



**Call Center Solutions  
General Description**

# Publication Information

**Toshiba America Information Systems, Inc.**  
**Telecommunication Systems Division**

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The Strata CIX100, CIX200 or CIX670 Digital Business Telephone System is registered in accordance with the provisions of Part 68 of the Federal Communications Commission's Rules and Regulations.

### FCC Requirements

**Means of Connection:** The Federal Communications Commission (FCC) has established rules which permit the Strata CIX system to be connected directly to the telephone network. Connection points are provided by the telephone company—connections for this type of customer-provided equipment will not be provided on coin lines. Connections to party lines are subject to state tariffs.

**Incidence of Harm:** If the system is malfunctioning, it may also be disrupting the telephone network. The system should be disconnected until the problem can be determined and repaired. If this is not done, the telephone company may temporarily disconnect service. If possible, they will notify you in advance, but, if advance notice is not practical, you will be notified as soon as possible. You will be informed of your right to file a complaint with the FCC.

**Service or Repair:** For service or repair, contact your local Toshiba telecommunications distributor. To obtain the nearest Toshiba telecommunications distributor in your area, log onto [www.toshiba.com/taistsd/pages/support\\_dealerlocator.html](http://www.toshiba.com/taistsd/pages/support_dealerlocator.html) or call (800) 222-5805 and ask for a Toshiba Telecom Dealer.

**Telephone Network Compatibility:** The telephone company may make changes in its facilities, equipment, operations, and procedures. If such changes affect the compatibility or use of the Strata CIX100, CIX200 or CIX670 system, the telephone company will notify you in advance to give you an opportunity to maintain uninterrupted service.

**Notification of Telephone Company:** Before connecting a Strata CIX system to the telephone network, the telephone company may request the following:

1. Your telephone number.
2. FCC and ACTA registration
  - Strata CIX100, CIX200 or CIX670 may be configured as a Key, Hybrid or PBX telephone system. The appropriate configuration for your system is dependent upon your operation of the system.
  - If the operation of your system is only manual selection of outgoing lines, it may be registered as a Key telephone system.
  - If your operation requires automatic selection of outgoing lines, such as dial access, Least Cost Routing, Pooled Line Buttons, etc., the system must be registered as a Hybrid telephone system. In addition to the above, certain features (tie Lines, Off-premises Stations, etc.) may also require Hybrid telephone system registration in some areas.
  - If you are unsure of your type of operation and/or the appropriate FCC registration number, contact your local Toshiba telecommunications distributor for assistance.

FCC Registration Numbers			
SYSTEM	PBX Fully-protected PBXs	Hybrid Fully-protected multifunction systems	KEY Fully-protected telephone key systems
CIX40	N/A	CJ6MF03BDTCHS40	CJ6KD03BDTCHS40
CIX100	CJ6MUL-35931-PF-E	CJ6MUL-35930-MF-E	CJ6MUL-35929-KF-E
CIX200	CJ6PF03BDTCHS192	CJ6MF03BDTCHS192	CJ6KD03BDTCHS192
CIX670	CJ6MUL-35934-PF-E	CJ6MUL-35930-MF-E	CJ6MUL-35932-KF-E

- Ringer equivalence number: 0.3B. The ringer equivalence number (REN) is useful to determine the quantity of devices which you may connect to your telephone line and still have all of those devices ring when your number is called. In most areas, but not all, the sum of the RENs of all devices connected to one line should not exceed five (5.0B). To be certain of the number of devices you may connect to your line, as determined by the REN, you should contact your local telephone company to ascertain the maximum REN for your calling area.

3. Network connection information USOC jack required: RJ11/14C, RJ21/2E/2F/2G/2HX/RJ49C (see Network Requirements in this document). Items 2, 3 and 4 are also indicated on the equipment label.
4. Authorized Network Parts: 02LS2/GS2, 02RV2-T/O, OL13C/B, T11/12/31/32M, 04DU9-BN/DN/1SN, 02IS5, 04DU9-BN/DN/1SN1ZN

### Radio Frequency Interference

Warning: This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the manufacturer's instruction manual, may cause interference to radio communications. It has been tested and found to comply with the limits for a Class A computing device pursuant to Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference, in which case, the user, at his/her own expense, will be required to take whatever measures may be required to correct the interference.

