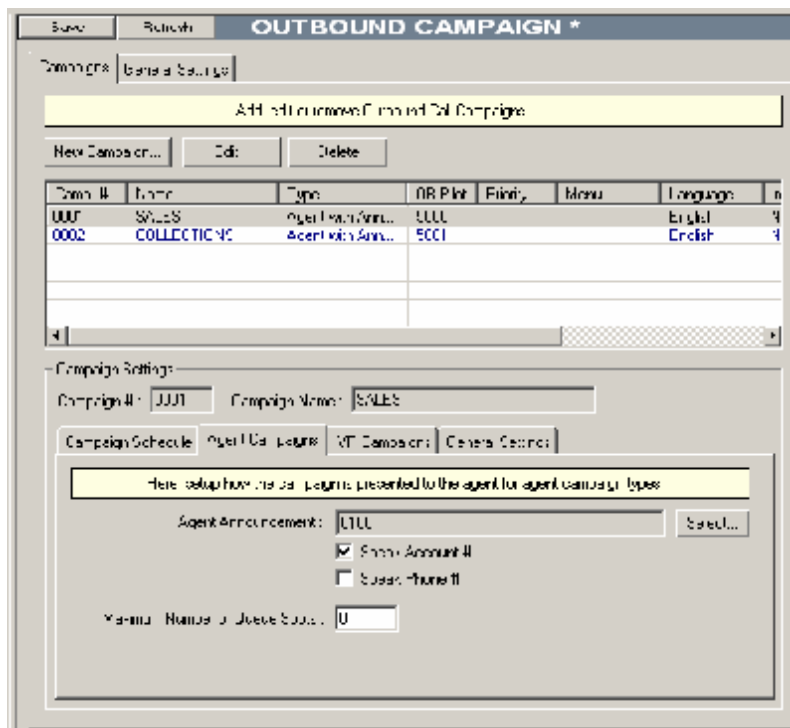
Campaign Type 101 - Stand alone IVR campaign with carry over. Similiar to type 1, but carries left over calls to the next day.

Campaign Type 102 - Direct to agent, with no announcement, but with carry over. Similiar to type 2, but carries left over calls to the next day.



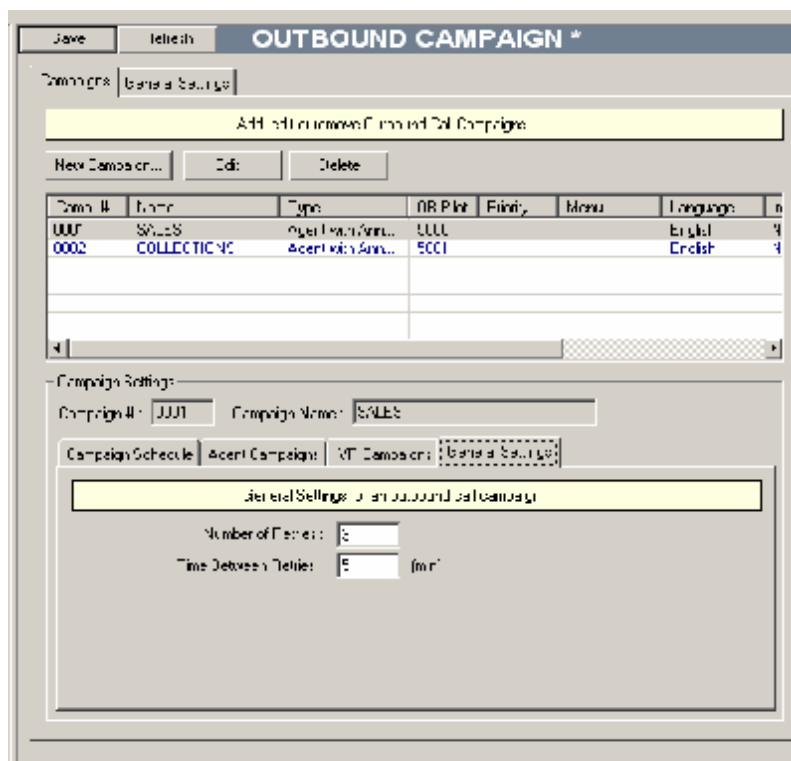
OPTIONS LIST – Campaigns / Campaign Schedule tab

OPTIONS	USE
Schedule	The schedule determines when the campaign can run. If you have a schedule defined, select the Schedule radio button, and a specific schedule from the drop down list.
24/7	Select this to allow the campaign to run at any hour.
Fixed Time	Select this to run the campaign any day during the specified interval.
Auto Start	Select this to allow the campaign to start unattended during the schedule specified.
Carry over next day(s) until done	Select this to continue the campaign into the next valid schedule interval if not all calls have been made.
Use Local Time Limits	Select this to limit calls to the target number, within the specified times, in THE TIME ZONE OF THE TARGET NUMBER.



OPTIONS LIST – Campaigns / Agent Campaigns tab

OPTIONS	USE
Agent Announcement	This is the number of the announcement spoken to the agent just prior to dialing the outbound call.
Speak Account #	Select this to make the system speak to the agent the account number of the person being dialed. Note that this is based on the availability of the account number in the campaign data file.
Speak Phone #	Select this to make the system speak to the agent the account number of the person being dialed.
Maximum Number of Queue Spots	This determines the maximum number of campaign calls that will be queued in the ACD simultaneously.



OPTIONS LIST – Campaigns / General Settings tab

OPTIONS	USE
Number of Retries	This is the number of times you want the system to redial an outbound call that failed.
Time Between Retries	This is the time in minutes between retries.

Designing IVR Campaigns

While the transaction can be controlled by your agents when running agent campaigns, IVR campaigns must be designed with special considerations related to the fact that the transaction is entirely automated.

When running an IVR campaign, each call takes the following actions.

- 1** Using IVR campaigns. In IVR campaigns, the system does automatic call progress monitoring, which includes answering machine and voice mail detection.
- 2** The system dials out from an IVR port and connects to the intended phone.
- 3** The system attempts to determine, based on the length of the answering message, whether it is connected to a live person or voice mail.
- 4** The system begins playing the messages you have configured when there is a sufficient pause in the outgoing message.

Recommended Practices

Determining whether it is voice mail or a live person is a statistical process, and outgoing messages that are unusually long or contain pauses, can sometimes fool the system into playing your recorded message before the voice mail begins recording. Because of this, TFB recommends the following practices,

- § Your recorded message should be a minimum of 30 seconds in length. If your message is inherently shorter than 30 seconds, it should be repeated.
- § Always identify your organization in the first part of the message
- § Always repeat contact information. This is important not only to ensure your customer can respond, but to ensure that if you have outdated telephone contact information and have called the wrong party, they can contact you.

Automated Outbound Campaign Data File

The campaign data file contains the information required to make each call. At a minimum this is the campaign number and the phone number to dial. Additional fields can contain data for later use in reporting or tagging the call for screen pop.

0001,3105551212,Jane Smith,20041215|1115AM|Dr. Johnson,1112222,

0001,3105551213,John Smith,20041215|1130AM|Dr. John Carp,2223333,

0001,3105551214,Jane Doe,20041215|1145AM|Dr. Roch Smith,3334444,

0001,3105551215,John Doe,20041215|1315PM|Dr. Jules Beamer,4445555,

0001,3105551216,Brett Johnson,20041215|1330PM,Dr. Wayne Miles,5556666,

The first field is simply a 4-digit campaign number you assign, followed by the phone number, and then user fields that allow you to maintain data associated with the call.

FIELDS

4 digit - campaign number (required)

10 digit - phone number (required)

24 char - account number (optional)

16 char - misc field (optional)

50 char - name field (optional)

Using Templates to Design IVR Campaigns

Templates are a powerful way to customize IVR campaigns without having to know a programming language. Each campaign can use a different template, or campaigns can share a template. The templates let you determine what announcements are played and what options the target caller has. You can even offer the option to callers to transfer to another extension or pilot in the switch.

A template is just a simple text file that you can edit in Notepad. You can also edit in Word but be careful – you must save the file as a text file, not as a Word .doc file. The campaign templates must be stored in the \tfb\campaigns\template folder on CTI Server. In Config Manager, the field **OCC Application Flags** will be set to a number from 1-999 for a campaign. If a template exists for this application flag, the template will execute, otherwise the standard OCC logic will prevail. The extension for a templates must be .occ so campaign template 2 would be in \tfb\campaigns\template\2.occ.

All boolean flags in the function set will be 0 for false, 1 for true.

Fields in the campaign file must adhere to the TFB-specified format.

Data in the Account, Misc, Name fields must be in fixed position and the standard format for different data types are as follows:

Dates: YYYYMMDD
Dollars: DDDDDDD.CC
Time: HH:MM, military time (ex. 1:00pm would be 13:00)

Template Function List

BRANCH	designates the beginning of a branch
CALLSTAT	Sets the success or failure of a call to the Campaign Manager
DISCONNECT	Terminates the call, and logs the call status.
EVAL	Compares two data fields or literal strings, jumps to branch.
GOTO	jumps to a branch
LANGUAGE	Sets the call to process in a different language
LOGSTAT	Logs an IVR Statistic to the Log Server
MENU	Offers callers a menu of choices
MENUOPT	Specifies one or more actions to take based upon a menu selection
PLAYMSG	Play a recorded prompt.
PLAYDATA	Play one of the campaign fields (Account, Misc, Name) or a substring of any of those fields.

SCREENTAG Tag a screen pop field
SURVEY Processes a survey.
TRANSFER Sends the call to a specified pilot

Function Specifications

BRANCH

Function – Designates the beginning of a branch

Format: BRANCH,BranchName,

CALLSTAT

Function – Notifies the campaign manager of the status of the call.

D – Disconnected, retry the call.

C – Connected, do not retry.

G – Good, call connected and message successfully delivered.

Both statuses C and G will cause the system to mark this call as complete. Status C is normally set after a successful connection is made to the caller and at least part of the outbound call flow has been played (for example, the opening message). Status G is typically used to designate that the caller acknowledged the message with touch-tone input. Status D is often used if the caller hung up before the first message has been fully played, indicating the call should be reattempted. Attempts will be limited to the max tries in the campaign definition.

Example call flow:

```
CALLSTAT,D,  
PLAYMSG,5000,0,  
CALLSTAT,C,
```

In the above example the call status is initialized to D then set to C only if message 5000 had fully played. If a caller hangs up while a recording is playing, the last status set will be the status sent to the campaign manager. By default, this is status C – Connected.

DISCONNECT

Function – Terminates the call.

Format: DISCONNECT,

EVAL

Function – Compares two data fields or literal strings, jumps to branch.

Format: EVAL,Data1,Data1StartPos,Data1NumChars,
Operator,Data2,Data2StartPos,Data2NumChars, Branch to jump to,

Ex: EVAL,Misc,2,1,EQ,D,,,SENIOR,
If the second letter of the Misc field is equal to D, go to branch SENIOR.

Ex. EVAL,Name,1,5,GT,Name,17,5,PASTDUE,

If the first five characters of the Name field are greater than the value in position 17 of that field, go to branch PASTDUE.

GOTO

Function – Jump to the specified branch.

Format: GOTO,BranchName,

LANGUAGE

Function – Set the call to speak in a different language – system must be enabled for multi-lingual.

Format: LANGUAGE,LanguageNum,

Format: LANGUAGE,1,
Set call to speak in Spanish (language 2)

The Language Num field is required and must be one of the following:

- 0 – English
- 1 – Spanish
- 2 – French
- 3 – Japanese
- 4 – Vietnamese
- 5 – Cantonese

LOGSTAT

Function – Logs an IVR Statistic to the Log Server

Format: LOGSTAT,StatNum,StatData,

Format: LOGSTAT,102,Account,

Log statistic 102, populating the User Data field with the OCAccount field sent.

The StatNum field is required while the StatData field is optional.

StatNum fields are in the range of 1-999 but must not conflict with the TFB Standard Statistics nor those custom statistics already defined for your system. Consult your TFB reference manual or your developer for a list of standard and custom statistics.

MENU

Function – Plays a menu to the caller for touch-tone response. Note that the MENU and MENUOPT functions operate together in that the MENU function defines the way a menu is presented to the caller while the MENUOPT function defines the action to take if a caller makes a given menu choice.

Format: MENU,MenuPrompt,MenuErrMsg,MenuOptions,Retries,

Ex: MENU,5010,5011,123*,2,

Note: This command is not allowed in a MENUOPT command

MENUOPT

Function – Specifies one or more actions to take based upon a menu selection

Format: MENUOPT,MenuOptionChosen>Action,

Ex: MENUOPT,1,PLAYMSG,5000,1,

The MENUOPT Actions may be any one of the permissible template actions such as PLAYMSG, GOTO, TRANSFER, etc. The MENU command is not allowed within a MENUOPT command - no menu nesting is allowed. If another menu must be called, use the GOTO and BRANCH functions to define another block.

PLAYDATA

Function – Speaks data from one of the campaign fields (Account, Misc, Name) or a substring of any of those fields.

Format: PLAYDATA,FieldType,FieldName,StartPosition,EndPosition,

Ex: PLAYDATA,DATE,Misc,6,8,
 PLAYDATA,TTS,Name,
 PLAYDATA,NUMBER,Account,1,4,

Data Types Supported

DATE – Must be in YYYYMMDD format., date format spoken as May 1st, 2000.

TIME – Must be in HH:MM 24-hour military format

NUMBER – ex. 123 = one hundred twenty-three

DIGITS - ex. 123 = one two three

PLAYMSG

Function – Plays a pre-recorded prompt.

Format: PLAYMSG,Msgno,Allow Interrupt,

Ex: PLAYMSG,5000,1,

SCREENTAG

Function – Tags one of the 3 screen pop fields with one of the OC Campaign fields, or any substring thereof.

Format: SCREENTAG,FieldToTag,FieldName,StartPosition,EndPosition,

Ex: SCREENTAG,Account,Account,1,9,
 SCREENTAG,Account,Misc,,,

SURVEY

Function – Processes a survey. System must have the Survey Package Installed.

Format: SURVEY,SurveyNum,

Ex: Survey,5,

Calls the Survey Manager to process survey 5.

TRANSFER

Function – Sends the call to a pilot

Format: TRANSFER,Pilot,

Note: This function will force a call termination with a status of **T** – Transfer.

Ex. :TRANSFER,4133,

Configuring Routing

CTI Server 5 modules offer options to send your callers to specific pilots, queues, and extensions based on touchtone input, full ANI, partial ANI, DNIS, or their originating area code.

To access configuration: Open the configuration from the *Routing* branch on the *navigation tree*.

Merely by queuing calls to the splits configured here, those calls are routed to the pilot designated for that ANI in the routing database. The routing database can be changed by agents as they interact with callers. It includes a facility to send callers to the agents personal pilot on a subsequent call.

OPTIONS LIST – Call Center Routing

OPTIONS	USE
ANI DB Source	This is the location of the ANI Routing database. To change it use the <i>IP Addresses</i> branch under <i>System</i> in the navigation tree.
Disable routing and/or matching	Inhibits the routing or tagging of calls even when they are queued to the routing or matching splits.

OPTIONS LIST – Use ANI Routing/Matching Parameters

Use ANI Routing/Matching	Enables routing and matching of calls queued to the ANI Routing split
ANI Routing split	The reserved split that queues call for routing. By queuing a call to this split in the ACD, the call will be tagged and routed according to the ANI database configuration.
Default Pilot	Pilot to route calls to when the ANI database has no record for that ANI.
Default Pilot on Match	Pilot to route calls to when the ANI database has a record for that ANI, but no routing pilot configured.
Use ANI Tracking	Enable tracking of ANIs
Add unregistered ANI's to ANI DB	On no match, automatically adds the ANI to the database

Use ANI Matching Only

Match and tag calls queued to the ANI Matching Split

ANI Matching Split: Default Pilot: Use Wildcards:

OPTIONS LIST – *Use ANI Matching Only* Parameters

Use ANI Matching Only	Enables and matching without routing of calls queued to the ANI Matching split
ANI Matching split	The reserved split that queues call for matching. Typically it is the same split as the routing split.
Default Pilot	Not used.
Use Wildcards	Allows entries with partial ANI in database.

