



OAISYS ACD Manager Operations Manual

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Overview

ACD Manager is an OAISYS application designed by **Computer Telephony Solutions, Inc.** *ACD Manager* assists in the management of ACD call queues so that callers are answered in a timely manner by an appropriate person or are redirected to another option. *ACD Manager* runs under the *OAISYS Net Server*.

ACD Manager can help to:

1. Keep ACD Managers and agents aware of calls waiting using a variety of methods:
 - Overhead or Silent Paging
 - Visual displays
 - Historical call logging
2. Anticipate the likelihood that a call will not be answered in a timely manner, and immediately take an alternative action:
 - Move call to another ACD queue or location
 - Notify supervisor and/or agents of call backlog
 - Allow caller to leave a voice mail message
 - Ask caller for callback information so the call can be returned when an agent is available
3. Help keep track of ACD call activity:
 - Log callers that abandon so they can be called back
 - Log ACD call activity for later viewing

ACD Manager will monitor call activity for up to 300 ACD groups, and for each of these groups, **thresholds** are used to specify what **actions** should be taken to notify or locate employees and to manage the call. There can be up to 8 thresholds and actions for each monitored group. The actions to be taken can be designed to perform a wide range of functions some examples of which are listed below:

Types of Thresholds: (up to 8 per ACD group)

- New Call arrived
- Oldest Call waiting more than 'x' Seconds
- More than 'x' Calls waiting in ACD queue
- Waiting Calls/Agent more than 'x' percent
- Caller Abandoned ACD wait
- Call Departed ACD group
- Agent Missed Call
- Active Agents <= 'x'
- Call load is now less than a specific level
- Change in Calls or Agents

Example Actions: (one for each threshold)

- Overhead page to notify personnel
- Notify ACD supervisor via beeper page
- Notify ACD agents via popup message on their PC screen
- Move call to a Voice Mailbox
- Move Call to less busy ACD group
- Centrex transfer caller to another location
- Take callback information from caller
- Keep a log of callers who "abandoned"
- Login / Logout Agent

What's New With ACD Manager 4.0?

A number of enhancements have been made to *ACD Manager* in this release. Following is a list of new features and differences from the previous version.

- Added three new Thresholds called **Waiting Calls/Agent** <= 'x' % , **Calls Waiting** <= 'x' Calls , and **Agent Utilization** <= 'x'%. These thresholds can be used to trigger actions when call load drops below selected levels. For example, you may want to notify some of your agents to "Log Out and perform other tasks" when the call load drops.
- Net Phone Integration – this version of ACD Manager attaches ACD information to all ACD calls it monitors, which is utilized by Net Phone V4.1 to display ACD information and trigger ACD actions.
- Tracer Integration -- this version of ACD Manager attaches ACD information to all ACD calls it monitors, which can be used by the Tracer Call Recording product to (1) trigger recordings based on selected ACD agents or ACD groups and (2) retain ACD group and agent information aslong with the other call/recording information.
- Added a new **Chat Broadcast** action which can be used to send popup messages to any agents or supervisors with an OASYS Chat client.
- Added a new **Send E-mail** action which can be used to trigger an e-mail message to be sent to a specified address. For example, when the last agent logs out you may want to send a file containing the list of abandoned calls to the ACD supervisor's e-mail address. *Note: The E-mail Service option of OASYS Net Server must be installed for this operate.*
- Added a new variable, **&E** , which provides a "+" delimited list of agent extensions from the triggering ACD group (primarily used in new Chat Broadcast action).
- Added a Monitor All button to make it easy to monitor all ACD groups. This is useful to allow Tracer and/or Net Phones to recognize all ACD calls.
- Added ACD group names into user interface to make it easier to program groups.
- Added Agents view tab to provide a view of all agents in each ACD group and show their status and DND message.
- Allows monitoring of up to 300 ACD groups (limit was formerly 50).

What's New With ACD Manager 3.2?

A number of enhancements have been made to *ACD Manager* in this release. Following is a list of new features and differences from the previous version.

- Allows for eight Thresholds (instead of four) per Monitored ACD Group.
- New Threshold called **Agent Missed Call** which can be used to monitor calls that ring too long at an agents desk and roll over to another agent.
- New Threshold called **Active Agents** <= 'x' which can be used to trigger an action when too many agents log out.
- New Threshold called **Agent Utilization** > 'x' %. This calculation is determined by dividing the Total Calls by Active Agents.
- New Threshold called **Change in Calls or Agents** which can be used to trigger an action any time there is a change in the number of calls or a change in agent status.

- New Action called **Login/Logout Agent** which provides a method of monitoring agents who missed a call. This Action allows you to log agents in or out of one group, or log agents in or out of all ACD groups.
- A new flag can be used to count agents in DND as unavailable.
- Three new tokens have been added; %L for the Longest Ringing Call, %M for the Extension number of the Agent who missed the call, and %B for the Agent ID of the Agent who missed the call.
- The Log File action has been changed to allow the option of either “Append” or “Write New”.
- Integration to OAISYS Chat to allow chat “Broadcast” messages to be sent to agents and/or supervisors when ACD thresholds are met or exceeded. It can even allow agents to “Log In” to a busy ACD queue with the press of a button. Please refer to Appendix D for more details on this feature.
- Release Date and Maintenance information has been added to *ACD Manager*.

Example Applications

Application #1:

Tech Support Technicians notified when calls waiting

In this company, the personnel that answer the Technical Support calls also perform product testing in the Quality Assurance lab area when the tech support call activity is low. When these technicians are in the QA lab testing and an excess of calls begin to build up in the Tech Support ACD queue, the technicians in the QA lab area are notified by overhead paging of the number of calls waiting.

- *ACD Manager* with one monitor set on the Tech Support ACD group.
 - Set a threshold to **Waiting Calls per Agent Exceeds 200%** with an action to **Page the QA lab**.
- When calls begin to backup in the Tech Support ACD group, an overhead page will be played in the QA lab
- One or more of the technicians can then go to their desks and log-on to the ACD group to start answering Tech Support calls.

Application #2:

Redirect overflow calls to another location

This sales company has their main office in Arizona and a satellite office in California. When they receive an excessive number of sales calls into the main office, they would like to redirect some of the calls to the satellite office.

- *ACD Manager* with one monitor set on the Sales ACD group.
 - Set a threshold to **More than 15 Calls** with an action to **Transfer Call to CA office**.
- When the call queue exceeds more than 15 calls all new calls are sent to the California office.

Application #3:

Keeping track of callers that gave up

This catalog sales company receives over 95% of its sales orders from callers calling in on their 800 numbers. They know that if they miss a call on this line they usually miss an order, so they want to keep track of every caller that gives up (abandons) before they are answered by a sales agent so that they can be called back as soon as possible.

- *ACD Manager* with one Monitor set on the Sales ACD group.
 - Set a threshold to **Caller Abandoned ACD wait** with an action to **Log Call info to Supervisor log**.
- When calls begin to backup and if a caller abandons, the caller information, including the date, time, and caller phone number, are saved in an Abandoned Call log file.
- Every 30 minutes, the supervisor checks this abandoned call file and personally calls back the customer to apologize and to try to recapture the order.

Application #4:***Log out Agents who miss calls***

This sales company has trouble with agents forgetting to log out of the Sales ACD group when they leave their desks. Since incoming calls are on their 800 number then are paying for calls to ring on missing agents desks, plus their callers are unhappy with additional wait times (even when other agents are available).

- *ACD Manager* with one Monitor set on the Sales ACD group.
 - Set a threshold to **Agent Missed Call** with an action to **Logout Agent**.
- Whenever an agent is offered a call but doesn't answer (before the call is moved to the next agent), the agent will be logged OUT of the sales ACD group and will therefore not receive any more sales calls until he/she logs back into the ACD group.

Requirements

Software Requirements

ACD Manager requires the *OAISYS Net Server* by **Computer Telephony Solutions, Inc.** This software must be installed on a dedicated PC as specified in the *OAISYS Net Server* Operations Manual.

In addition, *ACD Manager* may require installation of *Golden Page* (for silent paging) or *Voice Assistant3.0* or later (for overhead paging).

PC Requirements

ACD Manager will run on Windows 98, Windows NT or Windows2000. *ACD Manager* can be installed on the same PC as the *OAISYS Net Server* PC, or on another PC as long as it can communicate to the *OAISYS Net Server* via TCP/IP.

Phone System

Reference the *OAISYS Net Server* Operations Manual for AXXESS phone system specifications. *Net Server* interfaces with the PBX and provides the OAI data stream to *ACD Manager* and other *OAISYS* applications.

ACD Manager requires the System OAI link from the PBX to be configured as shown below.

	Axxess System OAI Link Requirements (minimum)
<i>ACD Manager</i>	System OAI Events AND System OAI Third Party Call Control

Power-Up

ACD Manager will automatically launch once *Net Server* successfully connects to the phone system. The *ACD Manager* screen will appear briefly on the desktop while initializing. Once it establishes the link to *Net Server*, *ACD Manager* will hide itself. Use the Services tab in *Net Server* to open the *ACD Manager* programming screens.

Installation

You will find the installation files for *ACD Manager* on the *OAISYS Net Suite* CD.

Note: if *Voice Assistant* is to be installed for use with *ACD Manager*, install *Voice Assistant* before installing *ACD Manager* as there are several *ACD Manager* files which need to be installed in *Voice Assistant* directories.

Installing the Software Key

A Software Key comes with every version of *OAISYS Net Server* (required to run *ACD Manager*). All *Net Server* installations include at least one software key. If you purchased *Net Server* and *ACD Manager* at the same time, your key will already contain the correct enabler codes. If you purchased *ACD Manager* for a previous *Net Server* installation, you will need to run the *Net Server Copy Key Upgrade*. See the *Net Server* Operations Manual for details on this procedure.