### Underwriters Laboratory

This system is listed with Underwriters Laboratory (UL). Secondary protection is required, on any wiring from any telephone that exits the building or is subject to lightning or other electrical surges, and on DID, OPS, and Tie lines. (Additional information is provided in this manual.)



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CP01, Issue 8, Part I Section 14.1

Notice: The Industry Canada label identifies certified equipment. This certification means that the equipment meets certain telecommunications network protective, operational and safety requirements as prescribed in the appropriate Terminal Equipment Technical Requirements document(s). The Department does not guarantee the Equipment will operate to the user's satisfaction.

Before installing this equipment, users should ensure that it is permissible to be connected to the facilities of the local telecommunications company. The equipment must also be installed using an acceptable method of connection. The customer should be aware that compliance with the above conditions may not prevent degradation of service in some situations.

Repairs to certified equipment should be coordinated by a representative designated by the supplier. Any repairs or alterations made by the user to this equipment, or equipment malfunctions, may give the telecommunications company cause to request the user to disconnect the equipment.

Users should ensure for their own protection that the electrical ground connections of the power utility, telephone lines and internal metallic water pipe system, if present, are connected together. This precaution may be particularly important in rural areas.

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**CAUTION! Users should not attempt to make such connections themselves, but should contact the appropriate electric inspection authority, or electrician, as appropriate.**

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CP01, Issue 8, Part I Section 14.2

Ringer Equivalence Notice: The Ringer Equivalence Number (REN) assigned to each terminal device provides an indication of the maximum number of terminals allowed to be connected to a telephone interface. The terminal on an interface may consist of any combination of devices subject only to the requirement that the sum of the Ringer Equivalence Numbers of all the Devices does not exceed 5.

Hearing Aid Compatibility Notice: The FCC has established rules that require all installed business telephones be hearing aid compatible. This rule applies to all telephones regardless of the date of manufacture or installation. There are severe financial penalties which may be levied on the end-user for non-compliance.

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**Toshiba America Information Systems, Inc.**  
**Telecommunication Systems Division**  
**9740 Irvine Boulevard**  
**Irvine, California 92618-1697**  
**United States of America**

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**Telecommunication Systems Division**  
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# Introduction

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**Note** Unless otherwise noted in this book, references to Insight apply to the Insight CIX products. References to Strata refer to Strata CIX.

This document provides an overview of Strata CIX Call Center Solutions consisting of Automatic Call Distribution (ACD), Management Information Systems (MIS), and related Computer Telephony Integration (CTI) applications.

## Organization

This document is divided into the following major topics:

- **Chapter 1 – Strata ACD** provides an overview of the ACD features, including basic and enhanced call handling features, system features and licensing.
- **Chapter 2 – Telephone Features** covers the ACD Agent and Supervisor telephone options.
- **Chapter 3 – ACD System Administration** covers the capabilities provided with this PC software that interfaces with the Strata ACD system.
- **Chapter 4 – Insight CIX** describes the MIS features and their interactions with the Strata ACD application and the Strata.
- **Chapter 5 – TASKE Reporting and Monitoring** covers TASKE Contact, Display Central, Desktop, TASKE Enterprise, and TASKE Workforce Management Interface.
- **Chapter 6 – Optional Application Products** describes applications available for Strata to enhance its operations.
- **Chapter 7 – CTI/ACD Applications** describes the types of application solutions that the Strata ACD package can provide.
- **Chapter 8 – Network ACD Application** – describes Network ACD and the Strata Unifier software required to support the application.

## Conventions

Conventions	Description
<b>Note</b>	Elaborates specific items or references other information. Within some tables, general notes apply to the entire table and numbered notes apply to specific items.
<b>Important!</b>	<i>Calls attention to important instructions or information.</i>
Arial Bold	Represents telephone buttons.
<b>Courier</b>	Shows a computer keyboard entry or screen display.
+	shows a multiple PC keyboard or phone button entry. Entries without spaces between them show a simultaneous entry. Example: <b>Delete+Enter</b> . Entries with spaces between them show a sequential entry. Example: # + 5.
Tilde (~)	Means “through.” Example: 350~640 Hz frequency range.
<a href="#">See Figure 10</a>	Grey words within the printed text denote cross-references. In the electronic version of this document (Strata CIX ACD Application Software and Documentation Library CD-ROM or FYI Internet download), cross-references appear in blue hypertext.