Configuring Auto Attendant / Speech Director

Auto Attendant routing lets you determine which menus callers are routed to from the ACD. The pilots you route from must be set up for routing*.

To access configuration: Open the configuration from the Routing -> Auto Attendant branch on the navigation tree.

KEY CONCEPT The Auto Attendant Routing is separate from Auto Attendant menu configuration. The *Auto Attendant tool* is separate from the *Configuration Manager* and allows you to build touchtone menus. Auto Attendant Routing determines which Auto Attendant menus where callers are routed to from specific pilots in the ACD.

At installation, each desired pilot must be set to route to the appropriate Auto Attendant menu. All of the appropriate pilots should be added here at installation to allow administrators to easily modify them.

What is Auto Attendant?

TFB's Auto Attendant enhances your call-routing efficiency by providing callers with an automated, touchtone menu system that can be completely customized to your requirements. Using touchtone inputs, callers can route themselves to the appropriate menus, prompts, special-case handling, or PBX extensions. Powerful menu-building features allow you to implement each touchtone menu or submenu to your specifications, and specify associated custom-recorded prompts. Auto Attendant also includes tools for assigning functions to touchtone buttons, as well as options to handle callers' input errors, time-outs, and menu navigation requirements. Included with Auto Attendant on most systems is TFB's Enhanced Announcements module. See Chapter 3 for information on configuring Enhanced Announcements.

The latest version of Auto Attendant offers new tools to help you design your auto attendant menus and integrate with other TFB features. It also supports optional Speech Recognition (ASR) modules such as speech directory and directed dialog. Many speech recognition options can be configured by the user. Other features include,

- User management and password protection for specific menu trees
- New Configuration Reports
- Integration to callback offers
- Integration to Auto Transcription sessions
- Integration to Surveys
- Speech Recognition (optional module)

Designing Auto Attendant Menus

To create an Auto Attendant, first define all menus and submenus in your system in the forms-based Auto Attendant tool. Each menu definition consists of a menu name and number, prompt numbers that specify the recorded prompts to play for each menu, touchtone key assignments, and timeout/error configurations. Auto Attendant has the capacity to handle menu systems of varying complexity, but regardless of how complicated your requirements are, the procedure for defining menus is the same. It's important to note that it's far easier to *enter* menu data than to *change* it, so be sure to plan all menus and submenus, and to script all prompts beforehand. By numbering your menus and announcements with a consistent methodology, you can easily implement even the most intricate system.

What Information is Required to Specify Each Menu?

In general, the following information must be specified in the Auto Attendant form for each functional menu in your system:

- § **A menu number and description** –This includes specifying whether it's a Main menu or submenu, and entering the menu number and description.

- § **An ACD IVR Announcement number (for ‘main’ menus)** – The IVR number is how the ACD routes calls to that menu.
- § **The prompts for this menu: main, error and timeout** – The verbal announcements made when the caller enters a menu (“press ‘1’ for...”), when undefined keys are hit (“that is not a valid selection, please re-enter...”), or the caller doesn’t hit any key (“Sorry, we did not hear your selection...”).
- § **The Touchtone keypad configuration** – Define the action to be taken when a caller presses each touchtone key

Creating an Auto Attendant System

The Auto Attendant form on CTI Server is where you construct menus and define how calls are routed based on a caller’s touchtone inputs. You can configure touchtone buttons to route callers to other menus, submenus, announcements, prompts, directly to agents, or to other PBX extensions. This section guides you through the three important steps that are required to implement an Auto Attendant menu system.


Step 1 Open the Auto Attendant form and define all Auto Attendant menus.

Step 2 Record all voice-prompts related to each menu.

Step 3 Configure ACD CCVs to route the appropriate calls to Auto Attendant.

To get started, open the Auto Attendant form from the icon on the CTI Server desktop.

To open the Auto Attendant form

- § Click the Auto Attendant icon on the CTI Server desktop (node 1 only!). 
- § If a shortcut is not defined, click the Windows **Start** menu, click **Run**, and type, `\tfb\bin\tfbaaup.exe`
- § The TFB Auto Attendant form opens.

TFB Auto Attendant Form

The screenshot shows the 'TFB Auto Attendant System - (3850) Menu 1 - 9999, Prompts 1 - 9999' window. At the top, there are dropdown menus for 'Menu No. / Description' (0011 Main Menu), 'Main Menu / Sub Menu' (Main Menu), 'IVR Ann' (11), and 'Greeting Prompt / Description' (0000 NONE). Below these are fields for 'Prompt Number / Description' (6000 Telecom Greeting & Main M...), 'Timeout Prompt' (0000 NONE), 'Timeout' (5), 'Retries' (0), and 'Error Prompt / Description' (9102 Did not understand comma...), 'Retries' (2). The 'Speech' section has 'Speech Enabled' checked, 'Directory Grammar' (dbn.gram), and 'Command Grammar' (cmd.gram). The 'Key / Meaning Actions' section features a keypad grid with keys K, E, Y, and a table for assigning actions to keys 1-11. The 'Key Actions' section lists 11 actions, such as 'GoTo Menu 0111 Support, Training' and 'Transfer to 3890 Operator'. The 'System' section contains buttons for 'System', 'AA Report', 'Where Used', 'Check', 'View Log', 'Add Menu', 'Change Menu', and 'Delete Menu'.

The primary menu configuration options are at the top of the form. The *Speech* options pertain to speech recognition features only, not touch tone menu setup. Then the *Meaning / Actions* section is for assigning actions to touch tone keys and spoken input. The *Key Actions* display shows current key assignments for the menu displayed. The *System* options let you run utilities, and edit the list of prompts, extensions, directory listings and users. Note that the entire form is displaying properties for the menu shown in the Menu No. / Description drop down box. This manual describes only the touch tone features of Auto Attendant. Speech recognition is described in the *Speech Enabled Attendant Guide*.

Primary Options

Field...	Usage...
Menu No. Description	User-defined Menu Number 1 - 9998.
Main Menu / Sub Menu	Indicates Menu type – main menu or sub menu.
ACD Ann No.	ACD <i>IVR Announcement</i> number for Main Menus only.
Timeout	Timeout value in seconds for this menu.
Language	Language code for this menu.
Print (Button)	Print Auto Attendant report (to Windows Notepad).

Prompt Number	Auto Attendant voice prompt number 0001 - 9998.
Timeout Prompt	Timeout prompt 0001 - 9998. A timeout occurs when the caller doesn't hit any touchtone key within the number of seconds specified in Timeout .
Retries (timeout)	Number of timeout retries (<i>after</i> the first try).
Error Prompt	Error prompt 0001 - 9998. An error occurs when the caller hits a touchtone key defined as 'N/A'.
Retries (error)	Number of error retries (<i>after</i> the first try).
Timeout Extension	Transfer extension when caller exhausts timeout retries .
Error Extension	Transfer extension when caller exhausts error retries .

Key Action Options

Field...	Usage...
----------	----------

Touch Tone Keypad Buttons	Select menu choices for the current menu.
Touch Tone Keypad Map	Shows menu choices defined for the current menu.

Assignable Touchtone Key Functions

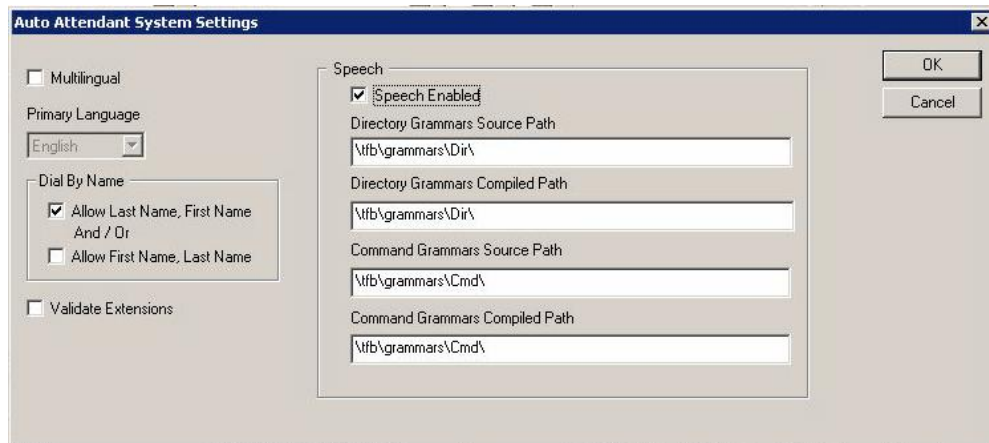
<u><i>This Function...</i></u>	<u><i>Produces this Result...</i></u>
Transfer	Transfers the caller to the extension selected.
GoTo Menu	Routes the caller to the menu number selected.
Play Passage	Plays passage specified then returns to the current menu.
GoTo Main Menu	Returns to the first menu presented to caller.
Backup Menu	Backs up one menu level.
HangUp	Hangs up on caller.
Dial Extension	Directly dials a PBX extension. The key must be the first of the 4 or 5-digit direct extension number.
Return to ACD	Returns control of the call to the next CCV step after the @IVR Announce <i>n</i> to that routed the call to Auto Attendant.
Special Treatment	Directly dials a PBX extension. The key must be the first of the 4 or 5-digit direct extension number.
Dial By Name	Directly dials a PBX extension. The key must be the first of the 4 or 5-digit direct extension number.
Callback	Sends caller directly to a callback offer. (Must have TFB Callback feature)
Auto Transcription	Sends caller directly to the specified Auto Transcription session. (Must have TFB Auto Transcription feature)
Survey	Sends caller directly to the specified touch tone Survey. (Must have TFB Survey feature)
N/A	Defines the key as not valid for this menu. If the caller selects this key, the error prompt is played.

System Options

Field...	Usage...
System	Opens configuration for enabling speech, multilingual features.
AA Report	Displays or prints the AA configuration report.
Where Used	Displays which menus and prompts are actually in use and where they are referenced.
Check	Checks for references to undefined or invalid menus, prompts and extensions.
View Log	Shows activity of configuration form users.
Menus Tab	Lets you Add, Change, or Delete a Menu from the list
Prompts Tab	Lets you Add, Change, or Delete a Prompt from the list
Extensions Tab	Lets you Add, Change, or Delete an Extension from the list
Dial By Name Tab	Lets you Add, Change, or Delete a DBN directory entry
Users Tab	Lets you Add, Change, or Delete a User

System Configuration

Before defining specific menus, you should make sure that system parameters are set correctly. You may also want to define passwords and permissions for other users. The Speech Enabled Option is discussed later in this section.



To define System parameters

In the Auto Attendant form...

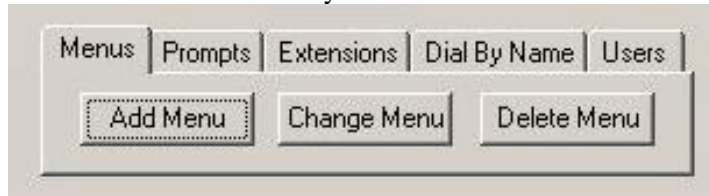
- 1 Click the **System** button. The Auto Attendant System Setting dialog should appear. Make sure the Speech Enabled checkbox is deselected.
- 2 Select the Multilingual checkbox if you have prompts in more than one language, and the menus and selections are the same in all languages. This feature lets you design a single menu tree but based on language you can specify different extension numbers.
- 3 If you are using the Dial by Name feature select whether you want the system to match caller entries by Last Name, First Name, or both. Larger directories are typically best using Last Name first, while small directories can benefit by using both, or even just First Name first depending on the directory size and how your callers know your staff.

This manual describes only the touch tone features of Auto Attendant. Speech recognition is described in the *Speech Enabled Attendant Guide*.

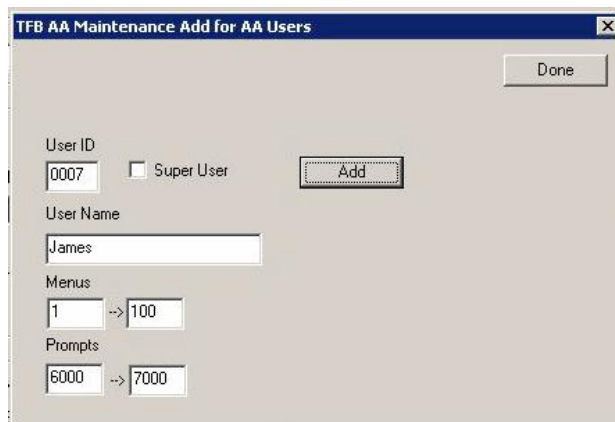
To define System users

In the Auto Attendant form...

- 1 Click the **Users** tab in the System area.



- 2 Select add change, or delete.
- 3 From the edit dialog, enter, delete, or change user info. The user name can be anything you like. It is used for reference only. The user ID should be a 4 digit number. Enter the range of menu numbers, and the range of prompt numbers this user has access to. By checking the Super User box, you give the user full admin right to manage other users and have access to all menus and prompts.



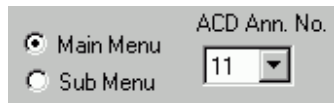
- 4 If this is the first time it is being used, the default super user is 1234 or 3850. You should also change that entry to another four digit number. Be careful not to delete a super user before you have another super user defined!

To define Auto Attendant Menus

In the Auto Attendant form...

- 1 Enter a menu description** – Click the **Menu No. / Description** list in the top left corner of the form. Click **9999 Create new menu** at the bottom of the list. Enter a number (1-9998) and description for your menu. The data entered in all other fields pertains **ONLY** to the menu shown in the **Menu No. / Description** field. The number you assign to any menu is up to you. It not must be used by another menu, and you may find it helpful to use a convention such as all Sales menus use numbers in the 100's, Help Desk 200's and so on.
- 2 Specify the type of menu.** If you plan to route calls from the ACD using @IVR Announce n (n=11 to 98) then you have to tag the menus you enter straight from the ACD as *Main Menus*.

NOTE You don't have to specify menu type if you route using @IVR Announce 9 !




The screenshot shows a form section with two radio buttons: 'Main Menu' (selected) and 'Sub Menu'. To the right is a dropdown menu labeled 'ACD Ann. No.' with the value '11' selected.

Click **Main Menu** or **Sub Menu**. If you're defining a main menu, enter the *IVR Announcement Number* (11-98) you want to route calls to this menu. You can only route calls to Submenus from other menus, so you don't need to specify **ACD Ann. No.** for 'Sub' menus. Of course, you must define at least one main menu as the first menu callers on a given pilot are routed to.

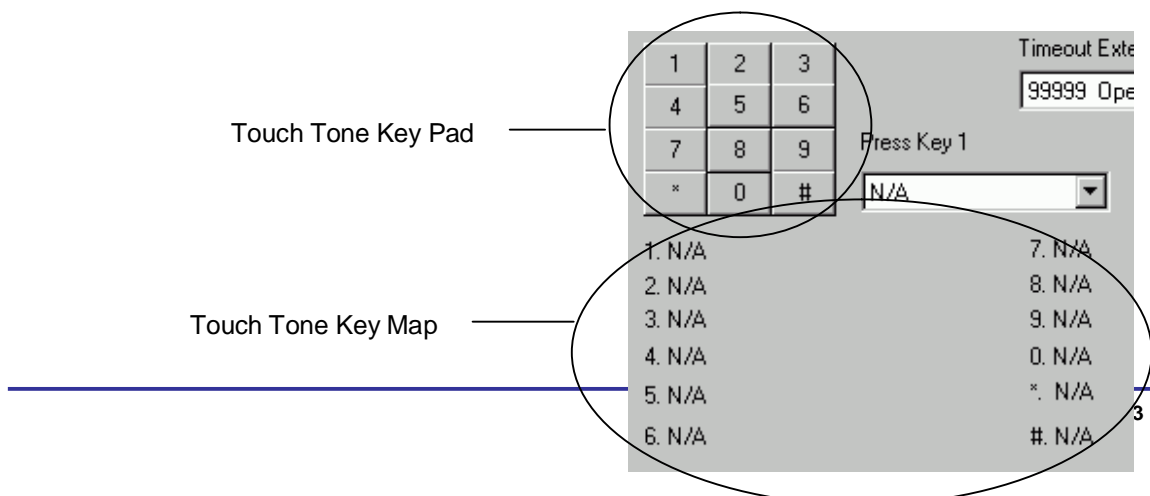
NOTE The ONLY difference between a Main menu and a submenu – Calls routed from the ACD to Auto Attendant can only go to 'Main' menus, hence the **ACD Ann. No.** field that appears when **Main Menu** is selected. 'Sub menus' are *only* launched from *other* menus. Main menus can be launched from sub menus, and vice versa.