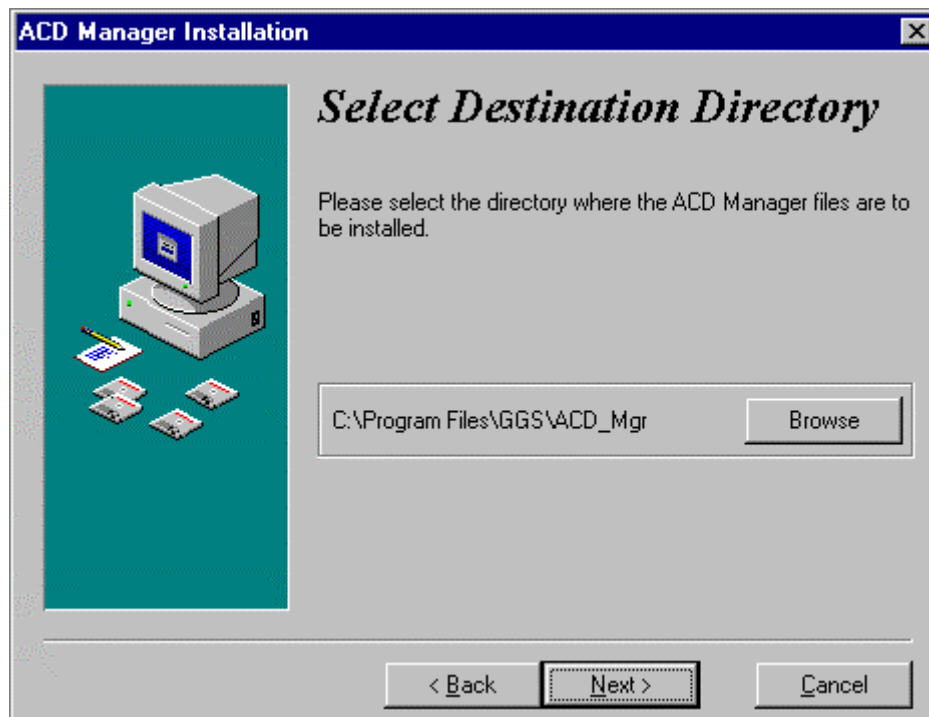
Installing ACD Manager

Insert the *OAISYS Net Suite* CD into the CD drive of your computer. Locate the Menu Option titled *ACD Manager*.

The Installation Wizard will automatically prompt you through the installation process.

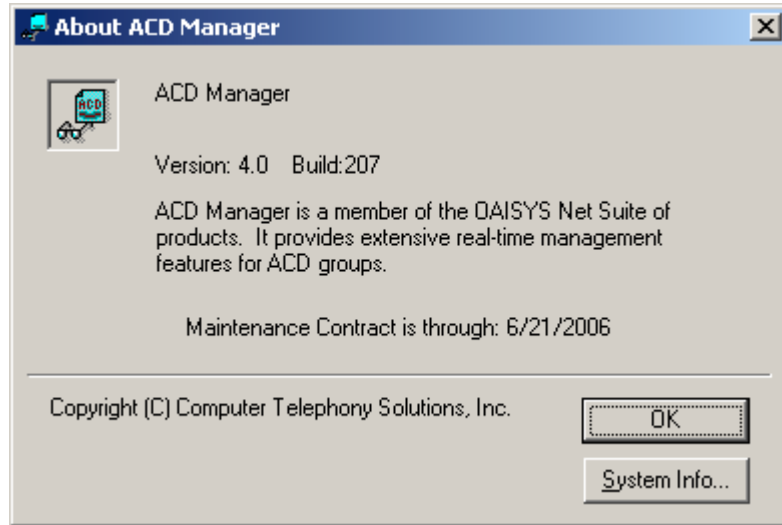


The installation program will suggest a default directory for the location of the program. This directory can be changed, but it is recommended that you accept the default.



Maintenance

ACD Manager displays maintenance status and maintenance expiration data in the **Help About** screen. If your maintenance has expired or you have any questions about maintenance please call Computer Telephony Solutions, Inc.



ACD Manager

Menu Commands

File

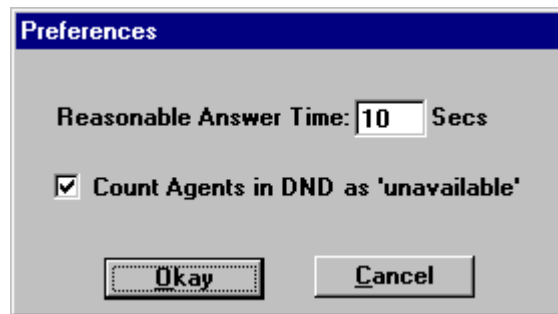
Exit

Click Exit to close the application.

Setup

Preferences

Reasonable Answer Time: This value represents the number of seconds a call is allowed to ring at a station without being answered before *ACD Manager* will treat it as Queued. If an ACD Agent leaves his or her desk without logging out, ACD calls will continue ringing at that station, leaving the caller stranded until the ACD Advance Timer triggers.



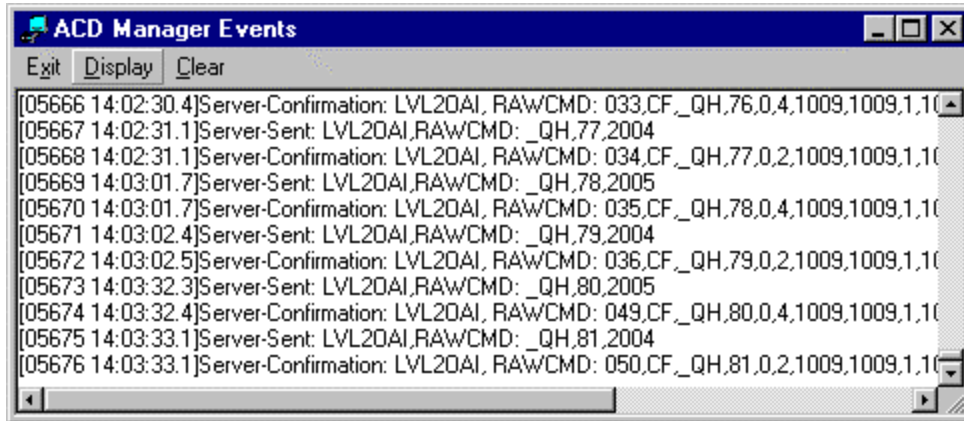
Count Agents in DND as 'unavailable': When this checkbox is checked, agents who are in DND will be considered unavailable. The Inter-Tel AXXESS reports agents in DND as equivalent to being logged in even though no calls will be offered to them. This box is checked by default. This box is primarily used to complement the Agent Utilization threshold in ACD Manager.

In order for ACD Manager to “see” the DND events, one of the following **must** be true:

- TASKE ACD Toolbox is installed and connected to the OASYS Net Server
- Each Agent is running a copy of OASYS Net Phone
- Each Agent is listed as a Monitored Extension in OASYS Auto Call Record
- Each Agent is listed as a Member in at least one copy of OASYS Group DSS

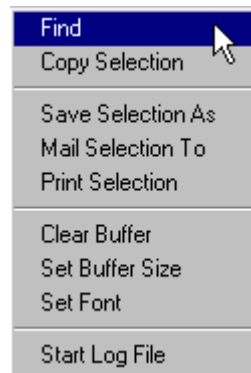
Show Activity

This allows you to display events as they occur in *ACD Manager*. You have the option to turn on the following events: OAI Server Events, Client Events, _QH and CF Events, and Debug Events. These events are primarily used for troubleshooting purposes. Technical Support can often solve difficult problems using the events from this log.



- **OAI Server Events:** Shows OAI events and confirmations received from the Server.
- **Client Events:** Shows commands sent from ACD Manager to the Server.
- **_QH and CF Events:** Displays Queue Status requests and Confirmation messages. Leaving this option disabled reduces clutter in the event window.
- **Debug Events:** Shows Threshold and Action events.

There are several options available within the Events window. Right click anywhere in the window to view the following options.



Start Log File allows you to log events to disk. This is extremely useful when trying to track down an intermittent problem. Simply start the log file, wait for the problem, then retrieve the log file for analysis.

Help

Contents

Click here to display the help files associated with *ACD Manager*.

About

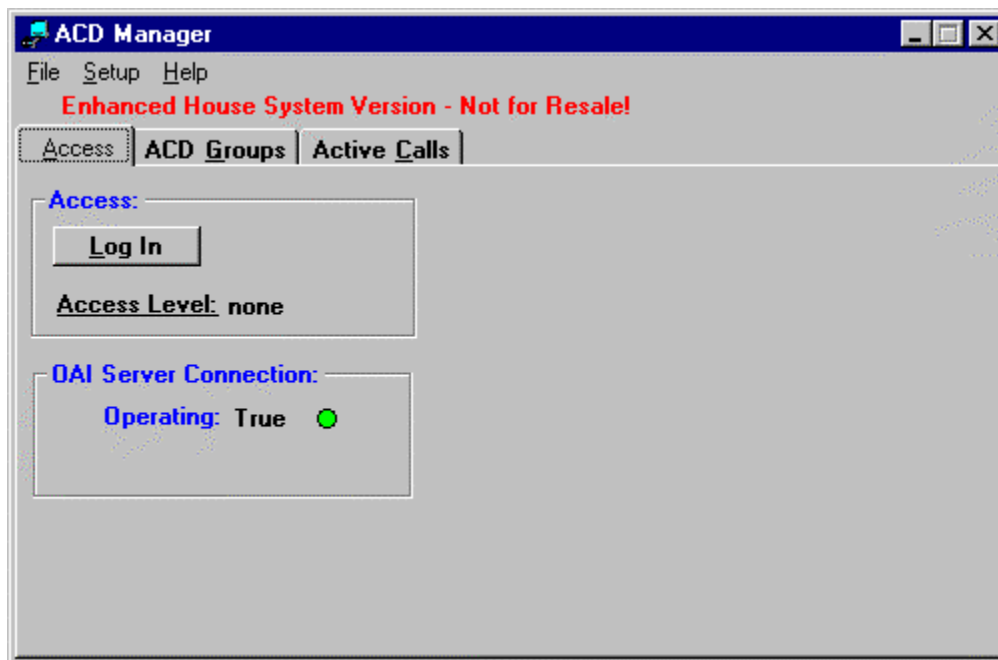
Click here to display the version number of *ACD Manager*, system information, and maintenance status information.