## Related Documents/Media

**Note** Some documents listed here may appear in different versions on CD-ROM or in print. To find the most current version, check the version/date in the Publication Information on the back of the document's title page.

### User Guides and Manuals

Located on the Strata Call Center Solutions Application Software and Documentation Library CD-ROM:

- Strata CIX ACD Agent/Supervisor User Guide
- Strata CIX ACD System Administrator Guide
- Strata CIX ACD Installation Guide
- Strata CIX IPT/DKT Telephone User Guide
- Strata CIX Insight CIX Installation Manual
- Strata CIX Insight CIX Supervisor Guide
- Strata CIX Insight CIX inView Quick Reference Guide

Located on Internet FYI or OAISYS support website:

- Net Server Operations Manual
- Voice Assistant Installation Guide
- Chat, System Administrator's Guide
- Call Router on CIX Operations Manual
- Net Phone System Administrator's Guide

### CD-ROMs

- Strata CIX Call Center Solutions Application Software and Documentation Library for Strata ACD, Insight, Net Server, and Voice Assistant

For *authorized users*, Internet site FYI (<http://fyi.tsd.toshiba.com>) contains all current Strata CIX documentation and enables you to view, print and download current publications.

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This chapter discusses the capabilities of the Strata CIX Automatic Call Distribution (ACD) application. It describes the ACD features and services provided by the Strata digital business telephone system to support various features.

The Strata ACD application gives call centers the ability to determine how calls are best distributed to their ACD Agents. ACD call centers can be Telemarketing, Customer Service, Technical Support, or any other group that handles large numbers of calls. With the Strata ACD application, calls can be directed in a variety of ways to ensure that calls are handled quickly and efficiently.

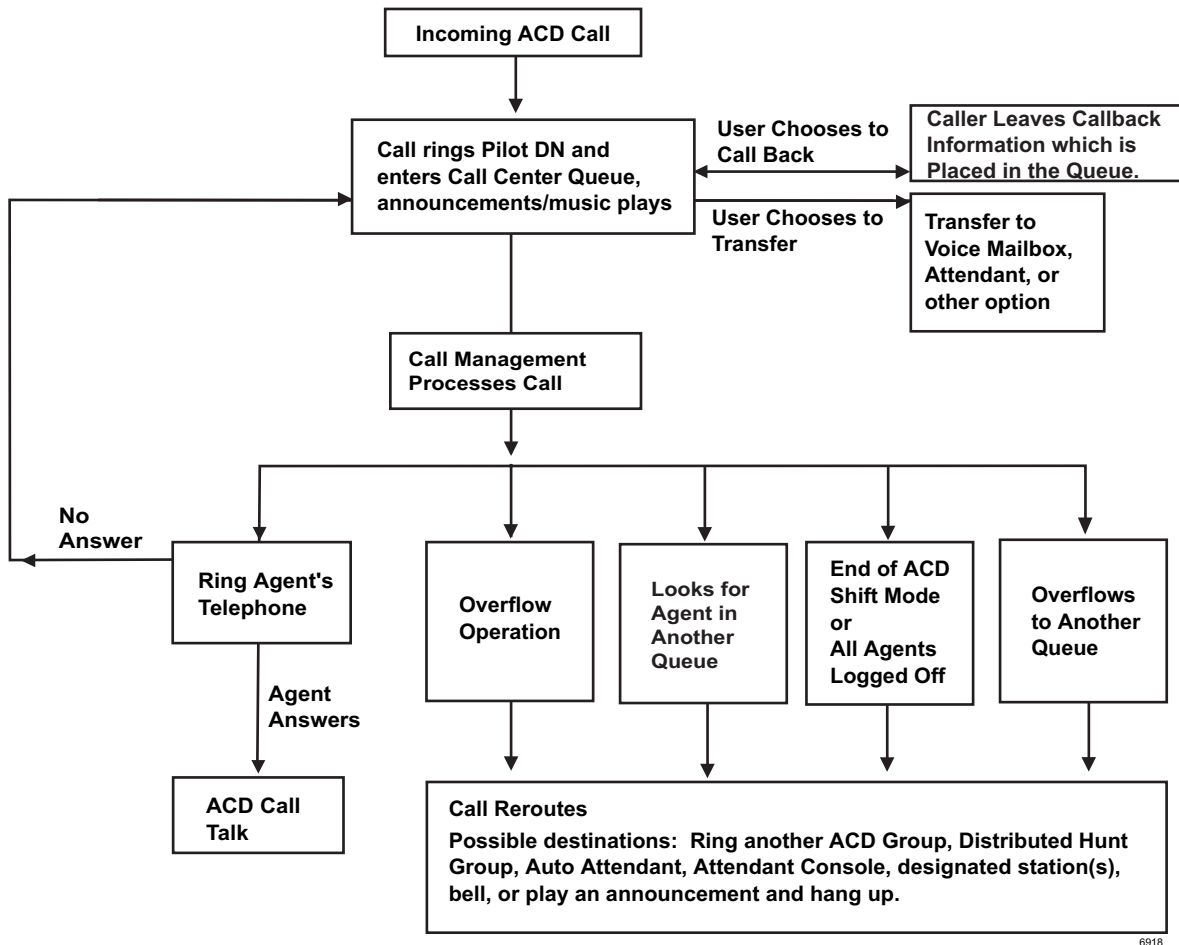
Strata ACD also interacts with applications from other vendors that help meet the overall needs of a call center. It includes OAISYS Tracer (recording application) or TASKE Contact (MIS application).