- 3 Specify the Language.** English or Spanish are normally available. Your system may also have custom language options. This field pertains only to 'canned' prompts that are played during transfers or other common events. **More Information** – See the *Predefined Prompts* section.
- 4 Specify the Prompt number and description for this menu.** Select a prompt from the list or click **9999 Create New Prompt**. Enter a prompt number (1-9998) and description. This specifies the prompt callers hear when they first reach this menu. The prompt is also replayed on each 'retry' caused by an error or timeout.

- 5 **Specify the timeout period in Timeout.** This is the number of seconds the system waits for caller input before playing the prompt specified in **Timeout Prompt**.
- 6 **Specify the Time-out prompt number and description for this menu, and enter the number of Retries.** Callers hear this prompt when they don't press any keys within the number of seconds specified in **Timeout**. **Retries** is the number of timeouts that can happen before the caller is transferred to the **Timeout Extension**.
- 7 **Specify the Time-out Extension,** the extension to which the caller is transferred after exhausting the number of timeout **retries**. You may specify a valid PBX extension or 'None' to make the system hang up when the caller exhausts the number of timeout **Retries**.
- 8 **Specify the Error prompt number and description for this menu, and enter number of retries.** Click **9999 Create new prompt** at the bottom of the list, or select an existing prompt. Enter a prompt number (1-9998) and description for your menu. Callers hear this prompt when they press any key defined as 'N/A' (see *Step 10*).
- 9 **Specify the Error Extension.** The extension to which the caller is transferred after exhausting the number of error retries. You may specify a valid PBX extension or 'None' to make the system hang up when the caller exhausts the number of timeout **Retries**.

TIP As you enter menu data, click **OK** to save your work at regular intervals. You must restart Auto Attendant each time, but because many experienced Windows users are in the habit of clicking the close  button to exit applications (which will *not* save your work), following this procedure may save time in the long run.

- 10 **Configure the Touchtone Keys.** Assign the function you require to each key on the touchtone pad by clicking the desired key, then selecting a function from the **Press Key n** list box to the right of the key pad.



Key assignments are displayed in the Touch Tone Key Map as shown above. 'N/A' indicates no function is assigned to that key. Key assignments are unique to each menu, so whichever keys you assign in this menu, may be assigned differently in the next.

<i>This Function...</i>	<i>Produces this Result...</i>
Transfer	Transfers the caller to the extension selected.
GoTo Menu	Routes the caller to the menu number selected.
Play Passage	Plays passage specified then returns to the current menu.
GoTo Main Menu	Returns to the first menu presented to caller.
Backup Menu	Backs up one menu level.
HangUp	Hangs up on caller.
Dial Extension	Directly dials a PBX extension. The key must be the first of the 4 or 5-digit direct extension number.
Return to ACD	Returns control of the call to the next CCV step after the @IVR Announce <i>n</i> to that routed the call to Auto Attendant.
Special Treatment	Directly dials a PBX extension. The key must be the first of the 4 or 5-digit direct extension number.
Dial By Name	Directly dials a PBX extension. The key must be the first of the 4 or 5-digit direct extension number.
Callback	Sends caller directly to a callback offer. (Must have TFB Callback feature)
Auto Transcription	Sends caller directly to the specified Auto Transcription session. (Must have TFB Auto Transcription feature)
Survey	Sends caller directly to the specified touch tone Survey. (Must have TFB Survey feature)
N/A	Defines the key as not valid for this menu. If the caller selects this key, the error prompt is played.

Notice that various dialog boxes appear to the right of the key map depending on the function assigned. Enter values in those fields as appropriate.

1 – The backup function keeps track (in real time) of which menu the caller came from. You can safely define submenus with multiple parent menus up to a depth of 12, and repeated backups will backtrack reliably along the original path!

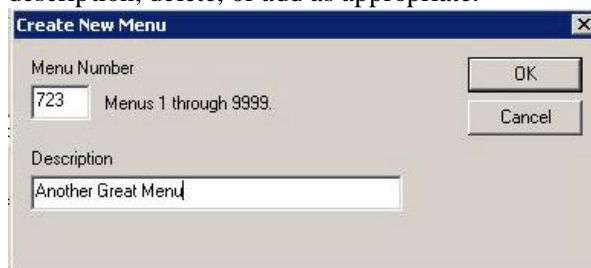
To edit the list of menus, prompts, extensions, and DBN entries

In the Auto Attendant form...

- 1 In the System areas, click the desired tab – Menus, Prompts, Extensions, or Dial by Name.



- 2 Select the edit function you need – Add, Change, or Delete. Note that for any item, these features simply allow you to change, add, or delete entries in the list. For extensions, that is the entire configuration. For prompts you still must record prompts in the recording utility. Menu parameters are edited by selecting the desired menu in the Auto Attendant form and changing values directly.
- 3 From the dialog, enter or select the Menu, Prompt, or Extension and change the description, delete, or add as appropriate.



DBN entries are only slightly different, requiring a first name, last name, and extension.

Completing Configuration

After specifying menu options, close the CTI Server window, then restart it by double-clicking the **TFB CTI Server** icon. This initializes your changes, and completes Auto Attendant configuration on the server. Next, you'll need to record all the prompts you referenced in your menu configuration. When you're satisfied with all the prompts, the section on ACD configuration will show you how to route calls to your main menus from each desired pilot.

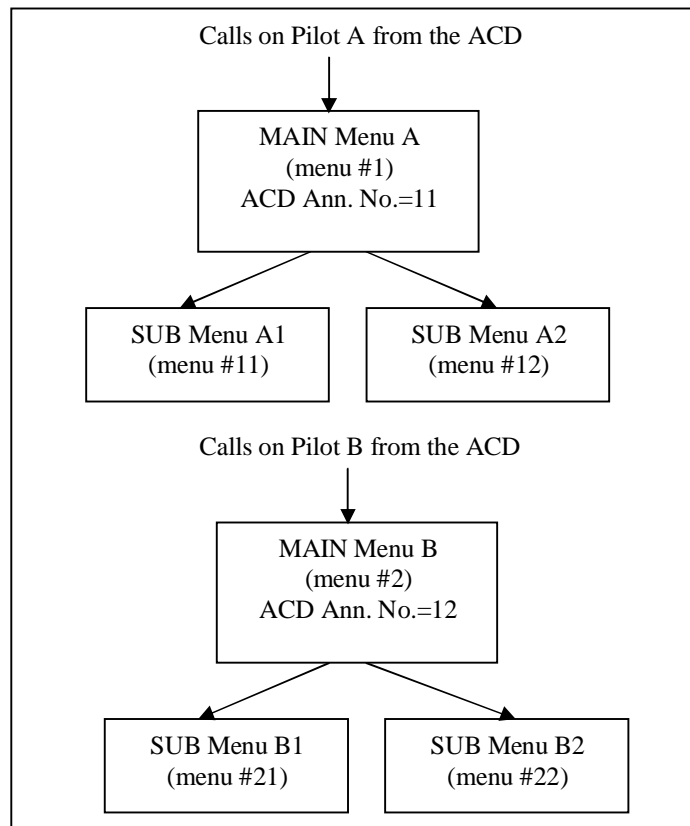
Defining Multiple Independent Menu Systems

Before recording prompts, it's worth reviewing the structure of your menu system. The way your menus interconnect can influence such factors as ease of use and accessibility to options. The design flexibility built in to Auto Attendant let's you determine routing options available to callers.

You can define multiple, independent menu systems, or 'menu trees', by defining multiple *main* menus, each with its own *unique* set of submenus. Assign a unique *IVR number* to each Main menu, then route calls on the desired pilots accordingly.

SAMPLE Two independent Menu 'trees' defined in Auto Attendant

Suppose you want to route calls to multiple, independent menu systems as determined by the incoming pilot. Multiple menu trees are easily defined within Auto Attendant. Two independent 'trees' are shown in the sample below, but you can define as many as you need within the limit of 99 *total* menus. The menu tree under main menu A is triggered by sending *IVR Announcement '11'*. The menu tree under main menu B is triggered by sending *IVR Announcement '12'*. The menu #'s shown are arbitrary.



Two Independent Menu Trees

Recording Prompts for Auto Attendant

After all desired menus are defined, you should record every menu prompt, error prompt, and timeout prompt referenced in the **...Prompt** fields of each menu. Auto Attendant recordings reside on the server in the `\tfb\dyps\aa` directory.

To record prompts for Auto Attendant

- 1 From any phone, dial the pilot configured to send *IVR Announcement 99*. This starts the TFB Recording Utility. The utility guides you through the recording process with verbal prompts.
- 2 Enter '1234#' when prompted for a password.
- 3 Enter '1' to record (enter '2' to hear existing prompts).
- 4 Enter '4' to specify Auto Attendant Prompts. Other types of prompts or announcements cannot be played by the auto attendant.
- 5 Enter the four-digit Auto Attendant prompt number to record. These are the prompt numbers you defined in the Auto Attendant form fields – **Prompt Number, Error Prompt, Timeout Prompt**. (0001-9998)
- 6 Record the prompt at the tone. Recording stops automatically when you stop talking for about 1 second. After completing a recording, the system will ask you to enter another prompt number. Repeat these steps to record each prompt in your system.

TIP When recording, start talking *immediately* after the tone. The system stops recording when it detects silence.

NOTES

Site / Section _____

Recording Utility DN _____

Predefined Prompts

You may have noticed that Auto Attendant only permits you to define the prompts played in three specific situations – for menu-related instructions, timeouts, and user errors.

What about the prompts that are spoken *between* menus, and when calls are transferred? TFB has prerecorded these default audio announcements for you. Prerecorded announcements play automatically in predetermined situations. For example:

In this Situation...	Automated Attendant automatically plays this message... (or a similar passage)
When transferring a call	<i>“Please wait while we transfer your call”</i>
When the system ‘hangs-up’	<i>“Goodbye, and thank you for calling”</i>

These ‘canned’ messages can be changed from the Recording Utility, but they can’t be specified in the Auto Attendant form, except to change the language used.

NOTE Auto Attendant’s pre-defined messages are the primary reason for specifying the **Language** field in the Auto Attendant form. When your system is required to play prompts in more than one language, it’s important that the ‘canned’ messages also be played in the language selected for the current menu. It’s the **Language** selection that determines this.

More Information – For a completed list of canned messages supplied by TFB, see *Appendix n “Canned Announcements”*

ACD Configuration: Routing Calls to Auto Attendant

When routing calls to the auto attendant, you are always routing to the specific menu you choose for that pilot in configuration. This means you have the option to offer callers different menus based on where they come from in the ACD! To put it another way, any pilot in the ACD can route to virtually any menu in Auto Attendant. There are two distinct methods used to route calls from the ACD to a specific auto attendant menu from a given CCV.

1. **@IVR Announce 9** Use an *IVR Announce 9* step to do the routing, while the Pilot number is tied to a specific routing number within configuration. Recommended option.
2. **@IVR Announce n** Use an *IVR Announce n* (where n = 11 to 98) step to specify the menu number and do the routing. Not recommended in most instances.

On older systems, the second method was the only option. But because CCV's limit unique IVR announcements to a total of 99, and some of those values are reserved for other purposes, it meant you could only have about 89 unique entry point menus from auto attendant. That's a lot for most systems, but still better not to have a limit, and using the first method has added benefits, like saving CCV steps because also registers calls for reporting purposes¹.

For newer systems, the first method, using an *IVR Announce 9* step, is preferable. With this method, you can have as many unique entry point menus as you have ACD pilots, although it means configuring a matching menu in a separate area so you can't determine the menu number being routed to just by reading the CCV. However, the *@IVR Announce 9* has the added benefit that it registers the call into the recording package, ACD Reports, where as, *@IVR Announce n* (n=11-98) does not.

So, unless there is a compelling reason to use Method 2, Method 1 is generally preferable.

1-With TFB ACD reports, CCV steps for the first pilot used by all trunk calls must ensure that call is registered with the reporting package, with either a QUEUE TO, or an @IVR ANNOUNCE 9 step. Provided each call uses just one of these steps before any other (except the requisite PAUSE before each), it will be properly registered for reporting. Note that @IVR ANNOUNCE 11 to 99 does NOT register the call for reporting! So, using Method 2 to route to an Auto Attendant menu means that before the @IVR ANNOUNCE n step, you must also QUEUE TO a dummy split, then DEQUEUE. A PAUSE 2 step is required before an @IVR Announce 9 step, and a PAUSE 3 step is required before any QUEUE TO step.


Method 1: Routing to a Menu with @IVR Announce 9

This is the simplest method, and it ensures calls get registered for reporting, while minimizing CCV steps.


SAMPLE Method 1 CCV to route a call to an Auto Attendant Menu

Routes calls to the menu configured for the pilot.

```
1) PAUSE 2
2) @IVR Announcement 9
... [Next CCV step: route call to a default pilot!]
.
.
.
```

 Before the *@IVR Announcement 9* step, be sure to include a *PAUSE 2* step. After the *@IVR Announcement 9* step, be sure to include a step that routes calls to a default pilot that queues calls for agents or otherwise handles them appropriately should auto attendant service be interrupted. Doing so ensures that calls will be handled properly in the unlikely event that *Infolink* or another CTI component goes down. If the call is successfully routed to Auto Attendant in step 2, the steps after '2) *@IVR Announcement 9*', are not executed!

Be sure to include a *PAUSE 2* prior to all *@IVR Announce 9* steps.

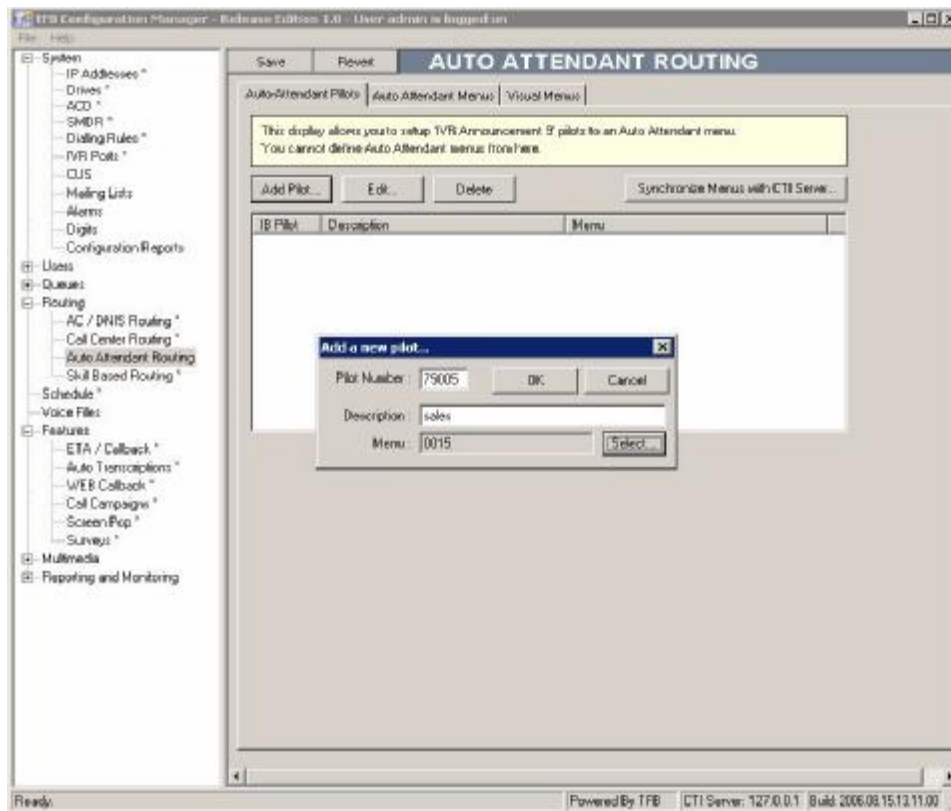
 To avoid interrupting callers while they are interacting with Auto Attendant, do **NOT** queue the call to a split prior to routing them to Auto Attendant!