Tab Choices

Access

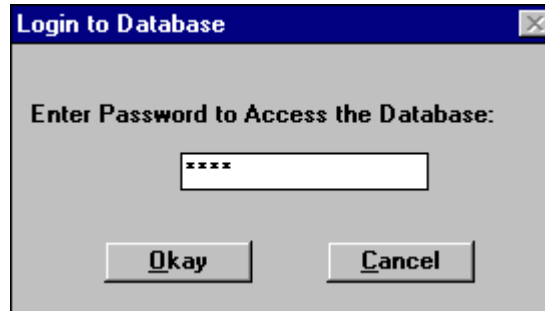
OAISYS Net Server Connection

When *ACD Manager* establishes a valid connection with *OAISYS Net Server*, the operating condition will say **True** and the light will display green. You must Log In to *ACD Manager* to change the connection settings.



Log In

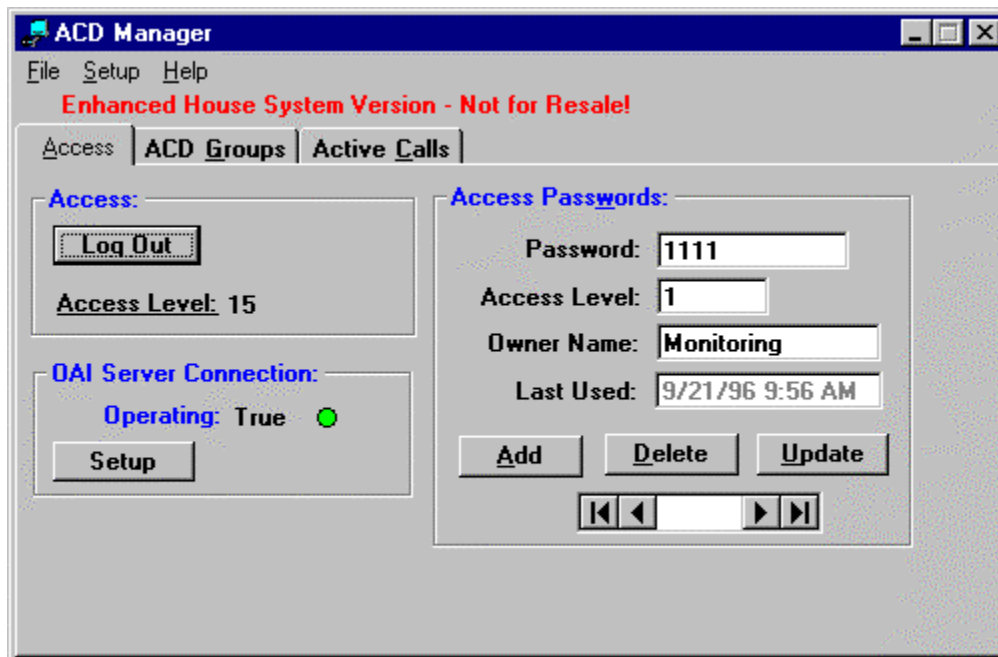
In order to view the active calls or make any additions or changes to the port entries you must first log in. Click the **Log In** button and enter your password.



The default passwords are:

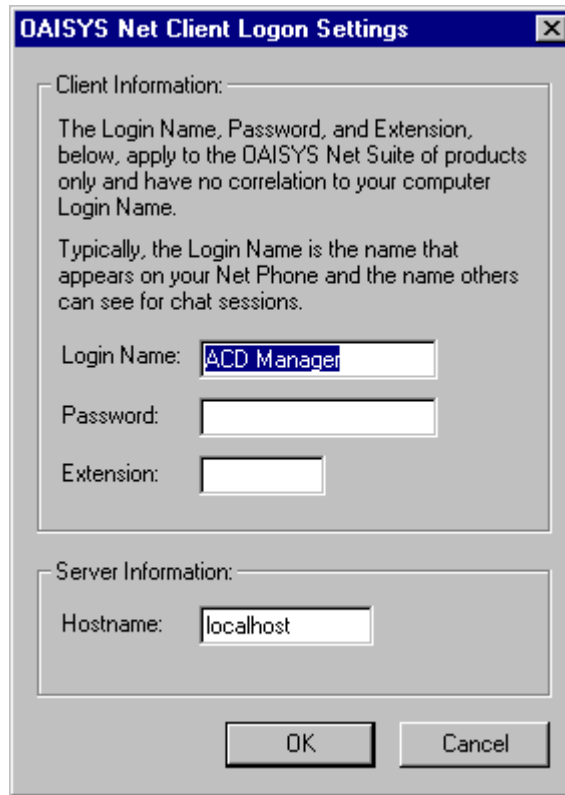
- 3333 for normal access
- 9999 for supervisory or top level access

When in the supervisory mode, the default passwords can be changed, as shown in the following screen:



Setup (button)

This button is used to configure the OAISYS Net Client Logon Settings.



The screenshot shows a dialog box titled "OAISYS Net Client Logon Settings". It is divided into two sections: "Client Information" and "Server Information".

Client Information:

The Login Name, Password, and Extension, below, apply to the OAISYS Net Suite of products only and have no correlation to your computer Login Name.

Typically, the Login Name is the name that appears on your Net Phone and the name others can see for chat sessions.

Login Name:

Password:

Extension:

Server Information:

Hostname:

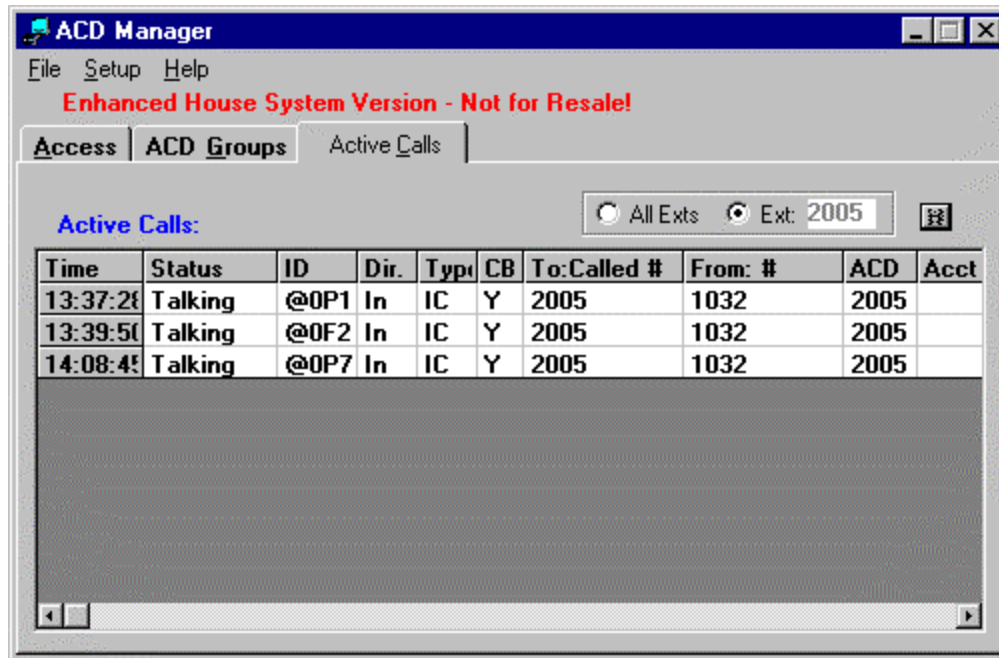
At the bottom of the dialog box are two buttons: "OK" and "Cancel".

To operate successfully, *ACD Manager* must be able to access the *OAISYS Net Server* using a TCP/IP connection. The default settings in this screen will work in most situations. If they do not, then you may need to change the Hostname field. This field should contain the network name or IP address of the *Net Server* PC. "Localhost" is a special name that always resolves to the TCP/IP loopback address – 127.0.0.1. This address always means "this PC." Some network software packages do not allow the use of the special "Localhost" name. In those cases, you need to use the Windows NetBIOS name, the full TCP/IP hostname (Netserver.mycompany.com), or the IP Address of the *Net Server* PC.

Click on OK to save any changes made to this screen.