Toshiba provides the choice of platforms that run the Strata ACD Server application, the MIS reporting application, and other CTI applications. The option to run these applications on a customer-supplied platform is also provided.

The ACD application is available with Basic and Enhanced feature functionality, along with the license for the number of ACD agents to provide cost-effective pricing levels according to the user's needs.

When the Strata receives an ACD call, it routes the call to a Pilot DN and the call enters the call center queue. From the queue, the call progresses to one of these options (see the flowchart on next page):

- Search for an Agent.
- Follow the specified call management rules.
- Follow the End of Shift operation if the shift has ended or if all Agents have logged out.



## Pilot Directory Number

When the Strata receives an ACD call, it routes to a type of phantom directory number (Pilot DN). From the Pilot DN, the ACD call enters the call center queue. When a call is directed to the ACD Pilot DN, the ACD software takes over control of the call, instead of the Strata.

The Pilot DN can redirect calls to a voice mailbox or After Shift destination if the link to the ACD Agents is down. The ACD System software provides a control to turn routing on or off to the After Shift destination.

## Music or Announcement Sources

Calls waiting in queue are connected either to a music source port that plays music or to pre-recorded announcements. These are defined per queue in order to provide information related to the function of that queue. Strata CIX provides up to 15 music sources. The announcements are provided by the ACD server. No external digital devices are required. The call control software assigns the music source on a call-by-call basis.

### Announcements

Informative announcements can be played to callers in queue at various intervals. If an Agent becomes available during an announcement, the call can be immediately routed to an agent or can wait until the announcement is completed. During the announcement, the call keeps its place in queue.

Two types of announcements can be programmed to play per queue: Initial and Periodic (repeating). For Initial announcements, if the timer is set to zero, it is always played before a call is routed to any Agent.

Once a call has been answered and the Initial announcement has been played, the call is held in a queue and the assigned announcement or music plays for the caller. The timing of the initial and periodic announcements is programmable.

The announcement can be either a fixed message or an intelligent message that provides information about the call wait time or the queue position. The announcement can also provide an option to leave a message in voice mail.

The enhanced version of ACD provides an option for callback. While the caller goes on-hook to wait for callback, the callback request retains its position in the queue until an agent becomes available.

Intelligent announcements should *not* be used in some configurations. For example, priority queuing, where higher priority calls push back existing calls in queue, thus changing the estimated wait time.

## Agent Search Methods

Once a call enters the ACD queue, it searches for available Agents. The search methods are:

- **Linear** – Always starts from the top of the Agent list and finds the first available Agent.
- **Round Robin** – Next Agent on the Agent list gets the waiting call. The next call rotates to the next Agent, etc.
- **Longest Idle** – The Agent who has been idle the longest receives the next call. An Agent's "start of idle" status affects all queues – that is if the Agent just completed a call in Queue #1, that Agent is now idle for any other queue that the Agent is logged into.
- **Balanced Call Count** – The Agent who has handled the lowest number of calls receives the next call. When an Agent logs in, the Agent is set to zero calls if the Agent is the first to log into the group or the Agent can be set to the lowest call count of any Agent already logged in. This prevents Agents that logged in late from getting all of the calls.