 **DON'T PLAN TO USE OTHER TFB FEATURES ON THIS PILOT!**

You may already know that the *@IVR Announcement 9* step is also used to send callers to a callback offer and an ETA/Queue announcement. However, you can't associate an *@IVR Announcement 9* step on a given pilot with BOTH those features and an auto attendant menu. Be sure to change pilots if you need to offer both on the same call, or use Method 2 to route to the auto attendant. In most call flows this is not an issue because you typically do not queue calls to a split when routing them to a menu, but you **MUST** queue them to a split before routing to a callback offer or queue announcement.

To match pilots to auto attendant menus

- 1 In the TFB Configuration Manager, in *Routing / Auto Attendant Routing*, click the Add Pilot to configure any pilot to route to a specific Auto Attendant menu.
- 2 In the *Add a new pilot* dialog, enter the pilot number.
- 3 Click the **Select** button to pick the appropriate auto attendant menu for this pilot.
- 4 Click the **OK** button to add the pilot to configuration
- 5 Repeat for each unique pilot that you want to transfer calls to the auto attendant



Method 2: Routing to a Menu with @IVR Announce n

When you create an auto attendant, each Main menu must be ‘tagged’ with a unique *IVR Announcement Number*. Calls are routed to Auto Attendant menus when the ACD sends an *IVR Announcement number* that matches one of your tags.

NOTE There are two type of menus in the Auto Attendant – ‘Main’ menus, and ‘Sub’ menus. The ACD routes calls only to your *Main* menus. From there, callers can route themselves either to ‘sub’ menus or to other Main menus, as allowed by your touchtone menu configurations.

When you’re ready to activate Auto Attendant, configure the CCV’s for the desired pilots to send a unique *IVR Announcement number* (10 through 98) corresponding to each of your Main menus. Make sure you have completely defined your menus, recorded all related prompts, and reviewed your system on a test pilot before routing live calls to your main menus.

SAMPLE Method 2 CCV to route a call to an Auto Attendant Menu

Routes calls to the menu tagged with ‘17’ in the **IVR Ann. No.** field on the Auto Attendant form.

These steps are there simply to register the call for reporting if this is the first pilot used for the call, and the call has not previously been queued or routed with an @IVRAnnounce 9 step.

- 1) Pause 3 (always PAUSE3 before a QUEUE TO step)
 - 2) QUEUE TO 99 (any split without agents logged in)
 - 3) DEQUEUE 99 (don’t leave it queued)
 - 4) Pause 2
 - 5) @IVR Announcement 17
- ... [Next CCV step: route call to a default pilot!]
.
.
.

Before the @IVR Announcement n step, be sure to include a PAUSE 2 step. After the @IVR Announcement step, be sure to include a step that routes calls to a default pilot. Doing so ensures that calls will be handled properly in the unlikely event that *Infolink* or another CTI component goes down. If the call is successfully routed to Auto Attendant in step 1, the steps after ‘1) @IVR Announcement 17’, are not executed!



To avoid interrupting callers while they are interacting with Auto Attendant, do **NOT** queue the call to a split prior to routing it to Auto Attendant!

Activating Auto Attendant

After double-checking your menus in the Auto Attendant form and listening to your recorded prompts, route calls to your new Auto Attendant from a test pilot, and run through the menus.

To test Auto Attendant

- § Close and restart the CTI Server window to activate your menu configuration.
- § Configure a CCV to route incoming calls from a test pilot to each of your main menus in turn.
- § Dial the test pilot from a PBX phone.
- § Run through your system to be sure that prompts play when they should, and that all touchtone mapping is correct.

You can also review your menu configuration by clicking the **Print** button on the Auto-Att form (see *Auto Attendant Reporting* in this chapter).

If the test was satisfactory, Auto Attendant is ready for activation.

Your Auto Attendant is ready to go live if...

- § All menus and submenus are completely defined and tested
- § All related prompts and announcements are recorded



To activate Automated Attendant

- § Configure the desired ACD CCVs to send an *IVR Announcement* corresponding to the **ACD Ann No.** field in each Main Menu.
- § If you haven't already done so, close the CTI Server window, then double-click TFB CTI Server icon to restart it.

Your auto attendant is now live! CTI Server will automatically detect an *IVR Announcement 9* on *Infolink*, and route the associated calls to the menu configured for with *that pilot*, OR any *IVR Announcement (11-98)* on *Infolink*, and route the associated calls to any Main menu tagged with *that IVR Announcement number*.

More Information – See “*ACD Configuration: Routing Calls to Auto Attendant*”, previously in this chapter.

Auto Attendant Troubleshooting and Maintenance

Enhanced Automated Attendant is maintenance-free after menus are created and routing has been enabled in the ACD! To the extent that you need to direct (or redirect) calls on certain pilots to and from existing menus, Auto Attendant can be effectively administered from ACD CCVs, without changing the CTI configuration. To add new menus, new prompts, or make other modifications, follow the procedures outlined in the section on *Creating an Auto Attendant System*, earlier in this chapter. If you have trouble getting Auto Attendant to work the way you want it to, see the following Troubleshooting guide for fast solutions.

Auto Attendant Report

It's important to note that the reporting feature in Auto Attendant does not relate to caller transactions, but rather to the static configuration of all Auto Attendant menus defined in your system.

You can view the Auto Attendant Report – a complete list of current menu and submenu configurations – by clicking the **Print** button on the Auto Attendant form. The report is displayed in a Notepad window where you can print (**File | Print**) or save it for review. This is a convenient way to view complex menu configurations in their entirety, and to spot problems or inconsistencies with touchtone key assignments.

Reading the Auto Attendant Configuration Report

The Auto Attendant Configuration report shows a menu definition for each menu in the system. As shown in the following sample, each menu definition consists of:

- § **MENU HEADER** – Shows the menu number, type (main or sub), associated *IVR Announcement* number (for a Main menu), and the menu title.
- § **PROMPT/EXTENSIONS BLOCK**. On the left side is a list of Menu, timeout, and error prompts (prompt title and number). On the right is a list of Timeout and error extensions.
- § **TOUCHTONE KEY MAP** - Lists key assignments from 0-9 as well as '*' and '#' for this menu.

SAMPLE Auto Attendant Report File, tfbaa.prn

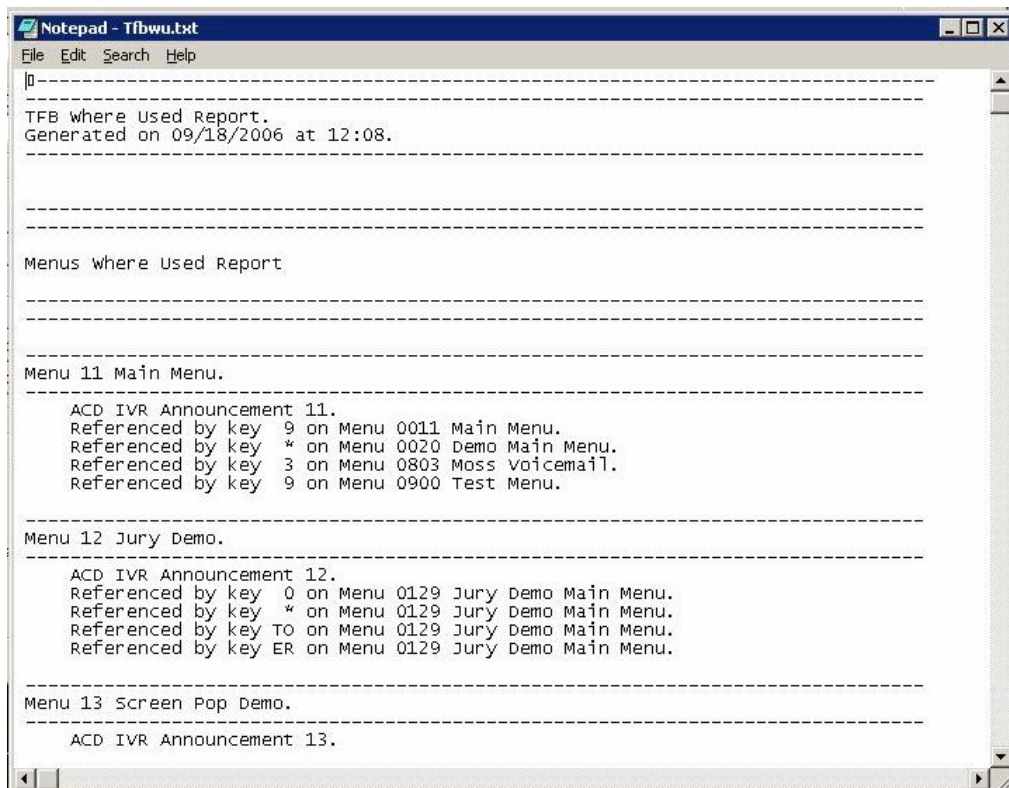
```
-----  
Menu Header -----  
Menu 0001 Main Menu IVR Ann. 11 Main  
-----  
Prompts Menu/TimeOut/Error      Exts TimeOut/Error  
-----  
Prompt/Extensions Block -----  
0001 Main Menu Prompt  
0901 No input prompt 1          0001 operator  
0801 General Error Prompt 1    0001 operator  
-----  
Touchtone key map -----  
Menu Choice -> 0. N/A  
Menu Choice -> 1. GoTo Menu 0002 Tech Help Main  
Menu Choice -> 2. N/A  
Menu Choice -> 3. N/A  
Menu Choice -> 4. N/A  
Menu Choice -> 5. N/A  
Menu Choice -> 6. N/A  
Menu Choice -> 7. N/A  
Menu Choice -> 8. N/A  
Menu Choice -> 9. HangUp  
Menu Choice -> *. BackUp Menu  
Menu Choice -> #. N/A
```

The Auto Attendant report displays a similar menu definition for each menu in your system.

Where Used Report

The Where Used report indicates where menus, prompts, and extensions are referenced in the system.

To access the Where Used report, click the **Where Used** button in the *System* area of the *Auto Attendant form*. In extensive auto attendants you may want to check this report prior to deleting a menu, prompt, or extension.

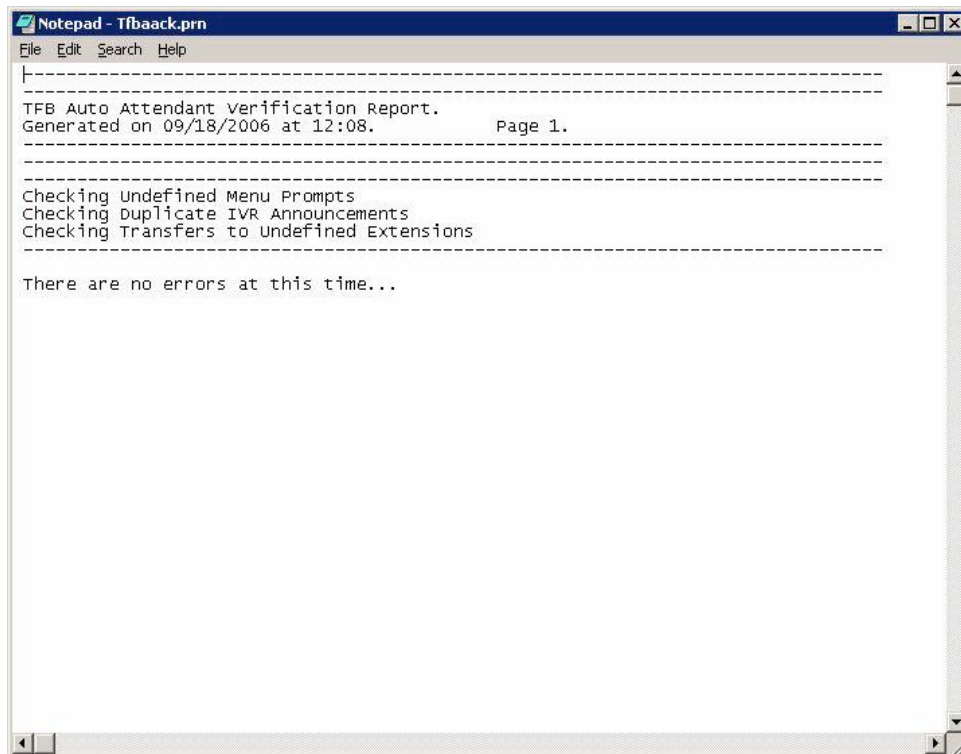


```
Notepad - Tfbwu.txt
File Edit Search Help
|-----|
TFB where Used Report.
Generated on 09/18/2006 at 12:08.
|-----|
|-----|
Menus where Used Report
|-----|
|-----|
Menu 11 Main Menu.
|-----|
ACD IVR Announcement 11.
Referenced by key 9 on Menu 0011 Main Menu.
Referenced by key * on Menu 0020 Demo Main Menu.
Referenced by key 3 on Menu 0803 Moss Voicemail.
Referenced by key 9 on Menu 0900 Test Menu.
|-----|
Menu 12 Jury Demo.
|-----|
ACD IVR Announcement 12.
Referenced by key 0 on Menu 0129 Jury Demo Main Menu.
Referenced by key * on Menu 0129 Jury Demo Main Menu.
Referenced by key TO on Menu 0129 Jury Demo Main Menu.
Referenced by key ER on Menu 0129 Jury Demo Main Menu.
|-----|
Menu 13 Screen Pop Demo.
|-----|
ACD IVR Announcement 13.
```

Check Report

The Check report helps locate references to undefined prompts or extensions. If any are listed, you should either remove the reference or properly redefine them in the auto attendant interface.

To access the Check report, click the **Check** button in the *System* area of the *Auto Attendant form*.



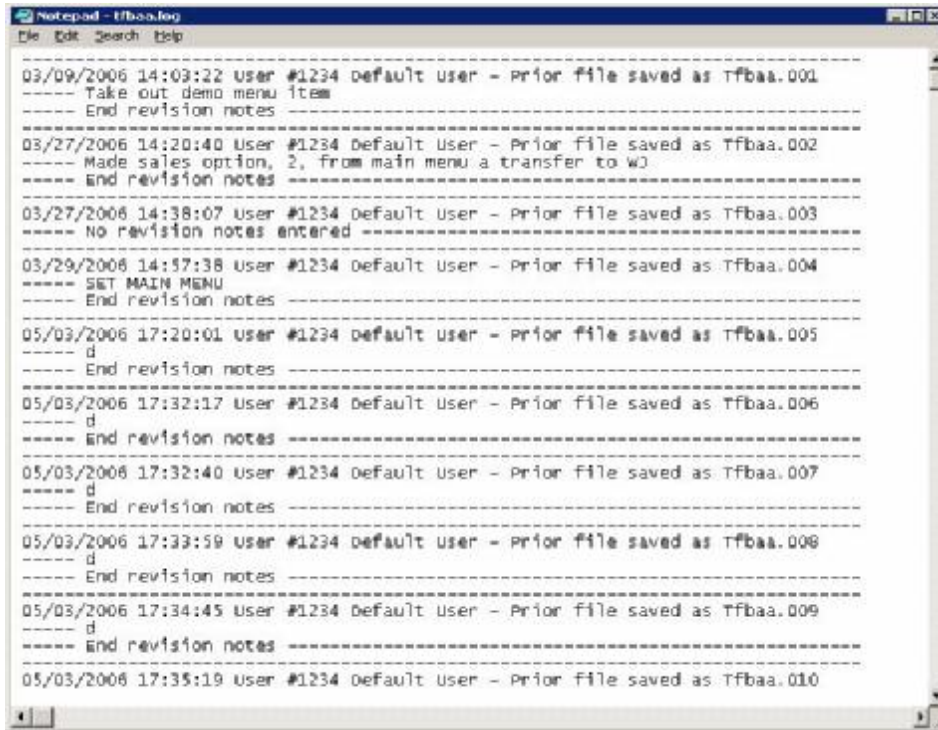
The screenshot shows a Notepad window titled "Notepad - Tfbaack.prn". The menu bar includes "File", "Edit", "Search", and "Help". The text content is as follows:

```
-----  
TFB Auto Attendant Verification Report.  
Generated on 09/18/2006 at 12:08.           Page 1.  
-----  
Checking Undefined Menu Prompts  
Checking Duplicate IVR Announcements  
Checking Transfers to Undefined Extensions  
-----  
There are no errors at this time...
```

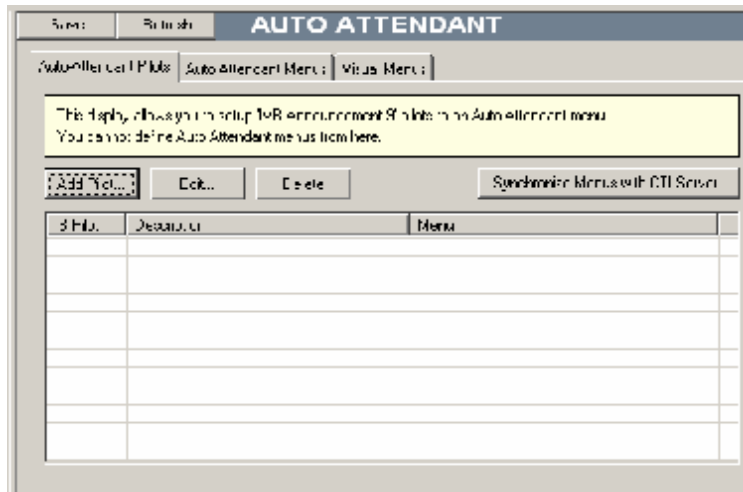
User Log Report

The User Log report displays user activity within the auto attendant configuration tool.