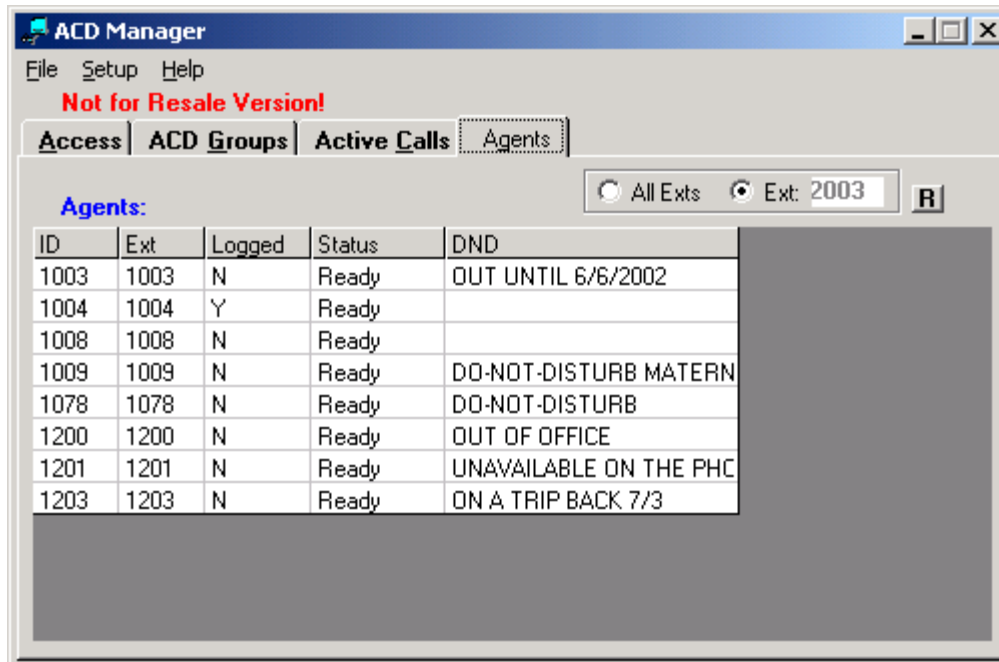
Active Calls

This screen shows information about active calls on the system. Typically this information is used for engineering analysis and troubleshooting.



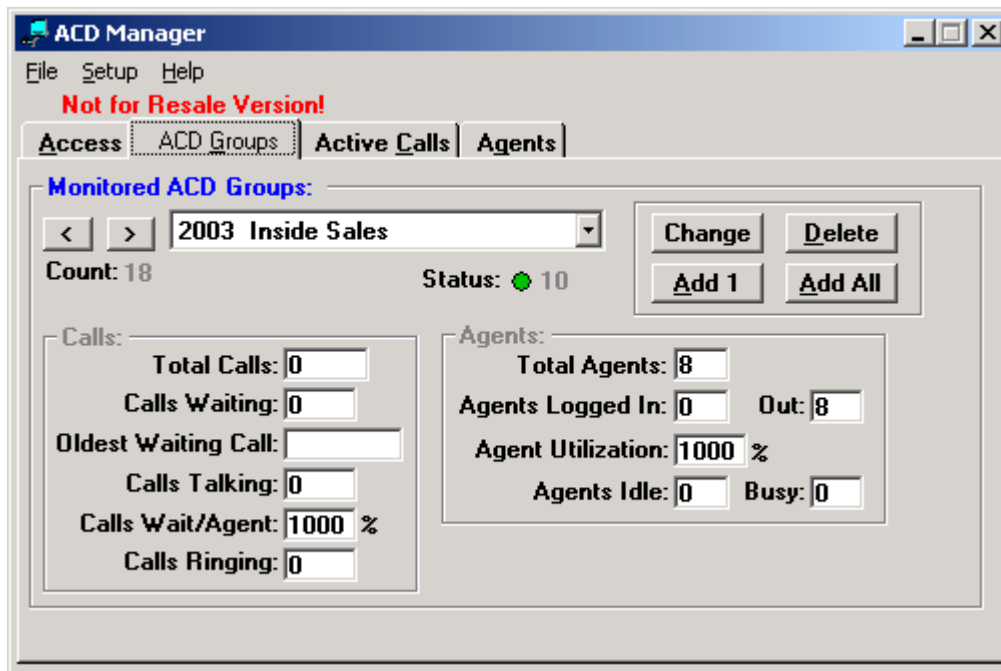
Agents

The *Agents* tab provides a view of agents and their status for individual ACD groups or for all groups being monitored.



ACD Groups

The *ACD Groups* tab provides access all of the ACD groups that *ACD Manager* will monitor and/or control.



Status

This indicates Green when *OAISYS Net Server* is operational, the **Ext #** has been set to a valid ACD group, and the PBX has provided the ACD group **Name:** and current information on Calls and Agents (as described below). If *OAISYS Net Server* is not operational, the indicator will show Red with a status count of 1. If you've incorrectly set the **Ext #** to a non-ACD extension, the indicator will show Red with a status count of 2. This status indicator is re-checked and updated whenever a change is made to the monitored extension number, thresholds, or actions.

Calls

This section gives a real-time glimpse of the status of calls that are presently waiting or answered in the ACD group. This information is provided simply as a reference.

Agents

This section gives a real-time glimpse of the number of agents that are in that ACD group and how many are logged in or out. This section also displays the current Agent Utilization percentage. This information is updated approximately every 30 seconds and is provided simply as a reference.

Adding or Deleting Monitored ACD groups

The *Add 1* button allows you to add an additional ACD group to be monitored. The *Add All* button allows you to add monitors for all ACD groups in the PBX, which is useful when ACD integration with Net Phones and/or the Tracer recording system are desired. The *Delete* button allows you to remove an ACD group from being monitored – note that this doesn't delete, or affect, the ACD group itself.

Monitored ACD Groups

ACD Manager monitors up to 50 ACD groups on the phone system. Click the **Add** button and the following screen will appear:

Add ACD Monitored Group

ACD Extension #: 2000 attendants

Thresholds:

- 2000 attendants
- 2001 Hunt Group 1 (FAX)
- 2002
- 2009 Snoop Group 139
- 2010 Data Ports
- 2011 Orbit HG1001
- 2012 Orbit ACD 1001
- 2013 VPort Hunt Group

#1: <none> Action: <None>

#2: <none> Action: <None>

#3: <none> Action: <None>

#4: <none> Action: <None>

#5: <none> Action: <None>

#6: <none> Action: <None>

#7: <none> Action: <None>

#8: <none> Action: <None>

Okay Cancel Edit Actions

Enter the extension number of the ACD group that you want to monitor. Monitoring an extension means that each call arriving in the ACD group is compared to the Thresholds for the group. If the call meets one or more thresholds, the associated actions will trigger. The Thresholds are checked sequentially – if a call meets Threshold #1, it will execute Action #1 before checking Threshold #2.

You can design your ACD applications to take advantage of this feature. Setting Threshold #1 to 'Calls Waiting/Agent > 999%' – 'Overflow Calls to Vmail' guarantees that your callers will never get stuck in the queue when all of your agents are logged out for the night.

In general, set your heaviest thresholds early, and your most common thresholds lower.

Thresholds

A maximum of eight thresholds can be specified for each monitored extension. Each Threshold can use any of eight different Action types.

Add ACD Monitored Group

ACD Extension #: 2000 attendants

Thresholds:

Threshold #	Threshold Type	Action
#1:	<none>	<None>
#2:	<none>	<None>
#3:	<none>	<None>
#4:	<none>	<None>
#5:	<none>	<None>
#6:	<none>	<None>
#7:	<none>	<None>
#8:	<none>	<None>

Buttons: Okay, Cancel, Edit Actions

Abandoned Call

When a call leaves the ACD group without being answered by an ACD agent, it is considered Abandoned. This threshold is used for logging information about callers that give up or abandon their wait, so that a supervisor or an agent may attempt to reach the caller.

Active Agents <= 'x'

When the number of active agents in the ACD group is less than or equal to the specified number, this threshold is triggered. For example, setting Active Agents ≤ 0 will trigger when the last agent logs out of the ACD group.

Agent Missed Call

When an ACD agent misses an ACD call that rings into the group, this threshold is triggered. This can be helpful in situations in which a supervisor may want to be notified if an agent missed a call or if you would like to log the agent out if they missed a call, perhaps if the agent forgets to log out when they go home at night.

Agent Utilization > 'x' %

This ratio is calculated by dividing the Total Calls by Active Agents. This threshold is very useful when you want to reroute an ACD call to another hunt group. For example, if you have 10 agents in your hunt group and you have 5 calls in queue, then your Agent Utilization factor would be 50%. (5 calls / 10 agents = 50 %.)

The following table contrasts the Waiting Calls/Agent threshold and the Agent Utilization threshold for a 10 agent hunt group.

Calls in ACD queue	Waiting Calls/Agent	Agent Utilization
1	0%	10%
5	0%	50%
10	0%	100%
11	10%	110%
20	100%	200%

Agent Utilization \leq 'x' %

Similar to the above except this triggers when the ratio drops down to or below the threshold. This can be used, for example, to notify some agents to log out and perform other tasks when the call load drops.

Any Change in Calls or Agents

When there is any change in the number of calls in the ACD group or any change in the number of ACD agents logged in or out this threshold is triggered. This can be used, for example, to update the ACD display on the Agent Net Phones.

Call Departed ACD

When a call leaves the ACD group (answered or unanswered) than this threshold is triggered. This can be useful for logging call information or updating some ACD display program.

Call Queued

When a new call queues into the ACD group this trigger will occur. That is when a call arrives but no agents are available to answer the call, the call is considered to be "queued".

Callback Completed

When the call back action is used and the call back has been completed by the ACD agent, this threshold is triggered. This can be helpful to track whether or not call backs are completed by the agents as well as track call backs that are not completed, so that they can be tried again later.

Callback Done Account Is

Checks for a certain account code when callback is completed and can call back the agent if it is not found.

Calls Waiting <= 'x' Calls

If calls are ringing into this ACD group are less than or equal to this number, this threshold is considered to be met. This can be used, for example, to notify some agents to log out and perform other tasks when the call load drops.

Calls Waiting > 'x' Calls

If more than this number of calls are ringing into this ACD group, this threshold is considered to be met. This is quite useful because it can be used to indicate that the ACD group is excessively busy and appropriate action can be taken. This threshold is the best option for ACD Callbacks.