- **Preferred Agent** – Based on integration with optional applications, the system can route the call to the Agent assigned to a specific account to handle the call. If that Agent is not available, the call routes to the next available Agent.

In the Enhanced version, the following options are also available:

- **Timer** – An ACD queue timer enables a call to wait a certain number of seconds to determine if the agent becomes available prior to going into queue.
- **Auto-Learn** – (requires Call Router) Sends Preferred Agent information to Call Router. The Call Router updates its Preferred Agent field for that CallerID/ANI so that the Preferred Agent is used on all future calls from that telephone number.
- **Change Preferred Agent** – (requires Net Phone) An agent can answer a call, change the Preferred Agent field, and then transfer the call back to the ACD queue. The call then tries to give the call to that preferred agent.
- **Skills-Based Routing** – Agents can log into the queues that they have the skills to support—for example, one queue for English-speaking clients, another for Spanish-speaking clients. An Agent who is bilingual can log into both queues. The ACD system can work with Interactive Voice Response (IVR) to send calls to the appropriately skilled Agents.
- **Agent Priority** – The Agent with the highest priority setting receives the next call. If multiple Agents have the same priority level, the Agent who was idle longest gets the call. This automatically expands the pool of Agents searched, based upon call traffic.

The Agent can log into multiple groups with a different priority in each group to allow for a more flexible skills based routing configuration.

## Call Handling

The ACD application is available in a basic and enhanced package. Enhanced ACD includes all basic capabilities plus multiple group login, priority queuing, time-scheduled ACD queues, agent and call priority escalation handling, balanced call count agent search and callback.

In addition to the Agent search methods described earlier, there are a number of enhanced features that provide greater flexibility and automatic call sorting.

### Multiple Group Agent/Supervisor Login

#### **System Availability: Enhanced Version**

ACD agents or supervisors can be logged into multiple ACD groups, enabling agents to answer calls for multiple groups. This is very useful for backup coverage between groups. It's also the foundation for skills-based routing and agent priority routing, enabling many advanced call center applications.

### Priority Queuing

#### **System Availability: Enhanced Version**

This feature enables high priority calls to be answered sooner than low priority calls. ACD calls can be tagged optionally with a priority number before they are placed into the ACD queue. The priority number assigned to the call determines where the call is placed in queue. Priority values range from 0 to 100, with 100 being the highest priority. Call priorities can be assigned through IVR or the Call Router. Identifying the caller when the call arrives is key to setting call priorities. This can be done using Net Phone (manually) or automatically using the Call Router or IVR.

## Priority Escalation

The escalation parameter ensures that calls in queue will advance in answer status despite an influx of high priority calls. An escalation value can be assigned to increment the priority value to ensure that calls with a lower initial value are eventually answered. Escalation value is programmed in seconds.

Each queue can have a pre-set priority value. Calls without an assigned priority take on the queue value. Calls with higher values keep the higher value.

Escalation ensures that calls are routed to available Agents based on two factors: highest priority and oldest ringing call. Agents logged into multiple groups receive the highest priority call of all of those groups.

## Call Backs (Real Time)

### System Availability: Enhanced Version

At a voice assistant announcement prompt, the caller is offered the choice to be called back when his/her place in queue occurs. If the caller chooses the Call Back option, he/she is prompted for his call back number and optionally to describe the reason for his call. The ACD holds his/her place in queue, and when it's ready to be answered by an Agent, the ACD places the callback call.

If the caller does not choose the Call Back option, the call remains in the ACD queue searching for the next available agent.

This option uses the same criteria provided for queue management, and will only begin when the queue conditions deem it necessary.

## Missed Call Unavailable

### System Availability: Basic or Enhanced Versions

Options are provided to make an Agent automatically unavailable or logged out if they miss an offered ACD call. A call is considered missed if the call is not answered and advanced to the next Agent using the "No-Answer Advance" timer.