To access the User Log report, click the **User Log** button in the *System* area of the *Auto Attendant* form.

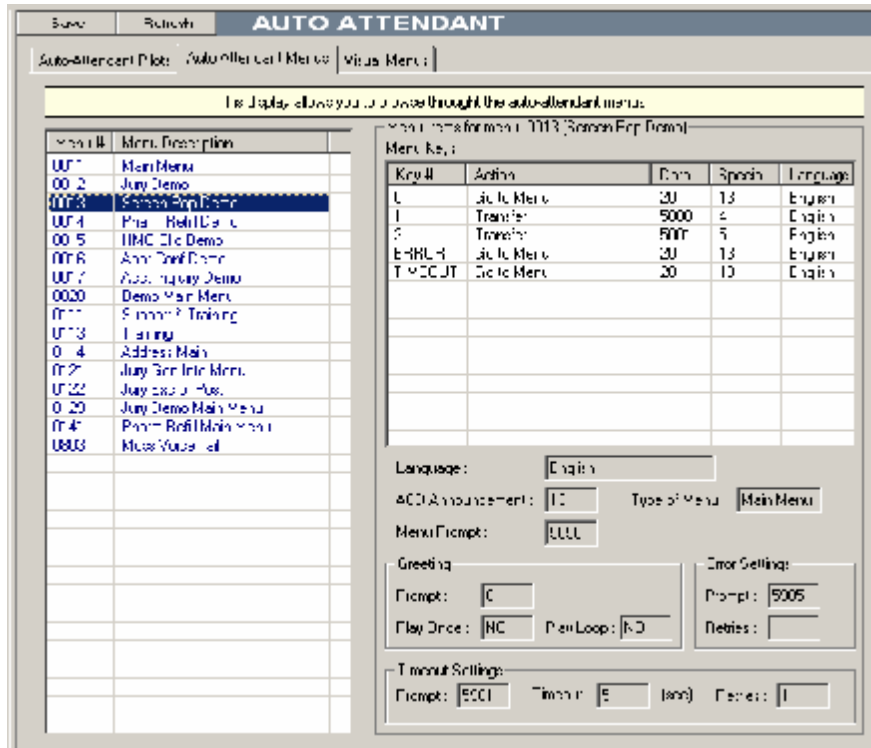


```
Notepad - tfbaa.log
File Edit Search Help
-----
03/09/2006 14:03:22 User #1234 Default user - Prior file saved as tfbaa.001
-----
Take out demo menu item
-----
End revision notes
-----
03/27/2006 14:20:40 User #1234 Default user - Prior file saved as tfbaa.002
-----
Made sales option, 2, from main menu a transfer to w3
-----
End revision notes
-----
03/27/2006 14:38:07 User #1234 Default user - Prior file saved as tfbaa.003
-----
No revision notes entered
-----
03/29/2006 14:57:38 User #1234 Default user - Prior file saved as tfbaa.004
-----
SET MAIN MENU
-----
End revision notes
-----
05/03/2006 17:20:01 User #1234 Default user - Prior file saved as tfbaa.005
-----
d
-----
End revision notes
-----
05/03/2006 17:32:17 User #1234 Default user - Prior file saved as tfbaa.006
-----
d
-----
End revision notes
-----
05/03/2006 17:32:40 User #1234 Default user - Prior file saved as tfbaa.007
-----
d
-----
End revision notes
-----
05/03/2006 17:33:59 User #1234 Default user - Prior file saved as tfbaa.008
-----
d
-----
End revision notes
-----
05/03/2006 17:34:45 User #1234 Default user - Prior file saved as tfbaa.009
-----
d
-----
End revision notes
-----
05/03/2006 17:35:19 User #1234 Default user - Prior file saved as tfbaa.010
```



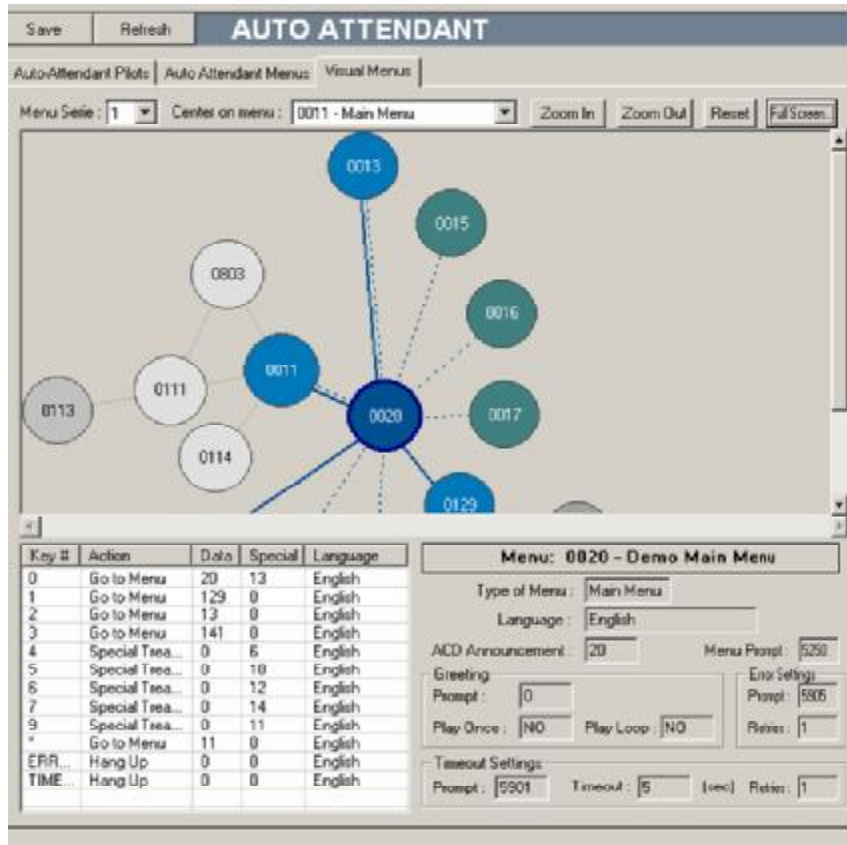
OPTIONS LIST – Auto Attendant Pilots tab

Add Pilot, Edit, Delete buttons	Allow you to manage which Auto Attendant menus callers go to from specific ACD pilots.
Synchronize with CTI Server button	Ensures menu information is up to date.



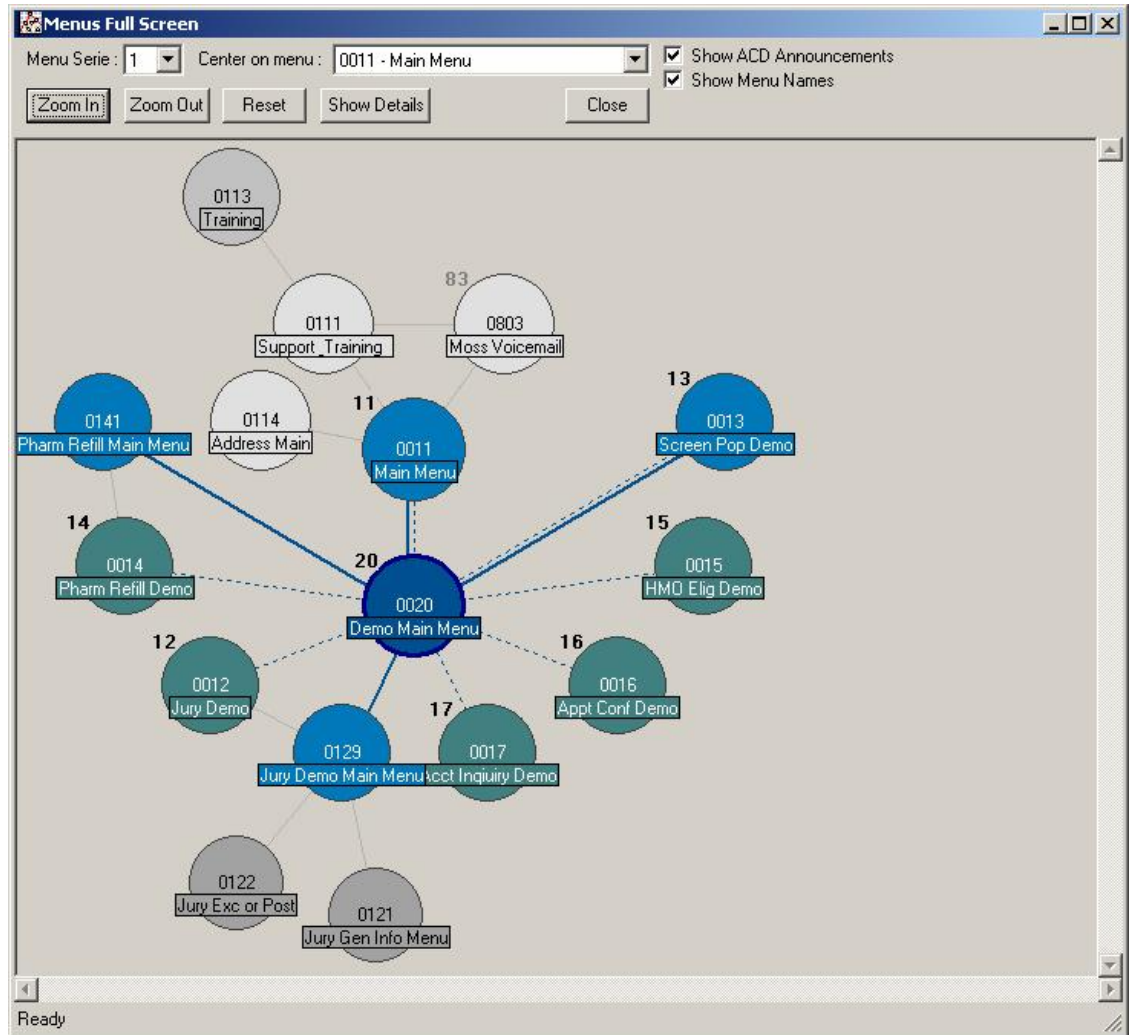
The auto attendant menus tab displays the current auto attendant configuration for reference. To change auto attendant configuration you must use the CTI Server 5 Auto Attendant Tool.

See the section on the Auto Attendant tool for detailed information about auto attendant configuration.



The Visual Menu tab displays the current auto attendant configuration and connectivity among menus. To change auto attendant configuration you must use the CTI Server 5 Auto Attendant Tool.

See the section on Auto Attendant tool for detailed information about auto attendant configuration.



By clicking the Full Screen button on the Visual Menus tab, you can see a display of how your auto attendant menus are connected. To change auto attendant configuration you must use the CTI Server 5 Auto Attendant Tool.

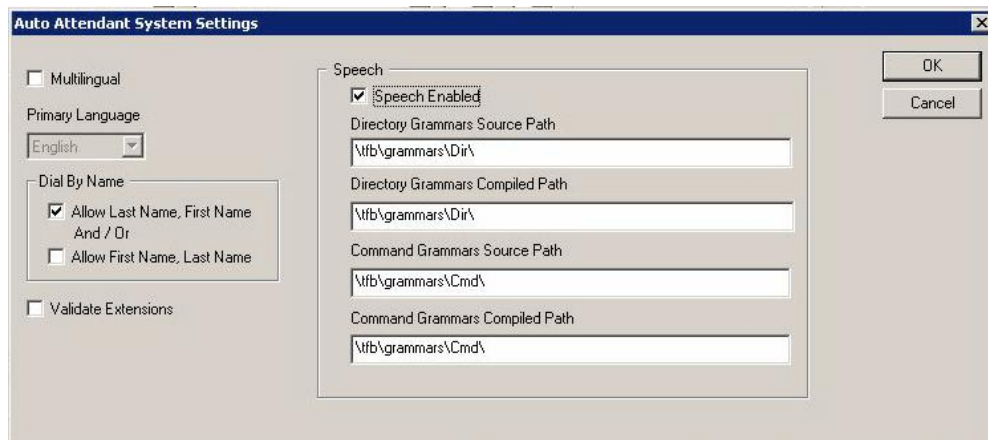
See the section on Auto Attendant tool for detailed information about auto attendant configuration.

Configuring Auto Attendant with Speech Director

TFB Auto Attendant offers the optional Speech Director module, which allows you to add speech recognition to your auto attendant menu tree. The speech-enabled auto attendant can help you flatten your menu tree. Callers can get to the menu, extension, or split they want more quickly and intuitively.

Adding Speech Recognition System Configuration

Before enabling speech, you must have grammar files available on your system. Grammars are simply files that define what words or phrases the system recognizes, and what type of action the system should take upon recognition. Grammars are provided or created by TFB professional services.



To define System parameters for Speech

In the Auto Attendant System Settings form...

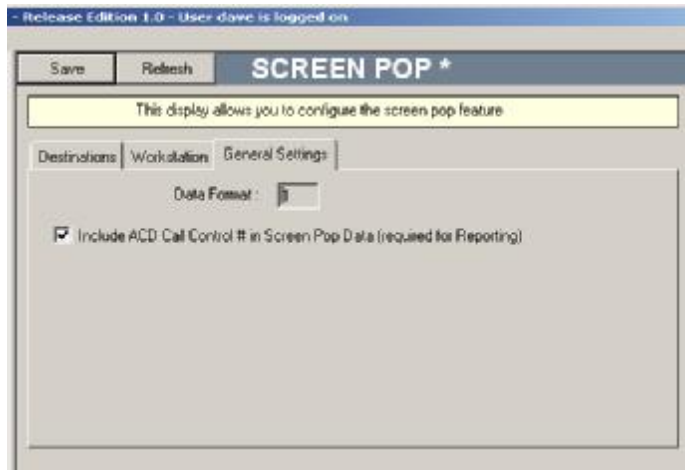
- 1 Click the **System** button. The Auto Attendant System Setting dialog should appear. Make sure the Speech Enabled checkbox is selected.
- 2 Enter the path for both the compiled Directory grammar and the Select the source Directory grammar. The directory grammar describes the names and associated extensions of individuals in your phone directory.
- 3 Enter the path for both the compiled command grammar and the Select the source command grammar. The command grammar describes the names of departments, menus, or other business units that are directly associated with routing to a particular menu, extension, pilot, or other auto attendant function.

The creation of the grammar files, and use of speech in custom applications, is typically a professional services function not performed by users. However, TFB offers custom programming courses that touch on this topic. Please contact your TFB representative for more information if your organization has a need to create such applications internally.

Configuring Screen Pop

CTI Server 5 Screen Pop is largely configured on the client, but there are a few simple parameters on the server to set prior to client installation.

To access configuration: Open the configuration from the *Screen Pop* branch on the *navigation tree*.