Longest Call Ringing > 'x' Seconds

If the oldest ringing call into this ACD group has been ringing (not answered by an Agent) for more than this number of seconds, this threshold is considered met. This can be useful for triggering some sort of audible or visual notification to the ACD agents and/or supervisor, or it can be used to overflow calls to another destination.

New Call Arrived ACD

This specifies that the associated action will be triggered whenever a new call arrives at this ACD extension. Common applications for this include logging call information to a file, or updating another application. (This threshold should not be used with *Xfr to VA and Run a Script* actions).

Ringling Count Changed

When the number of calls ringing into the ACD group changes (increases or decreases), this threshold is triggered. This can be useful for triggering an update of an ACD display program or an LED display panel.

Waiting Calls/Agent > 'x' %

This threshold keeps track of a *busy ratio*, which is the percentage of calls waiting (queued waiting in the ACD group) relative to the number of active agents. This ratio can be useful in determining whether an incoming call will be answered in a timely manner.

Note: An agent is considered active when he or she is logged on the ACD group, unless the "Count DND as Logged Out" flag is active and the agent is in DND.

For example: If there are 5 calls ringing and 20 agents are active, then the *busy ratio* is 25%, however if there are 5 calls ringing and only 1 agent is active, the *busy ratio* is 500%. In the second case the last caller in queue may not be answered for quite some time so it may be appropriate to route that caller to a message asking them for callback information, or transfer them to another ACD group or location.

When all agents are logged out of an ACD group this is a special case and the *busy ratio* is considered to be 1000%. To make use of this special case, set your threshold to 999%. The only time the ratio will ever be greater than 999% is when all agents are logged out of the group. Use an action that transfers callers to another group, or directly to voice mail.

Waiting Calls/Agent <= 'x' %

This threshold is similar to the above except it triggers when the *busy ratio* is less than or equal to the specified percentage. This can be used, for example, to notify some agents to log out and perform other tasks when the call load drops.

Actions

With every threshold specified an associated action is defined. Actions are the key to *ACD Manager* and represent a flexible menu of choices which, when fully understood, offer a wide variety of responses to telephone calls which can be used to build the application you need.

The following actions are available in *ACD Manager* (see *Appendix C*, page 31 for more information on these actions):

Transfer Call

Transfers a call to another extension or outside number.

Send DDE Message to Another program

Sends a DDE Execute message to another application. This message is fully programmable, and can be used with most DDE-capable programs. This is most commonly used to send a paging request to *Golden Page* client software, by *Computer Telephony Solutions*.

Log an Event to a File

Writes a string of information to a text file. The text string can contain dynamic information about each call, such as CallerID name and number, DNIS, etc. It can also include Date and Time information.

Run a Voice Assistant Script

Sends a request to *Voice Assistant* to run a particular voice script. The call remains in the queue, and is **not** transferred to the voice port. This action type is normally used for overhead paging scripts and supervisor notifications.

Transfer Call to Voice Assistant and Run Script

Sends a request to Voice Assistant to run a particular voice script, **and** transfers the call out of the queue to the voice port. This is used for applications similar to ACD Callbacks. Callers are no longer in the queue while talking to the voice port.

Send to Call Back Option

Transfers the call out of the queue to give the caller the option to be called back at a later time.

ReRoute to ACD Group

Transfers call to another ACD group that is less busy or can handle this call.

Log Agent Out/In

Logs an ACD agent in or out of the ACD group after a threshold is met. Agents who are members of more than one group can be logged into or out of all groups.

Send a Chat Broadcast Message

Sends a popup message to the PC screen of one or more agents or supervisors.

Send an E-mail Message

Sends an E-mail message to someone. Typically this is used to notify a supervisor of an ACD condition.

Send Message to Net Phone(s)

Sends either a popup or a scrolling marquee message to one or more Net Phones. This is very useful to provide current ACD queue information to agents as well as allow them to easily log in when the call queue begins to back up..

Voice Assistant

ACD Manager uses *Voice Assistant* to perform different functions, such as: (1) notify by Overhead Paging, (2) Centrex transfer a call, (3) request callback information from the caller. The Voice Assistant scripts that come with ACD Manager are listed below:

Overhead Paging – Script 110

Below is a sample Voice Script for notifying by overhead page. The ACD extension number (%G) and count of calls waiting (%R) are Variables that are passed into the voice script as parameters so that the page can announce, for example, that the “Sales Group has five calls waiting.” The action, **Do Overhead Page**, is setup as follows:

The screenshot shows a dialog box titled "Add/Edit Action". It has a "Name:" field with the text "Do Overhead Page". Below it is a "Type:" dropdown menu currently showing "Run a VA Script". To the right, there is a "Script #:" field with the value "110" and a "Parameters:" field with the value "%G,%R". At the bottom of the dialog are two buttons: "Save" and "Cancel".

See the *Voice Assistant Operations Manual* for more information on script commands

Voice Prompts -- The following prompts will need to be recorded:

Prompt 110 - *The number of Calls Waiting is*

Prompt 'yyyy' (where 'yyyy' matches the number of the ACD extension number) - recorded to say the name of ACD group (in the above example, "Sales Group").

Listing for Script #110

```

=====
1. //,Overhead Page Example
2. //,Parm %1 = ACD Ext #
3. //,Parm %2 = Number of Calls Waiting
4. IFVAL,%2,LE,0,GOTO,ENDPGM
5. OFFHOOK
6. PLAYVOL,+2
7. //,Dial All-Page Feature code
8. DIAL,|71|
9. DELAYSEC,1
10. //,Play prompt corresponding to ACD Ext Name
11. PLAY,%1
12. IF,RESULT,EQ,S,GOTO,PLAYCALLS
13. //,No Prompt with ACD name so Say ACD extension #
14. PLAYDIGS,%1
15. LABEL,PLAYCALLS
16. //,Say "The Number of Calls waiting is"
17. PLAY,110
18. PLAYDIGS,%2 "plays the number of calls waiting"
19. LABEL,ENDPGM
20. HANGUP

```

Centrex Transfer – Script 4 or 5

This is one of the basic *Voice Assistant* scripts. See the *Voice Assistant* Operations Manual for more information.

Callback Option – Script 810

ACD Callbacks are a great way to provide your callers an alternative to waiting in your call center queues. You can give your callers the option to leave their name and number instead of waiting for long periods of time in your queue. This can also save your customer money when the callers are coming in and waiting on toll-free lines.

You must first decide which Threshold you will use for your ACD group. Certain Thresholds, such as *Call Ringing > 'x' Seconds*, should not be used with the *Transfer: Oldest Call* parameter. If you set your threshold at 'Call Ringing > 300 Seconds' (5 minutes) and your Transfer Call parameter to the Oldest Call, the Callback Option will answer the caller after he has spent 5 minutes waiting in the queue. If the caller then chooses to continue waiting in the queue instead of taking the Callback, the voice port will transfer him back into the queue, **but at the end of the line!** He has lost his 5 minutes of wait time, and is most likely behind a number of new calls that arrived during his initial 5 minutes in the queue.

Try to use the Thresholds that are based on agent availability or call counts, not call times. Using the *Calls Waiting > 'x' Calls* is the best option, since you can catch callers before they spend any time in the queue. If you know that 5 calls in the queue means the sixth caller will likely spend 5 minutes waiting, set your Threshold to *Calls Waiting > 5 Calls*. When the sixth caller reaches the queue, she will immediately be given the Callback Option. If she chooses to continue waiting, she'll transfer back into the group at the end of the line, but she will not lose any invested wait time.

You can select the Oldest Call, Newest Existing Call, or the Next Call to Arrive. The VA Script # should be set to 810. The VA Ports will most likely be set to G1 for the Universal Port Group. If you want to use a dedicated group of voice ports, you can change this. In most situations you will leave the default value of G1.

Directory and Parameters: These fields contain the information that you will send to the Voice Assistant Script. The Directory is where your information will be stored.

The following parameters are passed to the Call Back Script:

Call Back Path:

%G This variable represents the ACD Extension number.

%Q This variable represents the number of calls waiting in the queue.

Average Call Duration: Enter a value in seconds that represents your average call duration. This number is multiplied by the value of %Q to get the total estimated wait time, in seconds. **Tip:** If you use a multiple of 60, your callers will hear only times in minutes. If you use other numbers, such as 45, your callers will hear estimates of minutes and seconds.

%I This variable represents the PBX Call ID.

%P This variable represents the Caller ID.

%N This variable represents the Caller ID Name.

Do not change the % parameters! These values are passed in by the phone system. The only value you should change is the Average Call Duration (default is 45).

Make sure your Voice Assistant ports have outside dialing access in Axxess Database Programming.

There are two things that you will need to change in Voice Assistant Script 810: Local Area Code, and Trunk Access Number (see lines 9 and 11 in the script listing below).