## Abandoned Calls

### System Availability: Basic or Enhanced Versions

Callers who hang up without ever being answered by an Agent are considered "abandoned." Whenever this occurs, appropriate MIS events are generated and an action can be triggered (for example, to log the call).

## Overflow/Reroute

### System Availability: Basic or Enhanced Versions

The amount of time that a call stays in this queue before it is routed to the overflow destination is programmable.

An overflow action can occur when calls remain in queue beyond an acceptable time period. The action to be taken is programmable, but typically the call is moved to another location.

A reroute action is triggered when the queue is disabled or no Agents are logged in to take calls. This action is also programmable, but frequently, the caller is sent to a reroute destination.

## Enhanced Queue Management

### System Availability: Enhanced Version

Enhanced ACD provides programmable triggers and actions to intelligently manage calls that are “unlikely to be answered in a timely fashion.”

The following conditions may be checked for both the current and target queues against the programmable value:

- Number of calls waiting in a queue
- Waiting calls/agent ratio
- Agent utilization

If the conditions are met for both the current and target queues, the following actions may be taken for the call:

- Route the call to the target queue
- Available agent search is expanded to include the target group

## System Capacities

The ACD software is scalable from a system of 10 Agents to 360 Agents with one agent increment.

**Table 1 Strata CIX System ACD Capacities**

ACD Max. Capacities	CTX28	CIX40	CIX100	CIX200	CIX670 Basic Processor BCTU	CIX670 Expanded Processor BCTU + BEXU
Number of Pilot DN's (ACD Groups)	100	100	100	200	200	256
Music-on-hold Sources	3 <sup>1</sup>	3	15	15	15	15
Voice Assistant Announcement Ports	2	24 <sup>2</sup>	64 <sup>2</sup>	58 <sup>2</sup>	96 <sup>2</sup>	96 <sup>2</sup>
Agents/Supervisors	360 <sup>3</sup>	360 <sup>3</sup>	360 <sup>3</sup>	360 <sup>3</sup>	360 <sup>3</sup>	360 <sup>3</sup>
Maximum Number of Extensions (PDNs)	16	24	72	160	160	560
Maximum number of calls waiting in a queue	28	56	56	64	64	64

1. Two analog ports are shared with Voice Assistant ports.

2. Actual capacity depends on the platform and the card. MAS supports up to 32 Voice Assistant ports for the dedicated ACD system and up to 16 for a system shared with voice mail.

3. Number of configured agents with a license.

# Feature Summary

Basic and Enhanced features are shown in [Table 2](#). (X = Feature included.)

**Table 2 ACD Basic and Enhanced Model Features**

<b>Queue Management Features</b>	<b>Basic</b>	<b>Enhanced</b>
Agent Search Methods		
• Linear	X	X
• Round Robin	X	X
• Longest Idle	X	X
• Balanced Call Count		X
• Agent Priority		X
Supervisor Search Methods		
• Linear	X	X
• Round Robin	X	X
Announcement Management	X	X
• Simple Announcements	X	X
• Intelligent Announcements	X	X
Overflow Timer and Destination	X	X
No Answer Agent Advance	X	X
Enhanced Queue Management		
• Re-route to another queue		X
• Look-ahead agent routing		X
Call Backs (real time)		X
Queue Management of Music-on-hold (MOH), Announcements and Timers	X	X
Primary-level Skills Routing		X
Preferred Agent		X
Queue Start/Stop Schedules		X
Call Priority and Escalation		X
<b>Agent Features</b>	<b>Basic</b>	<b>Enhanced</b>
Log In	Single	Multiple
Unavailable/Available	X	X
Wrap up Timer	X	X
End Wrap up Timer	X	X
Group Call Pick Up	X	X
Agent Help (Supervisor Assistance)	X	X
Work Units	X	X
Auto Answer with Zip Tone	X	X
Agent Scripting	X	X

**Table 2 ACD Basic and Enhanced Model Features** (continued)

<b>Supervisor Features</b>	<b>Basic</b>	<b>Enhanced</b>
Log In	Single	Multiple
Option to Take Calls as Agent	X	X
Agent Assistance (Agent Requests Help)	X	X
Call Monitoring – Silent	X	X
Call Monitoring – Participating	X	X
Queue Alarms	X	X
<b>System Features</b>	<b>Basic</b>	<b>Enhanced</b>
MIS Interface – Insight (optional)	X	X
Interfaces to other Optional Modules:	X	X
• Call Router	X	X
• Voice Assistant IVR	X	X
• Net Phone <sup>1</sup>	X	X
• Chat	X	X

1.ACD viewer required for enhanced ACD.