OPTIONS LIST – General Settings tab

Include ACD Call Control # in Screen Pop Data	Check this to allow ACD Reports users to open the reports browser with detail information regarding the current call.
--	---



OPTIONS LIST – Workstations tab

Terminal Server in Use	For integration to terminal server sessions only.
Restrict Workstation Configuration Access	Check to require a password for access to configuration on the Screen Pop client.

Configuring *CTI Server 5* eMail

The *CTI Server 5* eMail module lets you manage inbound email to your existing mass email addresses such as support@company.com or sales@company.com. To handle email messages with Agent eMail, your agents and supervisors use the Agent eMail client, rather than Outlook or similar tools. You can add as many of these queues as you need, but be sure the email addresses are first configured on your existing Exchange or other POP3 server. Note also that you can configure queues that are exclusively for handling email forwarded or escalated by agents. Such queues do not need to exist in your POP3 server because there is no published email address associated with them.

KEY CONCEPT – Email must be set up on your existing email server! Most TFB Agent eMail does not replace your existing POP3 server, it only integrates it with your call center by queuing messages for agents. When you set up an inbound email queue for Agent eMail it must already be a valid email address on your existing POP3 server.

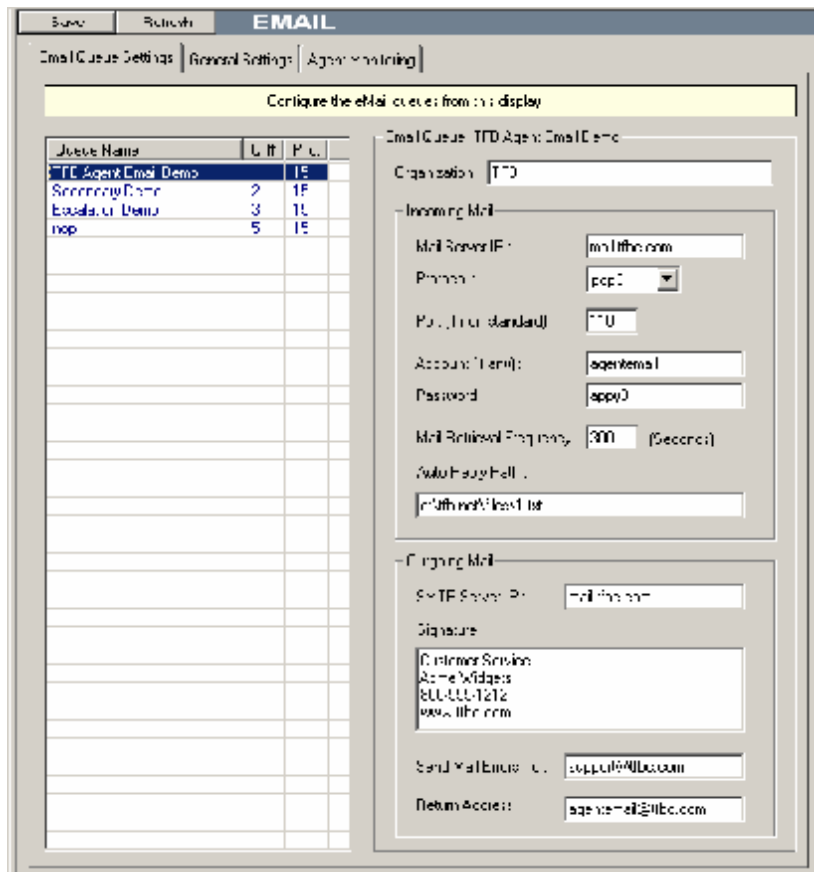
The Multimedia->Email tab is part of configuring email, but you must also set up queues and agents. Before configuring email here, be sure to set up at least one email queue with agents assigned. Each queue is individually configurable to pull messages from a specific server.

To Set Up Email for the First Time

- Step 1** From the Users tab, enter all email users and make sure they are all configured to be email agents. See the section in this manual on setting up users.
- Step 2** From the Queues tab, set up desired email queues. Add the appropriate users to each queue. See the section in this manual on setting up queues.
- Step 3** Set up technical email parameters in the Multimedia->Email tab. See the sections that follow.
-

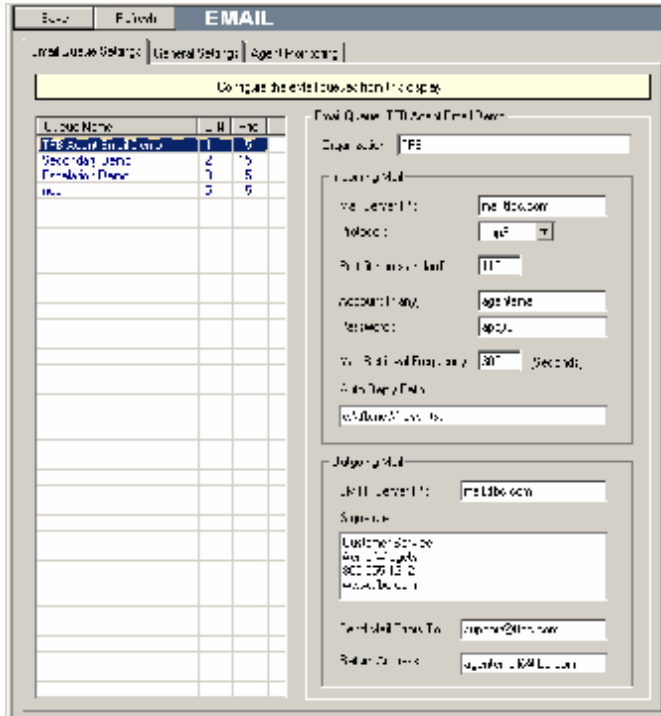
KEY CONCEPT – How to determine email settings. Most settings here pertain to your existing POP3 server! Unless you are an IT expert you are unlikely to know how to configure these setting such that they match your existing email server. You will likely need assistance from your IT staff.

To access Agent eMail configuration: Open the configuration from the Multimedia -> eMail branch on the navigation tree.



To configure Agent eMail

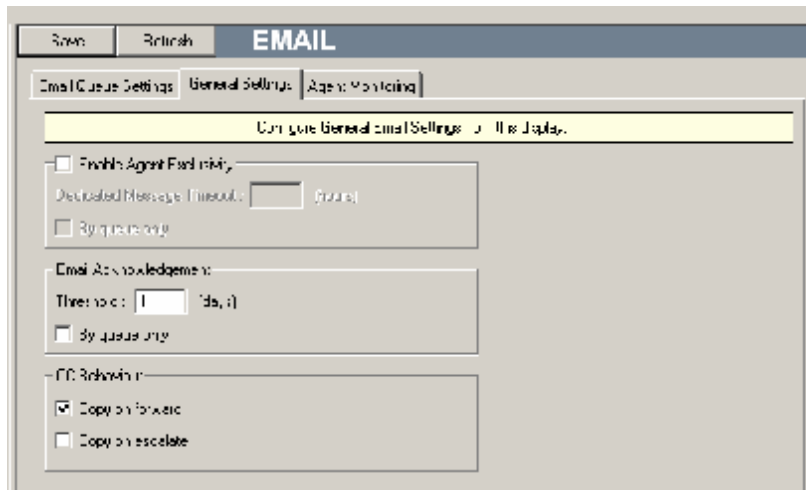
- 4 Select the Email Queue Settings tab
- 5 Click the queue to be configured. Note that queues must first be set up in the Queues section of the Configuration Manager.
- 6 Enter form information on the right according to the description in the options list.



OPTIONS LIST – Email Queue Settings tab

Organization	The organization name associated with this queue. This parameter is for your reference only.
Mail Server IP	IP address of the server to pull inbound email messages from.
Protocol	Select the protocol used by your existing email server from the dropdown box. Most will be POP3.
Account	Enter the account name, if any
Password	Enter the password for this account on your POP3 server.
Mail Retrieval Frequency	Enter the number of seconds between checks for new email messages.
Auto Reply Path	Enter the path for the Auto Reply text file on Media Server. This text will be sent to acknowledge receipt of each email.
SMTP Server IP	Enter the IP address for the SMTP server that will be used for Auto Replies and replies from agents.
Signature	Enter text for the email signature in this queue.

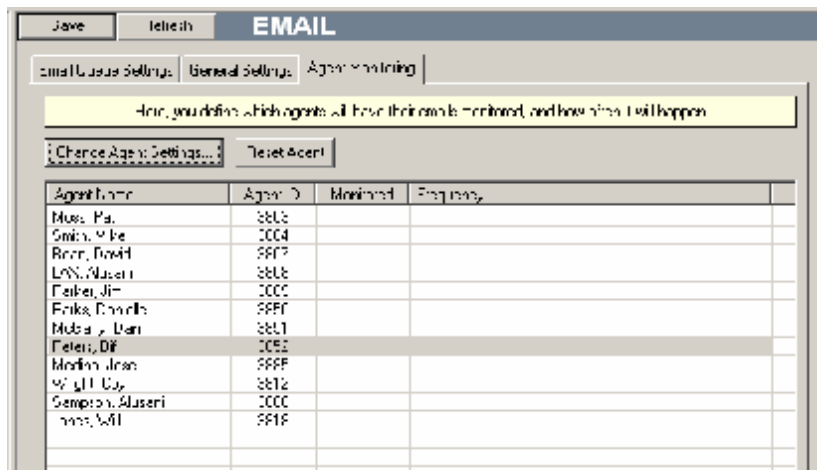
Send Email Errors to	Enter a valid address in your email system to send returned messages.
Return Address	Enter the return address to use on all replies.



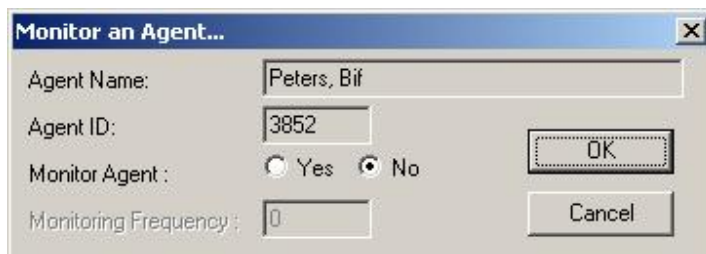
OPTIONS LIST – Email Queue Settings tab

Enable Agent Exclusivity	Select this option to have the same agent handle each email from a particular conversation. That is, any back and forth email messages between your contact center and a particular customer, where the customer is simply hitting REPLY from their email browser, are routed to the same agent. If that same customer sends an email by selecting NEW MESSAGE in their browser, that message will not necessarily be routed to the same agent they talked with previously.
Dedicated Message Timeout	NOT USED
Threshold	This is the interval in days that a repeated auto acknowledge message will not be sent.
By queue only	Leave unchecked for the Email Acknowledgement Threshold to apply to all queues. Check to apply per queue.

Copy on forward	Check if you want the customer to be automatically cc'd when an agent forwards their email.
Copy on escalate	Check if you want the customer to be automatically cc'd when an agent escalates their email.



For training or quality control purposes, you can designate particular agents for monitoring. This ensures that their replies are sent to a supervisor for approval prior to being sent to the original sender.



OPTIONS LIST – Agent Monitoring Parameters

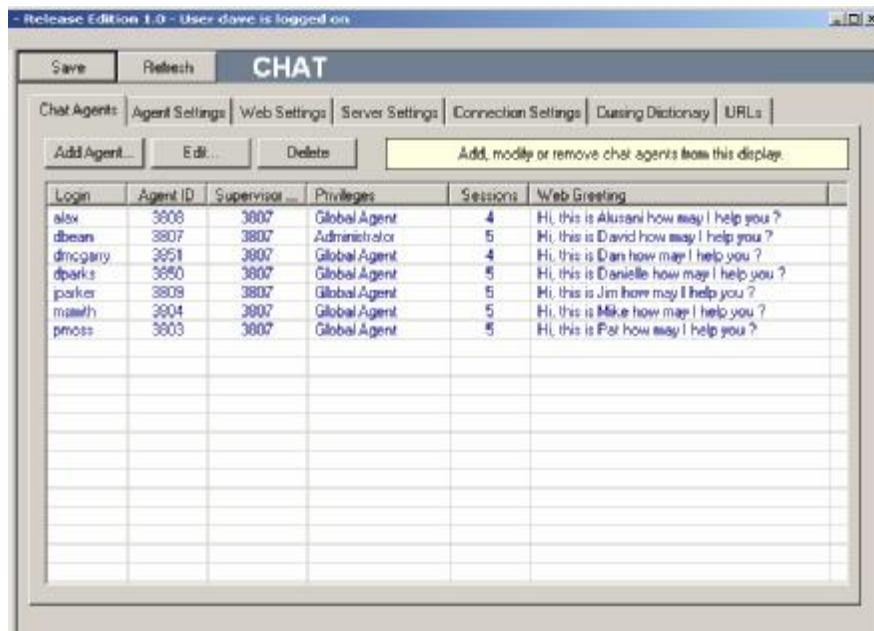
Agent Name	Name of agent last name first.
Agent ID	ID of agent in the ACD.
Monitor Agent	Select whether to monitor this agent.
Monitoring Frequency	If you selected this agent for monitoring, select the email interval to monitor.

Configuring CTI Server 5 Chat

The *CTI Server 5* Web Chat module lets you manage text chat requests from your existing web sites. Some simple web programming is required to initiate the offer on your web site.

Before configuring chat here, be sure to set up at least one chat queue with agents.

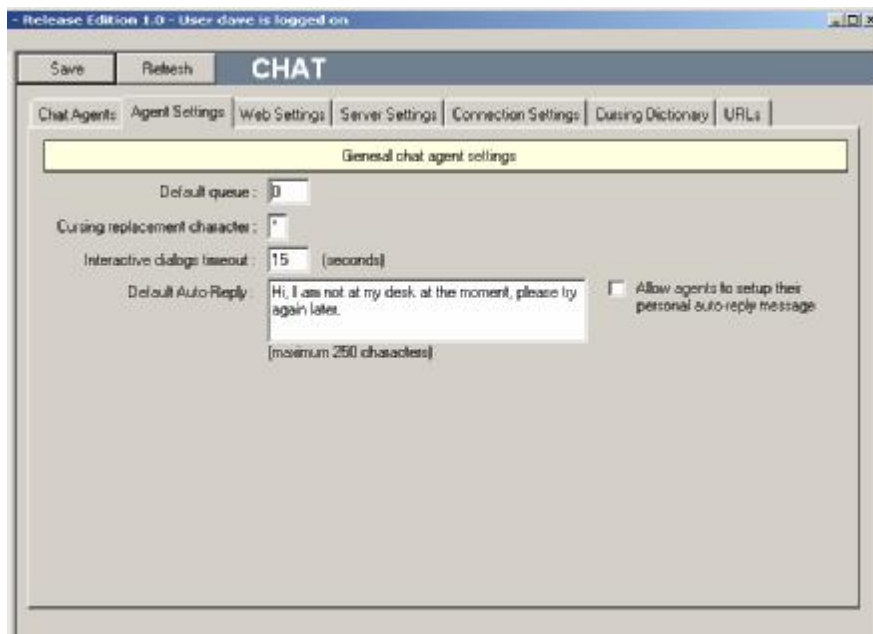
To access configuration: Open the configuration from the Chat branch on the navigation tree.



Set up which agents are enabled for chat from the Chat Agents tab. Click Add Agent to set up a new agent. To manage existing agents, select an agent from the list then click Delete or Edit.

OPTIONS LIST – *Chat Agent tab*

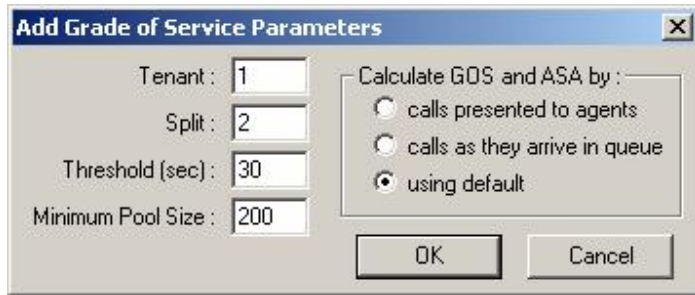
Login	Agent login name.
Agent ID	ID of agent in the ACD.
Supervisor ID in ACD	The ACD ID of the supervisor for that agent.
Privileges	Select the privilege level.
Sessions	Number of simultaneous chats the agent is permitted.
Web Greeting	Text of the greeting customers see when connected.