See the Voice Assistant Operations Manual for more information on script commands

Voice Prompts -- The following prompts are recorded:

Prompt 81001 - *Press 1 if you want to be called back*

Prompt 81002 - *Please state your name and the nature of your question*

Prompt 81003 - *Please enter your number*

Prompt 81004 - *Thank you, we'll call you back*

Prompt 81005 - *Press 1 to take a callback now*

Prompt 81006 - *This is a callback from...*

Prompt 81007 - *Please hold while I place the call to...*

Prompt 81008 - *Your estimated wait time is...*

Prompt 81009 - *...seconds*

Prompt 81011 - *...minutes*

Listing for Script #810

```

=====
1.  //,ACD Mgr -- Callback Script
2.  //,%1=CB path, %2=ACD Ext, %3=Calls Waiting, %4=Ave Call Duration
3.  //,%5=PBX Call ID, %6=CallerID %7=CallerID Name %8=Next ACD Group
4.  //,
5.  //,Voice Assistant 3.0 or later required
6.  //,
7.  //,
8.  SET,TRACE,Y
9.  //, !! CHANGE - Configure your local area code(s) in DIAL PLAN SERVER!!
10. //,!! CHANGE - This to be the Trunk Access code for making outside calls !!
11. SET,%U8,8
12. //,!! CHANGE - This to be the voice mail access number !!
13. SET,%U5,2502
14. //,
15. SET,%U3,%6
16. ANSWER
17. //,Play the announcement for the hunt group
18. //,Record prompt xxxx (where xxxx is the group ext. number) to be the greeting
    for this group
19. PLAY,%2
20. //,Estimate the Wait Time...
21. MULT,%3,%4,%U0
22. IFVAL,%U0,LE,0,GOTO,NO_WAIT
23. PLAY,81008
24. IFVAL,%U0,LT,60,GOTO,SECONDS
25. DIVIDE,%U0,60,%U0
26. CNV,%U0,%U1,D
27. PLAYVOL,0
28. PLAYSTRING,%U1,NUMBER,
29. PLAYVOL,+2

```

```
30. PLAY,81011
31. ADD,%U0,-%U1
32. MULT,%U0,60,%U0
33. CNV,%U0,%U0,N
34. IFVAL,%U0,LE,0,GOTO,NO_WAIT
35. LABEL,SECONDS
36. PLAYVOL,0
37. PLAYSTRING,%U0,NUMBER,
38. PLAYVOL,+2
39. PLAY,81009
40. //,
41. LABEL,NO_WAIT
42. SET,%V0,%2
43. //,Press One for us to Call you Back.
44. PLAY,81001
45. GDIGITS,1,#,U1
46. IF,RESULT,EQ,H,GOTO,EARLYHANGUP
47. IF,%U1,EQ,1,GOTO,GETCBINFO
48. //,
49. IF,%8,EQ,,GOTO,SAME_GROUP
50. //,If we have a parameter in %8, update %V0
51. SET,%V0,%8
52. //,
53. LABEL,SAME_GROUP
54. //,No CB -- Request ACD Mgr to take call back
55. SENDREQ,ACDM_CLI,|PICK_CALL:,%5.&E,%V0, R,1111|,|
56. //,Transfer Call back to ACD Group (just in case above failed)
57. HANGUP
58. DONE
59. //,
60. //,Here when they want to be Called Back
61. LABEL,GETCBINFO
62. SET,%U2,RANDOM
63. IFEXIST,%1,GOTO,DIR_EXISTS
64. //,Create directory -- %G or a Runtime param was included
65. FILE,CREATEDIR,%1,
66. LABEL,DIR_EXISTS
67. //,Get Callback Phone Number
68. //,
69. IF,%6,EQ,,GOTO,GETNUMBER
70. SET,%U3,%6
71. PLAY,81012
72. PLAYVOL,0
73. PLAYDIGS,%U3
74. PLAYVOL,+2
75. PLAY,81013
76. GDIGITS,1,#,U7,15
77. IFVAL,%U7,EQ,1,GOTO,PROCESSNUMBER
78. //,
79. LABEL,GETNUMBER
80. PLAY,81003
81. GDIGITS,11,#,U3,15
82. //, Handle Local Area Code, 1+, 7-digit, etc.
83. //,
84. LABEL,PROCESSNUMBER
85. //,Request the correct dial number from DIAL PLAN SERVER
86. SERVREQ,DIALPLAN,GETDIALNUM,|%U3|,|%U3|
87. //,
88. GOTO,GET_NAME
89. //,
90. //,Long distance number, put in form 1-xxx-xxxxxxx
91. //*,LABEL,LONGDIST
92. //*,SET,%U3,1%U3
93. //,
94. LABEL,GET_NAME
95. //,Please state your name/nature of your question
96. PLAY,81002
97. RECORD,%1%U2.WAV,90,Y
98. GOTO,THANKYOU
99. //,
100. LABEL,THANKYOU
```

```
101. //,Thank you we'll callback.
102. PLAY,81004
103. HANGUP
104. DELAYSEC,1
105. //,
106. //,Call Back into ACD Q and wait for Agent
107. OFFHOOK
108. SET,TERMDROP,N
109. //,Store information about the callback into this call so others can use it
110. SERVREQ,LVL2OAI,RAWCMD,|!CALLINFO,xxx,%I,CallBackFile=%1%U2.TXT&tCallBackID=%U3
    %7&t|,||
111. //,Inform ACD mgr of a CallBack coming
112. SENDREQ,ACDM_CLI,|CB_CALL:2,%5,&E,%2,C, %1%U2.TXT|,||
113. DIAL,|%2|
114. //,Setup the MAX # of times to Wait loop (about 3 loops/minute)
115. SET,%U4,60
116. //,Clear out Answering Ext info
117. SET,ANSR_EXT,0
118. //,
119. LABEL,WaitACD_Loop
120. //,Say Press 1 to take a callback now
121. PLAY,81005
122. IF,RESULT,EQ,H,GOTO,NOAGENTS
123. //,If voice mail answers, treat it as no agents
124. IF,ANSR_EXT,EQ,%U5,GOTO,NOAGENTS
125. IF,ANSR_EXT,NEQ,0,GOTO,PlaceCB
126. GDIGITS,1,#,U1,15
127. IF,RESULT,EQ,H,GOTO,NOAGENTS
128. //,If voice mail answers, treat it as no agents
129. IF,ANSR_EXT,EQ,%U5,GOTO,NOAGENTS
130. IF,ANSR_EXT,NEQ,0,GOTO,PlaceCB
131. IF,%U1,EQ,1,GOTO,PlaceCB
132. ADD,%U4,-1
133. IFVAL,%U4,GT,0,GOTO,WaitACD_Loop
134. //,
135. //,Failure to get an Agent to Answer
136. LABEL,NOAGENTS
137. LOG,%1%U2.TXT,|:CTS:&tACCB&t&NYYYY MM/DD HH:MM& &t:A#:&t999 &t:SU:&tFailed - No
    Agents &t:AD:&t%2&t:LA:&t-None-&t:R1:&t%1%U2.WAV&t:P#:&t%U3 &t:FR:&t%7 %6|
138. HANGUP
139. DELAYSEC,2
140. OFFHOOK
141. //,Dial the HG Mailbox and play the recording into the mailbox
142. DIAL,|%U5|
143. DELAYSEC,2
144. DIAL,|%2#|
145. DELAYSEC,1
146. //,This is a Call Back from...
147. PLAY,81006
148. PLAYVOL,0
149. PLAYDIGS,%U3
150. PLAYVOL,+2
151. PLAY,%1%U2.WAV
152. DIAL,|##|
153. HANGUP
154. DELAYSEC,1
155. DONE
156. //,
157. LABEL,PlaceCB
158. //,This is a Call Back from...
159. PLAY,81006
160. PLAY,%1%U2.WAV
161. //,Please hold while I place the call to...
162. PLAY,81007
163. PLAYDIGS,%U3
164. //,If Call to Outside #, precede with Trunk Acces Code
165. IFLEN,%U3,LT,7,GOTO,XfrCB
166. //,SET,%U3,|%U8,%U3|
167. SET,%U3,|%U8%U3|
168. LABEL,XfrCB
169. //,Transfer ACD Agent to Phone Number
```

```
170. SERVREQ,LVL2OAI,RAWCMD,|_TO,xxx,&E,%I,%U3|,||
171. //,XFR,|%U3#|
172. //,DELAYSEC,2
173. HANGUP
174. //,
175. SET,%U6,ANSR_EXT
176. LOG,%1%U2.TXT,|:CTS:&tACCB&t&NYYYY MM/DD HH:MM& &t:A#:&t&t:SU:&tCallback
    &t:AD:&t%2&t:LA:&t%U6&t:R1:&t%1%U2.WAV&t:P#:&t%U3 &t:FR:&t%7 %6|
177. DELAYSEC,1
178. DONE
179. //,
180. LABEL,EARLYHANGUP
181. SET,%U2,RANDOM
182. LOG,%1Hungup-%U2.TXT,|:CTS:&tACCB&t&NYYYY MM/DD HH:MM& &t:A#:&t&t:SU:&tHungup
    &t:AD:&t%2&t:LA:&t%U6&t:R1:&t&t:P#:&t%U3 &t:FR:&t%7 %6|
183. IFLEN,%U3,EQ,0,GOTO,NONUMBER
184. HANGUP
185. DELAYSEC,2
186. OFFHOOK
187. //,Dial the HG Mailbox and play the recording into the mailbox
188. DIAL,|%U5|
189. DELAYSEC,2
190. DIAL,|%2#|
191. DELAYSEC,1
192. //,This is a Call Back from...
193. PLAY,81006
194. PLAYVOL,0
195. PLAYDIGS,%U3
196. PLAYVOL,+2
197. //,Play "Caller hungup before leaving information"
198. //,PLAY,81014
199. DIAL,|##|
200. LABEL,NONUMBER
201. HANGUP
202. DELAYSEC,1
203. DONE
```

Appendix A: Additional Installation Information

Files

The following files are installed into the directory selected during installation to hold the *ACD Manager* application:

ACD_MON.EXE, ACD_MGR.ACS, ACD_MGR.MDB, CTS_ACD.HLP

The following files are installed into the WINDOWS\SYSTEM directory. If a file of the same name and the same or a later date is found already installed, then the Installation Program will not overwrite it.