## License Policy

The set of features provided are controlled through the license that defines these capabilities:

- Basic or Enhanced mode of operation
- Number of configured Agents
- Number of MIS Supervisors and options

Other options such as Call Router, Net Phone, etc., are available by the proper license.



# System Configuration

Strata ACD has two major configuration options, one for traditional Time Division Multiplex (TDM)-based system and the other for Voice Over IP (VoIP)-based system.

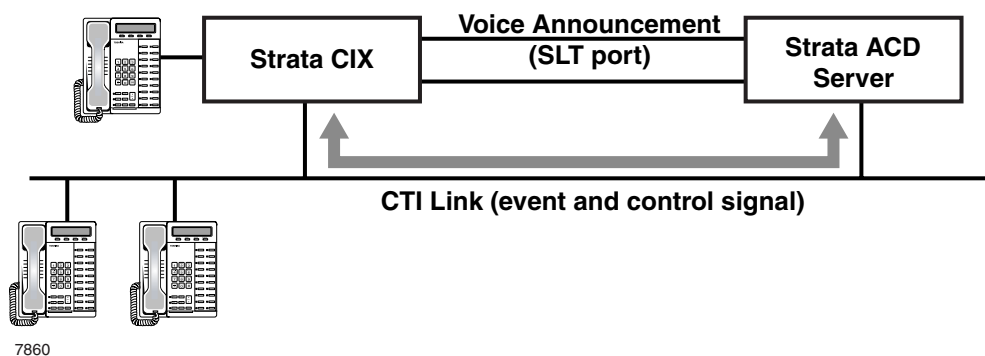
## Strata ACD for TDM

The chart below shows the Strata ACD system based on the traditional TDM system. Announcement ports are connected to the analog station ports of the switch while Strata ACD uses the LAN for all other informational exchange between the switch and the client.

The Strata ACD Server application runs on an industrial-grade computer that serves the ACD application, the MIS reporting application, and other CTI applications. It is important to use a high quality, dependable PC with card slots that fit the required Intel® Dialogic® trunk cards.

ACD Release 2 is shipped with Dialogic drivers V5.1.1 which supports both ISA and PCI card slot types. Please note that not all Dialogic PCI cards will work in all PCI motherboards because there are two different standards for the PCI slots. The new standard uses a 3.3 volt power lead. Some Dialogic cards use the older 5 volt power lead and do not fit in the newer PCI slots.

Toshiba provides packaged models including necessary hardware and software. Toshiba also provides multiple server models to accommodate customer's specific needs.