Set up general chat agent defaults from the *Agent Settings* tab. Click *Add Agent* to set up a new agent. To manage existing agents, select an agent from the list then click *Delete* or *Edit*.

OPTIONS LIST – *Chat Agent tab*

Default Queue	Chat Queue agent is logged into when starting chat client.
Cursing Replacement character	Character to show web customer if agent sends forbidden word.
Interactive dialogs timeout	The time in seconds for an agent to respond to ringing dialog before that dialog disappears and the cvhat request is automatically declined.
Default Auto-Reply	The text displayed to other agents who request a chat from this agent, when the agent does not respond.



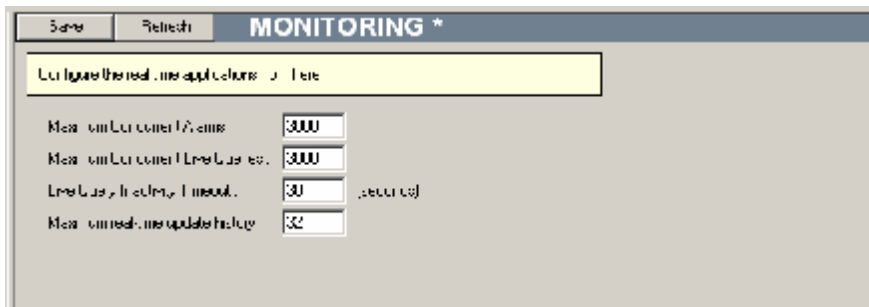
OPTIONS LIST – *Grade of Service and Average Speed of Answer Parameters*

Tenant	Select the tenant this setting will apply to. Unless you have multiple tenants, this should be set to 1.
Split	Select the split this setting will apply to.
Threshold	The time in seconds, from queuing to answer, that a given call must not exceed to be calculated as in grade. This applies to both reporting and monitoring.
Minimum Pool Size	The text displayed to other agents who request a chat from this agent, when the agent does not respond. This applies only to monitoring.
Calculate GOS and ASA by	This setting determines whether calls handled by agents in more than one queue are counted in statistics for subsequent queues. This applies to both reporting and monitoring.

Configuring Monitoring – *Contact Director*

The *Contact Director* lets agents and supervisors see real time call center statistics from anywhere on the LAN.

To access configuration: Open the configuration from the *Monitoring* branch on the navigation tree under *Monitoring and Reporting*.



Parameter	Value
Maximum Concurrent Alarms	300
Maximum Concurrent Live Queries	300
Live Query inactivity timeout	30 seconds
Maximum real-time update history	32

OPTIONS LIST – *Grade of Service Parameters*

Maximum Concurrent Alarms	The maximum number of simultaneous <i>Monitor</i> alarms across the contact center. Should only be set by a qualified technician.
Maximum Concurrent Live Queries	The maximum number of simultaneous downloads across the contact center. Should only be set by a qualified technician.
Live Query inactivity timeout	Seconds before a data query times out. Should only be set by a qualified technician.
Maximum real-time update history	Maximum size of update queue. Should only be set by a qualified technician.

Configuring Reporting – ACD Reports

The *ACD Reports* module provides supervisors with historical statistics on call center performance, from summary to detail.

To access configuration: Open the configuration from the *Reporting* branch on the navigation tree under *Monitoring and Reporting*.

OPTIONS LIST – Reporting Parameters

General Settings	Should only be set by a qualified technician.
Consider External Transferred call as answered calls	When a call is transferred outside the ACD.
Show Pilots as DNIS	When a call is transferred outside the ACD.
Tag emergency calls	When an agent hits the emergency button on the phone set during a call, these calls can be tagged for later review.
Call Validation	
Minimum Call Duration	The minimum call duration for which that call should be included in reporting.
Maximum Call Duration	The maximum call duration for which that call should be included in reporting.
Date format settings	Date format to show in historical reports.

System Setup at Install



This section focuses on parameters that must be configured on installation, prior to configured feature options like routing, callback, or screen pop. Typically system configuration changes only at installation, or when an attached platform is upgraded, like the ACD or servers.

You can skip this section if you just wish to change feature configuration.

- § Proper ACD Preparation
- § IP Addresses
- § Drives
- § ACD
- § SMDR
- § Dialing Rules
- § IVR Ports
- § CUS
- § Mailing Lists
- § Configuration Reports

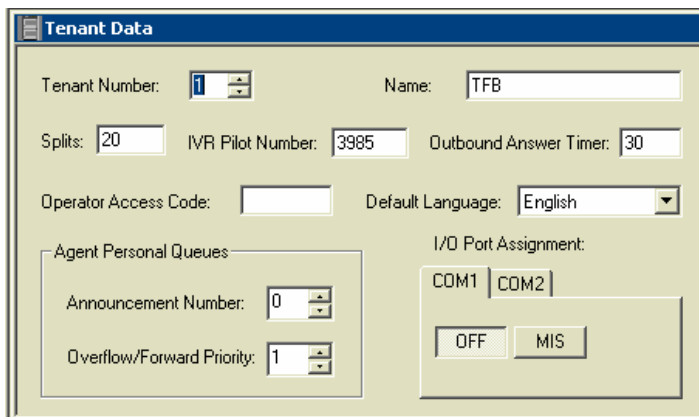
Proper ACD Preparation

The ACD must be set up properly for IVR port and Infolink integration before CTI Server features will work. There are two MAT screens of particular importance to the integrated system.

- 1 Tenant Data
- 2 System Data

Tenant Data

Be sure to set up tenant data with the appropriate IVR Pilot number in the ACD.



The screenshot shows a 'Tenant Data' configuration window with the following fields and controls:

- Tenant Number: 1 (dropdown)
- Name: TFB (text input)
- Splits: 20 (text input)
- IVR Pilot Number: 3985 (text input)
- Outbound Answer Timer: 30 (text input)
- Operator Access Code: (empty text input)
- Default Language: English (dropdown)
- Agent Personal Queues section:
 - Announcement Number: 0 (dropdown)
 - Overflow/Forward Priority: 1 (dropdown)
- I/O Port Assignment section:
 - COM1 (checkbox)
 - COM2 (checkbox)
 - OFF (checkbox)
 - MIS (checkbox)

System Data

Properly setting Infolink parameters in the System Data ensures that calls are tracked properly for reporting purposes.

- 1 Select Infolink with Call ID.
- 2 Select Infolink with Split Info.
- 3 Incoming Call Msg must be set to 'lq' (NOT 'lQ').

be any single digit from 1-9. Do NOT use 0. For installations with a single ACD use 1. On multi-ACD systems this number should be unique.

The screenshot shows the 'System Data' configuration window. It is divided into two tabs: 'User Settings' and 'Time Out Settings'. Under 'User Settings', there are several checkboxes: 'Send AD (MIS) Msg:', 'Display 'ANI NONE':', 'Queue High Priority:', 'Display IVR Header:', 'ETA Includes Excess Work:', 'Infolink with Call ID:' (checked), 'Call Timeout Audit:', and 'Orig Detail Codes:'. There is also a 'MIS High Priority Threshold:' field with the value '9'. Under 'Time Out Settings', there is a 'Dash' section with five spinner boxes: 'Min Len:' (7), 'Index 1:' (5), 'Index 2:' (8), 'Index 3:' (11), and 'Index 4:' (0). Below this is an 'Infolink with Split Info:' checkbox (checked). There are three dropdown menus: 'Incoming Call Msg:' (lq), 'Outbound Call Disp:' (lz), and 'Reclaim IVR Call to:' (Music). There is also a 'Work Key Press:' dropdown (Ready Mode) and a 'Non-telephony break type:' spinner (9). On the right side of the window, there are three buttons: 'Update', 'List', and 'Close'.

For a more thorough explanation of ACD settings, consult the installation manual. the IP addresses branch in the nav tree, enter the number of servers, then enter valid IP addresses for each CTI Server. Note that these must be static.

Support Services tab

Enter the IP Addresses for each function server. If you have IVR ports in CTI Server, then Media Server is always a separate server. The other supports services listed are by default on CTI Server and should have its IP address.

The screenshot shows the 'IP ADDRESSES *' configuration window with the 'Support Services' tab selected. A yellow instruction bar at the top reads: 'For each service, setup the IP address of the server running it.' Below this, several services are listed with their respective IP address input fields and checkboxes:

Service	IP Address	Checkbox
Media Server IP	10.10.255.64	
Web Server IP	156.186.254.52	
Internal Server II	156.186.254.73	
Admin Server IP	10.10.255.75	
Message Server IP		<input type="checkbox"/>
LDAP Server II	156.186.254.73	
Self Admin Server IP	10.10.255.75	
Mail Server IP	156.186.254.52	<input checked="" type="checkbox"/>
Time Server II		<input type="checkbox"/>

At the bottom of the window is a 'Save/Exit' button.

IVR IP's tab

Enter the IP Addresses for IVR functions. The IVR Log Server IP is by default the same as CTI Server, but other IP addresses refer to any integrated data host used for IVR, typically an existing database or application server in your IT infrastructure.

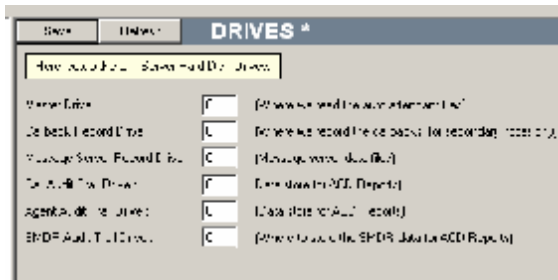
The screenshot shows the 'IP ADDRESSES *' configuration window with the 'IVR IP's' tab selected. A yellow instruction bar at the top reads: 'Setup the IP addresses of the IVR server.' Below this, several IVR-related services are listed with their respective IP address input fields and checkboxes:

Service	IP Address	Checkbox
IVR Log Server IP	10.10.255.64	
IVR Log Server II		<input type="checkbox"/>
IVR Mail Server IP		<input type="checkbox"/>
IVR Mail II		<input type="checkbox"/>
IVR Mail Server IP II		<input type="checkbox"/>
IVR Mail Server IP III		<input type="checkbox"/>

At the bottom of the window is a 'Save/Exit' button.

Configuring Drives

Unless instructed otherwise, the modules listed should all be on the same drive. The C drive is the default. Note that Audit trail files can become quite large, so it is important to ensure that the main drive is the largest drive on the server.



The screenshot shows a configuration window titled "DRIVES *". It contains a table with columns for "Module Name", "Drive", and "Description". The "Drive" column contains dropdown menus with the following values: F, L, C, F, L, C. The "Description" column contains the following text: "(Where you need the user statement files)", "(Where you record the case backlogs for recording (CCIR only))", "(Where you store the files)", "(Where you store the PDF Reports)", "(Where you store the Audit Reports)", and "(Where you store the SPDR Data and CD Reports)".

Module Name	Drive	Description
Case Files	F	(Where you need the user statement files)
Case Backlog Files	L	(Where you record the case backlogs for recording (CCIR only))
Message Store - Record Files	C	(Where you store the files)
Case Audit Trail Files	F	(Where you store the PDF Reports)
SPDR Audit Trail Files	L	(Where you store the Audit Reports)
SPDR Audit Trail Files	C	(Where you store the SPDR Data and CD Reports)

Configuring ACD Connectivity

Enter information about the ACD that CTI Server 5 will be integrated with.

The screenshot shows the 'ACD *' configuration window. The 'General Settings' tab is selected. The 'ACD Name' field contains '1'. The 'ACD Model' dropdown is set to 'Cisco'. The 'Max. Number of Calls' field is '1000'. The 'ACD IP' field is '192.168.252.255'. The 'TCP/IP' radio button is selected. The 'Incoming Message Subscription' section has several checkboxes checked, including 'Monitor B', 'Monitor S', 'Monitor A', 'Monitor T', 'Monitor U', 'Monitor C', 'Monitor D', 'Monitor E', 'Monitor F', 'Monitor G', 'Monitor H', 'Monitor I', 'Monitor J', 'Monitor K', 'Monitor L', 'Monitor M', 'Monitor N', 'Monitor O', 'Monitor P', 'Monitor Q', 'Monitor R', 'Monitor S', 'Monitor T', 'Monitor U', 'Monitor V', 'Monitor W', 'Monitor X', 'Monitor Y', 'Monitor Z'. The 'Clearance Timeout' field is set to '3600'.

General Settings tab

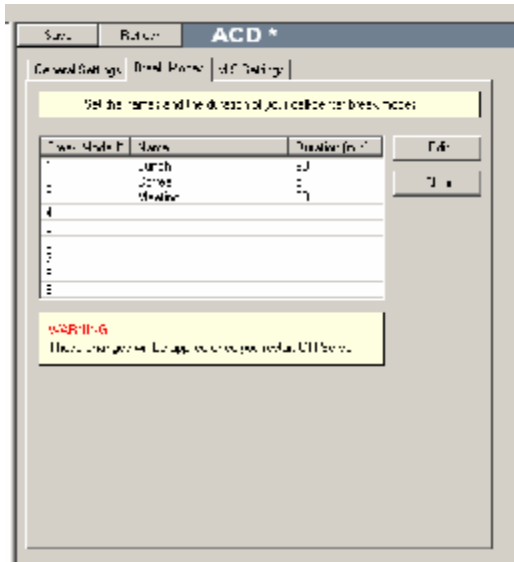
The ACD number can be any single digit from 1-9. Do NOT use 0. For installations with a single ACD use 1. On multi-ACD systems this number should be unique.

Enter an ACD name. This is purely for report labeling purposes.

Select the correct model of ACD from the dropdown box.

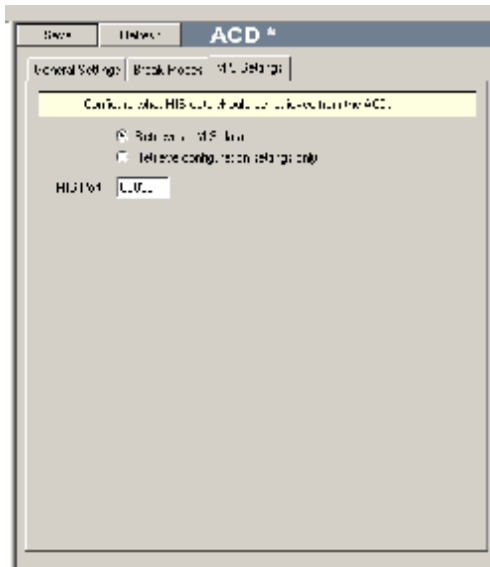
Enter the Max. Number of Calls to track simultaneously. This should never be less than the number of trunks attached to the switch, and typically will be greater because the total calls include station to station calls.

Select TCP/IP and enter the IP address of the switch.



Break Modes tab

Enter the break modes and corresponding break number. They should match those defined in the ACD. Use the dropdown box to determine whether to define Break modes or Work modes. You can define up to 99 unique codes each for break and work mode. The names should be as you would like them to appear in reporting. Durations are used to notify agents who use the TFB Agent Dashboard when they have exceeded the specified duration of that mode.

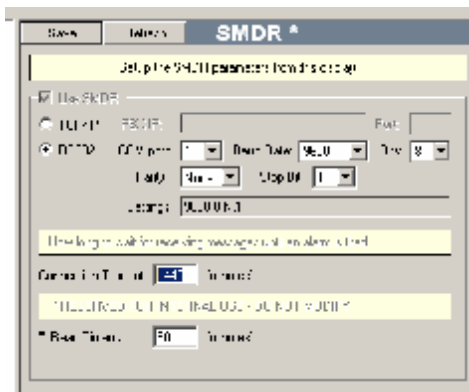


MIS Settings tab

Select retrieve all MIS data. Enter the correct MIS port for this switch.

Configuring SMDR

The system supports both IP and Serial RS232 connections to the SMDR link. Refer to switch documentation for correct settings.