ECLIENT.OCX, DUMPWIN.OCX, MSFLXGRD.OCX, TABCTL32.OCX, EXPSRV.DLL, MSVCRT.DLL, MFC42.DLL, MSVBVM50.DLL, COMDLG32.OCX, STDOLE2.TLB, OLEAUT32.DLL, OLEPRO32.DLL, ASYCFILT.DLL, COMCAT.DLL, DAO350.DLL, MSJTER35.DLL, MSJINT35.DLL, MSVCRT40.DLL, MSJET35.DLL, VBAJET32.DLL, VB5DB.DLL, MSRD2X35.DLL, MSREPL35.DLL, ODBCJT32.DLL, ODBCJI32.DLL, ODBCTL32.DLL

Attention: If you are “un-installing” the *ACD Manager*, be careful in deleting the files which are installed in the WINDOWS\SYSTEM sub-directory as some of these files might have already been installed and in use by another program when the *ACD Manager* was installed. Deleting them may cause another such program to no longer be able to run properly if at all.

Appendix B: Errors & Troubleshooting

ERROR	Causes	Remedies
OAI Send-REQ_OAI,8,ACD1234,33,16	This error occurs when <i>OAISYS Net Server</i> failed to execute a command. The usual cause of this error is that the <i>OAISYS Net Server</i> program is not running.	Check to see that <i>OAISYS Net Server</i> is operational.
OAI Services Connection Lost.	This error occurs when the <i>OAISYS Net Server</i> failed to respond to a routine check. The usual cause of this error is that the <i>OAISYS Net Server</i> program is not running	Check to see that <i>OAISYS Net Server</i> is operational.
Ext: 1000 is Not an ACD Device.	The extension number listed to be monitored is not that of an ACD group on the PBX.	Change the Monitored Extension number to that of an ACD group.
Call @xxx Expired in Call Queue	This error occurs when a call on a monitored extension has timed out waiting in the call queue. This may not actually be an error, as in the case where a call is actually "Ringing" or "Talking" for an excessive period of time. However it could indicate that OAI events are being missed, which could indicate that RS232 hardware handshaking on the OAI port is not correctly configured on the <i>OAISYS Net Server</i> .	If you suspect these are actual errors, then check the <i>OAISYS Net Server</i> operation
ClientMsgSend->VA_HOST	This error occurs when a request to <i>Voice Assistant</i> has completely failed. The usual cause of this error is that the <i>Voice Assistant</i> program is not running	Check to see that <i>Voice Assistant</i> is operational.
ERROR-:DDE FAILED to: NAMExxx TOPICyyy -... -- No foreign application responded to a DDE initiate	This error occurs when DDE Execute action fails. The cause is either (1) the destination application is not running or (2) the App Name or App Topic of the Action is incorrect.	Make sure the destination application is running on the same PC and that the App Name and App Topic parameters are correct for that application.
ERROR-:DDE FAILED to: NAMExxx TOPICyyy -... -- Foreign application won't perform DDE method or operation	This error occurs when DDE Execute action fails. The cause is the destination application does not recognize something in the DDE message.	Edit that Action and change the DDE message in the action to have the provide the correct information for the target application.

Appendix C: Building Actions

Actions, which are triggered when **Thresholds** are met, are the core strength of *ACD Manager*. The flexibility allowed in setting up different types of actions and the variety of different types of run-time information that can be used within those actions provides a powerful range of ways to control telephone calls and other programs.

Variables

Variables provide a means to insert run-time call, extension, and system information into parameter strings passed to other programs. These variables can be used in virtually any position of any parameter. Following is a list of the variables:

Call Variables

These variables are used to insert specific information about a call.

- %A** - Account Number
- %C** - Path and Filename of Callback file
- %D** - DNIS Number
- %E** - Called Phone Number
- %F** - Call Fwd Number
- %H** - Calling Phone Number (hyphenated – format = xxx-xxx-xxxx)
- %I** - Call ID
- %J** - Calling Phone Number (hyphenated – format = (xxx)xxx-xxxx)
- %N** - Calling Party Name (outside calls only)
- %P** - Calling Phone Number
- %S** - Call was Answered ('Y'es or 'N'o)
- %T** - Call Type

ACD Variables

These variables are used to insert information about a monitored extension.

- %B** Agent ID
- %G** - ACD group extension number
- %L** Longest ringing call – elapsed time since call started ringing (SS or MM:SS or H:MM:SS)
- %M** Agent Extension
- %O** - Oldest Ringing Call – time of day call started ringing (hh:mm:ss)
- %Q** - Count of all calls queued (waiting)
- %R** - Count of all calls ringing and waiting
- %U** - Agent Utilization
- %W** - ACD group Name
- %X** - Total Number of Agents
- %Y** - Number of Active Agents
- %Z** - Calls per Active Agent (in percentage)

System Values

System values can be inserted into parameter strings. These can be very useful for inserting date/time stamps, etc. for use in the message string of the LOG command, for example.

- &C** - insert a Carriage Return character
- &D** - insert the date in format: "mm/dd/yy"
- &E** - insert a "+" delimited list of agent PBX extensions from the triggering ACD group.
- &L** - insert a Line Feed character
- &N** - insert the date and/or time in user-specified format -- i.e. "&Nhh:mm:ss AM/PM&"
- &Q** - random variable (6 digits)
- &R** - random variable (8 digits)

- &T - insert the time in format: "HH:MM"
- &t - insert a tab character
- %% - insert a percent "%" character
- && - insert an ampersand "&" character

Action Types

Transfer Call

This action is used to transfer a call to another destination which can be either an extension on the PBX or an outside phone number. If the destination is the voice mail unit, you can also specify which voice mailbox you would like it to go to. If you want to transfer to an outside phone number you will need to specify the trunk access code followed by the telephone number (e.g. 9-15054388032 -- **Note: Do NOT use commas in this field**). When transferring an outside caller to an outside number, this feature uses the Off-Premise Transfer Feature which will use a Conference circuit and a 2nd trunk (if a Centrex transfer is preferred, use *Voice Assistant*).

The screenshot shows the 'Add/Edit Action' dialog box with the following fields and options:

- Name:** Transfer to NY office
- Type:** Transfer Call (selected from a dropdown menu)
- Transfer:**
 - Oldest Call
 - Newest Existing Call
 - Next Call to Arrive
- To:** 9-12125551234
- Mbox:** (empty field)
- Buttons:** Save, Cancel

Send DDE Message to another Program

This action will send a DDE message to another program that can, for example, be used to deliver some form of notification. An obvious example is to use this to send a page message to a beeper using the *Golden Page* program as shown in the following example:

The screenshot shows the 'Add/Edit Action' dialog box with the following fields and options:

- Name:** Beep ACD Supervisor
- Type:** Send DDE Msg (selected from a dropdown menu)
- App Name:** PAGELINK
- App Topic:** SYSTEM
- DDE Message:** PAGE_MYPAGER_ACD:%G, %R Calls Waiti
- Buttons:** Save, Cancel

Log an Event to a File

This action will append an Event (a text string) to a specified text file. For example, this can be used to keep track of calls to an ACD group.

The screenshot shows the 'Add/Edit Action' dialog box with the following fields:

- Name:** Log Call Departed
- Type:** Log an Event
- Log Filename:** ACD_TEST.TXT
- Log String:** &D &T - Call to: x%G %W, Answered=%S
- Buttons:** Save, Cancel

Run a Voice Assistant Script

This action causes a *Voice Assistant* script to be executed. For example, this could be used to run a *Voice Assistant* script to play an *Overhead Page* function.

The screenshot shows the 'Add/Edit Action' dialog box with the following fields:

- Name:** Do Overhead Page
- Type:** Run a VA Script
- Script #:** 110
- Parameters:** %G,%R
- Buttons:** Save, Cancel

Transfer Call to Voice Assistant and Run a Script

This action will transfer a call to *Voice Assistant* and have it run a script. For example, this can be used to (1) Centrex transfer the caller to another location or (2) request call-back information from the caller so that they can be called back later

The screenshot shows the 'Add/Edit Action' dialog box with the following fields:

- Name:** Centrex Xfr to New Mexico
- Type:** Xfr Call to VA & Run Script
- Transfer:**
 - Oldest Call
 - Newest Existing Call
 - Next Call to Arrive
- VA Script #:** 4
- Parameters:** 102,15054388032
- Buttons:** Save, Cancel

Send to Call Back Option

ACD Callbacks are a great way to provide your callers an alternative to waiting in your call center queues. You can give your callers the option to leave their name and number instead of waiting for long periods of time in your queue. This can also save your customer money when the callers are coming in and waiting on toll-free lines.

Callers meeting the Callback threshold will hear:

“We estimate your wait time to be <x> minutes. Press 1 if you would like to have us wait in line for you and call you back when your turn comes up. Press any other key to continue waiting.”

If the caller decides to wait, they simply transfer back into the ACD group (at the end of the line.) If they choose use the Callback, they hear the following:

“Your phone number is xxx-xxx-xxxx. Press 1 if we can reach you at this number, or press 2 to enter a different number.”

If there was no CallerID on the call, the caller is prompted to enter a number. After entering a number, the caller is asked for their name:

“After the beep, please state your name, extension number, and a brief description of your question. Press pound when finished.”

After recording the information, the caller will hear:

“Thank you, an agent will return your call.”

At this point, the voice port hangs up on the caller. The port immediately calls into the ACD group and begins waiting for an available agent. The voice port call is treated just like any other ACD call, expect *ACD Manager* will not attempt to execute another Callback Option on it.

When the voice port reaches an agent, the agent will hear the following:

“This is a callback from <plays message recorded by the caller>. Please wait while I place the call to xxx-xxx-xxxx.”

The port then transfers the agent out to the phone number using a regular PBX transfer.

See the *Voice Assistant* section for more detailed information on this Action, page 24.