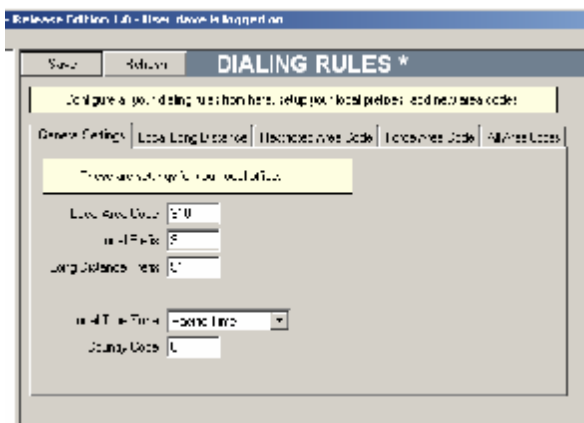
Configuring Dialing Rules

The system helps you accommodate regional dialing rules and area code overlays from the *Dialing Rules* configuration form. If you're using any version of callback or campaigns, you should ensure that dialing rules are properly set up.

Refer to switch documentation for correct settings.

Dialing Rules – General Settings tab

For outbound dialing features it is important to set the area code and any required prefix. The time zone helps the system interpret call campaign rules.



The screenshot shows a web-based configuration interface for 'DIALING RULES *'. The interface includes a title bar with 'Release Edition 1.0 - Release Date: 11/20/2010' and a navigation bar with 'Save' and 'Cancel' buttons. Below the navigation bar is a tabbed interface with the following tabs: 'General Settings', 'Local Long Distance', 'International Code', 'Local Area Code', and 'All Area Codes'. The 'General Settings' tab is active and contains a yellow instruction box: 'Configure a general dialing rule from here. Setup local prefixes and local area codes.' Below this are several input fields: 'Local Area Code' (text box with '011'), 'Local Prefix' (text box with '0'), 'Long Distance Area' (text box with '0'), 'Local Time Zone' (dropdown menu with '-GMT-11:00'), and 'Country Code' (text box with '0').

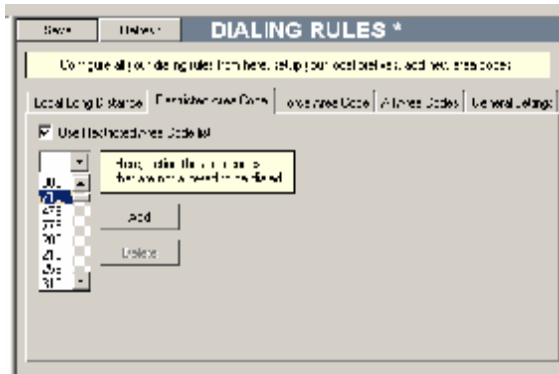
Dialing Rules – Local Long Distance tab

Enter local exchanges that are designated as long distance within your area code. Select the Use Local Long Distance box to have outbound dialing features refer to this list.

The screenshot shows a configuration window titled "DIALING RULES *". At the top, there is a yellow banner with the text: "Use local long distance rules for the following local area code(s)..." Below this, there are several tabs: "Local Long Distance", "Exchanged area Codes", "Over area Code", "All area Codes", and "General settings". The "Local Long Distance" tab is selected. Under this tab, there is a checkbox labeled "Use Local Long Distance" which is checked. Below the checkbox is a list box containing the numbers "570" and "718". To the right of the list box is a yellow callout box with the text: "Here, setup the list of the exchanges that are long distance for your local area code." Below the callout box are two buttons: "OK" and "Cancel".

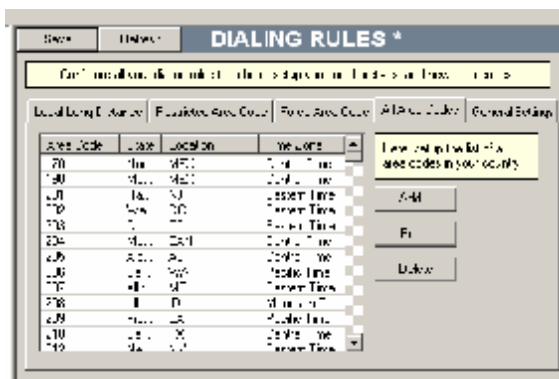
Dialing Rules – Restricted Area Codes tab

Enter area codes that you want restricted from dialing by callback and call campaign features,



Dialing Rules – All Area Codes tab

This is a maintenance tool for area codes. You can designate a time zone and city name for each.

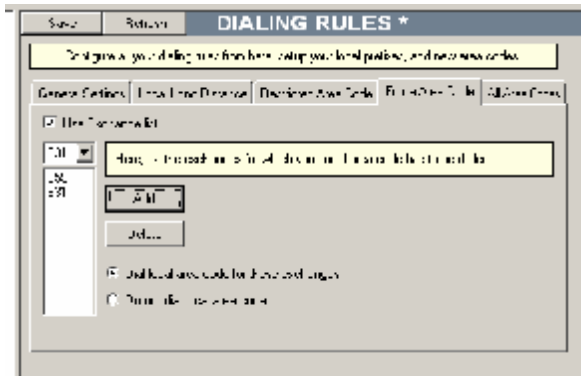


To add a new area code, click the **Add** button and fill in the form.



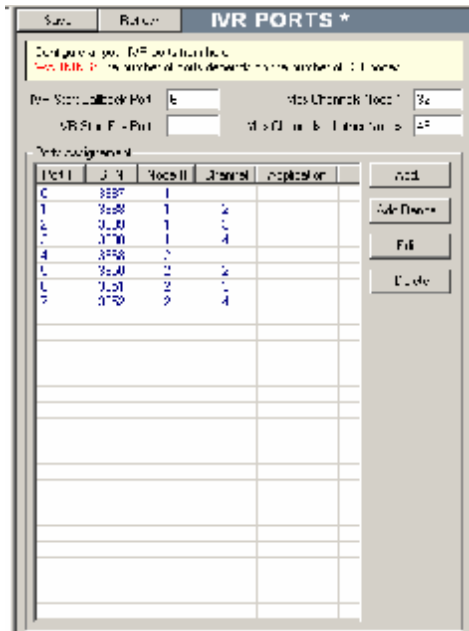
Dialing Rules – Force Area Code tab

To allow for area code overlays, enter all local exchanges that require the local area code to be dialed. Check Use Exchange List to activate. You can also select whether the exchanges in the list are the only exchanges that don't require a local area code, or the only that do.



Configuring IVR Ports

Enter IVR port numbers by clicking the **Add** button. The IVR Start Callback port is actually the first Port # of the reserved UCD group for Call Campaigns. If Call Campaigns are not installed, leave this blank.



The screenshot shows a configuration window titled "IVR PORTS *". It contains a table for port assignments with the following data:

Port #	Port #	Access	Channel	Application
1	3333	1	2	
2	3334	1	2	
3	3335	1	4	
4	3336	2	2	
5	3337	2	2	
6	3338	2	4	
7	3339	2	4	

Buttons for "Add", "Add-Down", "Full", and "Delete" are visible on the right side of the table.

Configuring CUS

CUS is client, unit, sub-unit, a specification of your business units that helps segregate statistics in *ACD Reports* accordingly. Using this feature is optional, but it can help you structure your reports according to how your business is organized, and then present users with only those reports that pertain to the parts of your organization of interest to them.

Use the Add button to add a new business unit.

The screenshot shows a window titled "CUS" with a "Home" button. Below the title bar, there are instructions: "Configure the Clients, Business Units, and Business SubUnits of your organization." A "Help" button is visible. The main area contains three tables:

Clients		Business Units		Business SubUnits	
ID	Name	ID	Name	ID	Name
1	TFB Houston	1	Sales	1	North America
2	TFB Connecticut	2	Support	2	Europe
		3	Marketing	3	South America

At the bottom, there are navigation buttons: "Add", "Edit", "Delete", "Print", "Refresh", "Close", "Cancel", "OK", and "Help".

Assignments tab

After entering your various business units, you can assign combinations of them to pilots.

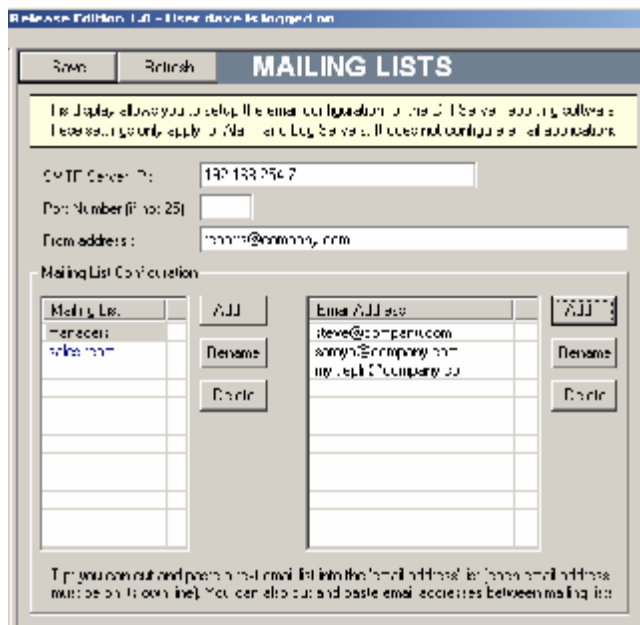
The screenshot shows the "Assignments" tab in the "CUS" window. It contains a table with the following data:

Pilot	Client	Unit	SubUnit
P1	TFB	TFB Houston	Sales
P2	TFB	TFB Connecticut	Support

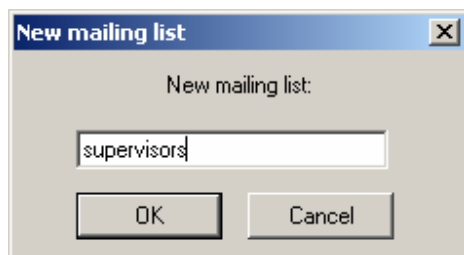
Buttons for "Add", "Edit", and "Cancel" are visible on the right side of the table.

Configuring Mailing Lists

The Mailing Lists configuration allows you to build email mail lists for Log Server report delivery.



To add a list, click the Add button next to Mailing List, then select a list and click the Add button next to Email Address to add addresses to the selected list.



Reading Configuration Reports

The Configuration Reports are merely a centralized list of your pilot and agent assignments.

Save		Refresh		CONFIGURATION REPORTS	
This display gives an overview on different parts of the system.					
Agents Report		Pilot Report			
Ext	Type	Description			
0000	ETACallback	Default			
0000	Menu Dial Extension	Extens or dialed from a menu transfer			
3703	Menu Transfer	Extens or dialed from a menu transfer			
00 0	Menu Transfer	Extens or dialed from a menu transfer			
3800	Menu Transfer	Extens or dialed from a menu transfer			
3888	Routing	used by A2DHIS Routing			
0950	Menu Transfer	Extens or dialed from a menu transfer			
3995	Menu Transfer	Extens or dialed from a menu transfer			
5000	Auto Transfer	Unbound-Ext used by A			
5000	Agent Callback	used by ICC			
5000	Menu Transfer	Extens or dialed from a menu transfer			
5000	JulLearl Call Campaign	used by UCC			
500	Auto Transcriptions	NOC			
500	Menu Transfer	Extens or dialed from a menu transfer			
500	JulLearl Call Campaign	used by UCC			
5002	ETACallback	Ext: 5002			
5003	ETACallback	Ext: 5003			
5004	Auto Transfer	Ext: PM used by A1			
9 00	Menu Transfer	Extens or dialed from a menu transfer			

System Configuration Summary

For most sites, system configuration changes infrequently. Please ensure your staff is aware that major changes to the switch, the LAN, and dialing rules in your area might require attention to CTI Server configuration.

System Maintenance

4



This section focuses on recommended maintenance to ensure the integrity of your system, configuration, and reporting data. Be sure to make your MIS staff aware of the maintenance required for the server.

This section covers the following topics.

- § User Responsibilities
- § Recommended Maintenance Tasks
- § How to Back Up the System

User Responsibilities

✓ Perform Regular Backups

Backup the SQL Server instance on your CTI Server whenever configuration changes are made.

Backup the SQL Server instance on your Media Server weekly.

Backup the Log and Audit trail files on CTI Server weekly.

Backup the prompts on your CTI Server whenever new prompts are recorded.

✓ Hard Drive Maintenance

Keep fragmentation on server hard drives at appropriate levels

✓ Microsoft Updates

Patch your Servers for both Windows and SQL Server Service Packs as recommended by Microsoft. ***DO NOT USE AUTOMATED UPDATE PROCESSES THAT RESET THE SERVER!***

✓ Virus and Security Software

Apply Virus and other Security per your policies

DO NOT USE AUTOMATED UPDATE PROCESSES THAT RESET THE SERVER!

✓ NEVER...

...set up processes or updates that automatically reboot unattended servers!

Maintenance: More Things To Tell Your IT Staff

CTI Server Settings

The IP address on CTI Server must be static! Please let your support channel know if you plan to change it.

Group policy settings should not be changed on CTI or Media Server after implementation! Please let your support channel know if you plan to change related settings. This includes changing security settings, and removing or adding these servers in the domain

Contact your support channel if you require the IP address of this server to change, or if you are adding or removing the server from a domain.

Changing Permissions on Any Integrated Systems

TFB Integration to your other systems for custom IVR, reporting, and screen pop relies on access and permission settings! Let your support channel know if you plan to change access parameters to a database, voice logger, or application TFB is integrated with! Contact your support channel if need to change any access information such as passwords, usernames, machine names, database names, or addresses.

Regular Server Maintenance

Those on your IT staff charged with maintaining servers should know the following.

Server fragmentation level should be kept to manageable levels, with special emphasis on Media Server.

Windows updates should be applied per your policy and Microsoft recommendations.

Automatic Updates of OS, Security Applications and so on should not be configured to restart the server(s) automatically as this could interrupt service and cause discontinuity in reporting.

Recommended Maintenance Tasks

TASK	Daily	Weekly	As OEM Advises	After Changing	Per Your Policies
Differential Backup: Media Server SQL Database – off peak hrs (reporting data)	✓				✓
Full Backup: CTI Server SQL Database – off peak hrs (configuration data)		✓		✓	✓
Full Backup: Media Server SQL Database – off peak hrs (reporting data)		✓			✓
Full Backup: CTI Server Log and Audit Trail files (reporting data)		✓			✓
Full Backup: Voice Prompt files (\tfb\dvps*.*)				✓	
Hard Drive: Defrag CTI Server HD during off-peak hours					✓
Hard Drive: Defrag Media Server HD during off-peak hours		✓			
Hard Drive: Run HD diagnostics on CTI Server and Media Server HD during off-peak hours					✓
Hard Drive: Check available space on HD >2GB on CTI Server. >10GB on Media Server		✓			
Apply OS Patches: Apply MFR Patches to OS on CTI Server and Media Server			✓		✓
Apply SQL Server Patches: Apply MFR Patches to OS on CTI Server and Media Server. First shutdown applications properly.			✓		✓
Check Errors: Review CTI Server and Media Server desktop for Errors	✓				
Reset CTI Server: After PBX/ACD is upgraded to new version, or physical connections to CTI Server are interrupted.				✓	

✓ - Recommended

How to Back Up the System

TFB Servers use SQL Server for configuration and reporting data. There is an instance of SQL Server on CTI Server and another on Media Server. Frequent backups will help preserve the security of your data.

SQL BACKUPS



MEDIA SERVER

Media Server contains reporting data in a SQL Server database, if you are using ACD Reports. This should be backed up regularly *during off peak hours*.

TFB Recommends,

- § A differential backup nightly during off peak hours
- § A full backup weekly during off peak hours
- § All backups are to a separate platform!



CTI SERVER

CTI Server contains configuration data in a SQL Server database. This should be backed up regularly during off peak hours after configuration changes are made.

TFB Recommends,

- § A full backup weekly during off peak hours
- § All backups are to a separate physical platform!

OTHER FILE BACKUPS



CTI SERVER

CTI Server contains raw reporting data as a backup to the SQL database on Media Server. In addition, all recording prompts are stored as WAV files.

TFB Recommends,

- A full weekly backup of the TFB folder off the root of the main drive.
- All backups are to a separate platform!