To have the Callback option repeated to the callers please see the *ACD Callback from Routing Announcement* application note. This option uses announcements from the phone switch to offer the option to the caller.

ReRoute to ACD Group

This action provides a way to perform intelligent look-ahead transfers between ACD Groups. For example, if the Inside Sales group is excessively busy you can tell the ACD Manager to transfer any new calls to the Outside Sales ACD Group, but only if the Outside Sales group is not too busy.

This action has an internal threshold that you configure – the action will not occur if this threshold is not true (met). The three threshold choices are:

1. **Calls Ringing < 'x' Calls** = total number of calls ringing at agent phones plus calls queued waiting must be LESS THAN 'x'. So for example if you set the parameter ('x') to 10, then the action will only occur if there are LESS THAN then 10 (9 or fewer) calls ringing.
2. **Calls Waiting < 'x' Calls** = total number of calls queued (waiting to ring an agent phone) must be LESS THAN 'x'. So for example if you set the parameter ('x') to 3, then the action will only occur if there are LESS THAN then 3 (2 or fewer) calls queued on the target ACD group.
3. **Waiting Calls/Agent < 'x' %** = Ratio of calls queued per agent logged in is LESS THAN 'x' percent. This threshold uses the *busy ratio*, which is the percentage of calls waiting (queued waiting in the ACD group) relative to the number of active agents (for more details on the *busy ratio* see **Waiting Calls/Agent > 'x'** on page 21) So for the example shown above, if you set the parameter ('x') to 35, then the action will only occur if the ratio of calls waiting per active agent is LESS THAN 35% at the target ACD group (extension 2105)
4. **Agent Utilization < 'x' %** = Ratio of Total Calls divided by Available Agents is less than 'x' percent. If you have ten agents in your hunt group and you have five calls in queue, then your Agent Utilization is 50 %. If you have ten agents and 10 calls waiting, your Agent Utilization is 100 %.

Both the Origination and Destination (target) ACD Groups must be setup to be monitored in ACD Manager. This action will remember from which ACD group the call was last re-routed so it won't allow you to reroute a call back to that same ACD group. This is to prevent the user from accidentally setting up actions in two ACD groups that bounce calls back and forth between the groups.

Log Agent Out/In

This action allows you to change an agent status from logged in to logged out or from logged out to logged in from one or all ACD groups if the desired threshold is met. For example, if an agent misses an ACD call you may want to use ACD Manager to automatically log this agent out of the ACD group so this does not occur again.

The screenshot shows the 'Add/Edit Action' dialog box. The 'Name' field contains 'Log Agent Out/In'. The 'Type' dropdown menu is set to 'Log Agent Out/In'. The 'Set Agent State' section has four radio buttons: 'Log Out of Group' (selected), 'Log Out ALL Groups', 'Log In to Group', and 'Log In to ALL Groups'. The 'Agent Ext' field contains '%M' and the 'Agent ID' field contains '%B'. To the right of these fields, there is explanatory text: '%M = Ext of Agent who Missed Call' and '%B = ID of Agent who Missed Call'. At the bottom are 'Save' and 'Cancel' buttons.

ACD variables are typically used to perform this action. %M represents the extension number of the agent who missed the call. %B represents the Agent ID of the agent who missed the call.

Send Chat Broadcast

This action allows you to send a chat broadcast (popup) message to one or more users. For example, you might use this to notify a supervisor when the call load in the ACD queue reaches a high level.

The screenshot shows the 'Add/Edit Action' dialog box. The 'Name' field contains 'Send Chat Broadcast'. The 'Type' dropdown menu is set to 'Send Chat Broadcast'. The 'Service Name' field contains 'MSG'. The 'Command' field contains 'ONESHOTTEXT'. The 'Message' field contains '&E,|Test Message|,H,0'. At the bottom are 'Save' and 'Cancel' buttons.

Message Format: <Target Extensions>, <| Text Message |>, < Urgency >, < Timeout >

- <Target Extensions> = the extension number (i.e. 1001) or list of extensions (i.e. 1001+1008+1021) to receive the chat broadcast. Use the variable &E to send to all agent extensions in the triggering ACD group.
- <| Text Message |> = message to appear in the chat pop-up message box. Must have vertical bar delimiters if text contains any commas!
- < Urgency > = "H" is High priority, "" or "L" is normal
- < Timeout > = Number of seconds for popup to expire. Leave blank to use the default (60 seconds).

Send E-mail

This action allows you to send an E-mail message to someone. For example, you might use this to notify a supervisor when the call load in the ACD queue reaches a high level. Or possibly to send a copy of an Abandoned Call log to the supervisor when the last agent logs out.



The screenshot shows a dialog box titled "Add/Edit Action" with a close button (X) in the top right corner. The dialog is divided into several sections:

- Name:** A text input field containing "Send E-Mail".
- Type:** A dropdown menu with "Send E-Mail" selected.
- Service Name:** A text input field containing "EMAIL".
- Command:** A text input field containing "SEND".
- Message:** A text input field containing "test@oaisys.com, \"Subject\", \"Message\", \"Attach Fi".

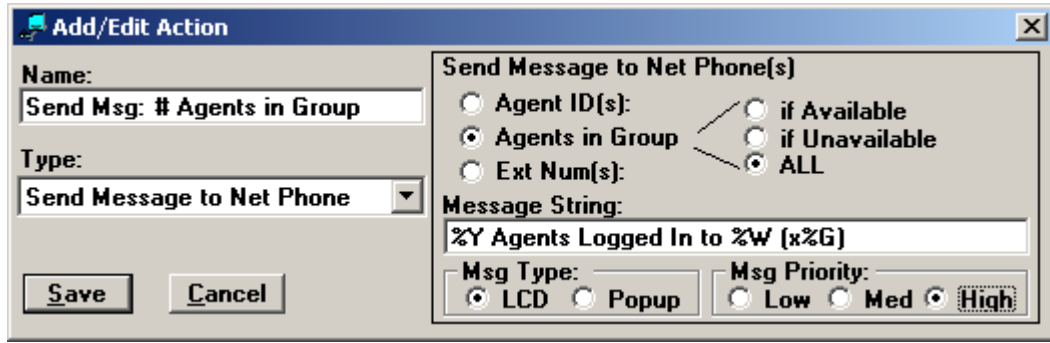
At the bottom of the dialog, there are two buttons: "Save" and "Cancel".

Message Format: <Target Email address>, <"Subject Text">, <"Message Text">, <"Attachment filename">

- < Target Email address > = the address to send the e-mail to (i.e. joe@msn.com)
- < "Subject Text" > = text to appear in the subject field of the e-mail
- < "Message Text" > = text to appear in message area of the e-mail.
- < "Attachment filename" > = path and filename to attach to the e-mail. If no attachment, leave this field blank.

Send Message to Net Phones

This action allows you to various types of messages to Net Phone users. For example it can be use to scroll ACD queue information across the Net Phone "LCD" of all agents in the group to keep them aware of ACD loading. It can also be very effectively used to send a popup message to agents to notify them when calls are backing up and allow them to easily log in to the ACD queue and/or make themselves available to answer calls in the queue.



Please note that NOT all Triggers should be used with the "Send Message to Net Phone" action. The following are ones that work well with it.

Threshold Trigger	Comment
Active Agents < 'x'	-- Good with "PopUP" message
Any Change Agents or Calls	-- Good with LCD (using "Calls Message") -- Okay with LCD (using other Message)
Ringing Count Changed	-- Good with LCD (using "Calls Message")
Calls Waiting > 'x'	-- Good with LCD (using "Calls Message") -- Good with "PopUP"
Calls Waiting/Agent > 'x'	-- Good with LCD (using "Calls Message") -- Good with "PopUP"
Agent Utilization > 'x'	-- Good with LCD (using "Calls Message") -- Good with "PopUP"

Note: A "Calls Message" is one that contains either of the variables %R or %Q

Transfer Call Choices

When using either the **Transfer Call** or **Transfer Call to Voice Assistant and Run Script** action(s), you need to choose which call the action will transfer. The choices are as follows:

Oldest Call

This is the call that has been ringing into the ACD group for the longest period of time. Once a call has been answered it is no longer considered to be ringing into the ACD group.

Newest Existing Call

This is last or newest call that was ringing into the ACD group BEFORE the triggering threshold was met.

While this choice might be the right one for some situations, care should be taken when setting up an action to use this choice because it can affect all of the existing calls ringing into the ACD group!

An example: Suppose you set a threshold at **Call Ringing > 35 Seconds** and an action to **Transfer to Voice Mail** and select **Newest Existing Call** as your call transfer choice. Then suppose that a first call rings into the ACD group and then within the next 30 seconds 5 more calls ring into the same ACD group. If the first call still isn't answered after the 35-second threshold, the newest call will be transferred to Voice Mail. But in less than two seconds, when that call transfers out to voice mail, the next newest call now becomes the newest existing call, so it too will be transferred to Voice Mail. This process continues as long as the first call is still ringing (because the 35-second threshold is still met), until all of the existing calls are all transferred to Voice Mail.

Next Call to Arrive

This means the next call to ring into the ACD group AFTER the threshold is met. This is typically the best choice for most situations.

Appendix D: OAISYS Chat and Net Phone Integration

ACD Manager can be used with *OAISYS Chat* to send broadcast messages to ACD agents or supervisors to notify them with a Pop Up message on their PC screen when selected thresholds have been met or exceeded. The setup to accomplish this has been made much more simple with the addition of the "Send Chat Broadcast" action (see Actions section above)

Also, with the addition of the "Send Message to Net Phone" action, it is now very simple to notify agents when the call load is backing up and allow them to log in, or make themselves available to take calls, with the single click of the mouse. Please see the **Action Types** section above for details.