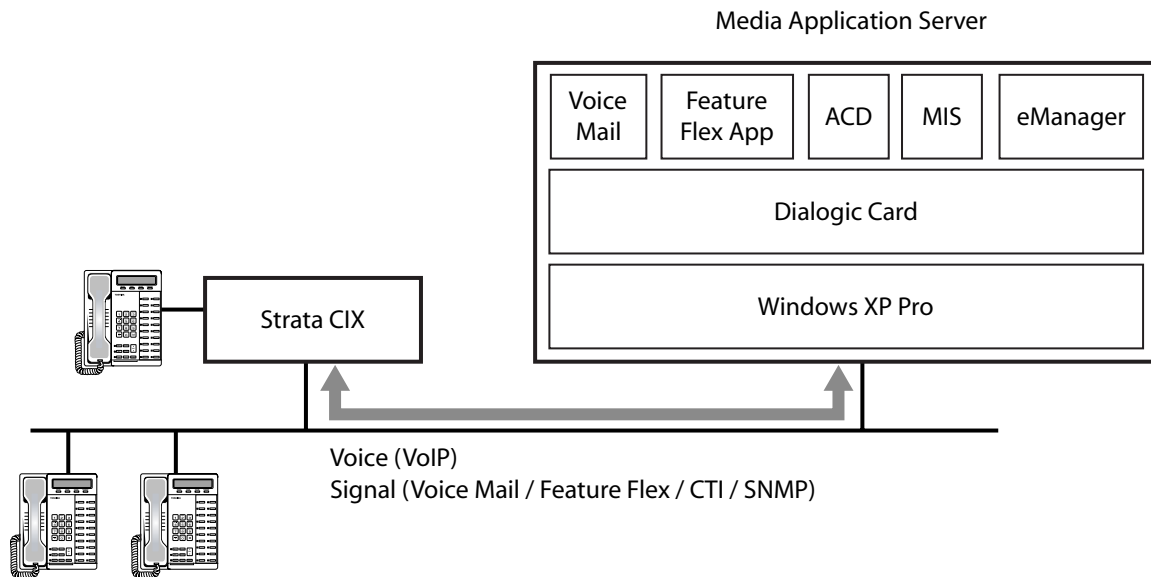


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## Strata ACD for MicroMAS-D

Strata ACD application can run on the MicroMAS-D that uses Dialogic voice cards. MicroMAS-D supports up to 8 ports of Voice Assistant ports or voice mail ports.

MicroMAS-D can run on multiple applications.



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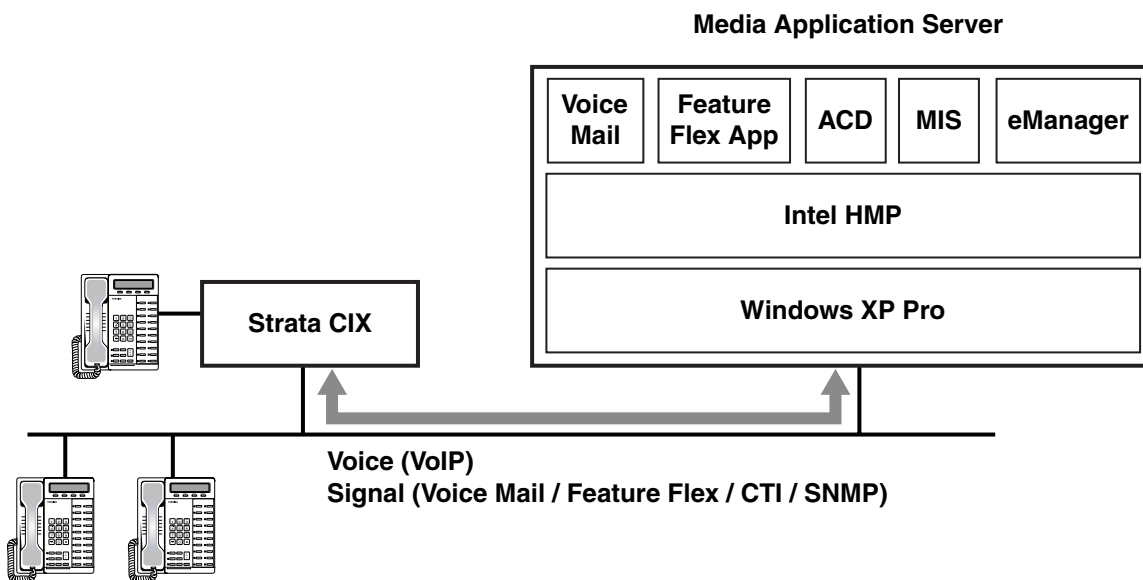
## Strata ACD for MAS/MicroMAS-H

Strata ACD application can run on the Media Application Server (MAS) or MicroMAS-H that runs multiple VoIP applications. The chart below shows the Strata ACD system based on the state of the art VoIP technology. Announcement ports use VoIP technology to connect to the Strata CIX system.

MAS supports up to 32 Voice Assistant ports when running only Strata ACD and supports up to 8 Voice Assistants when running both voice mail and Voice Assistant ports. MicroMAS-H supports up to 8 ports of Voice Assistant or Voice mail ports.

MAS uses an industry standard rackmount server where ACD and MIS applications are preinstalled. To activate applications, necessary licenses must be purchased and applied.

Strata ACD for MAS provides the customer with the easier installation, configuration, and maintenance.



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## PBX Services

ACD and MIS are provided by CTI applications running on an external ACD server module connected to Strata via the Computer Supported Telephone Applications (CSTA) Open Architecture Interface (OAI) port. The CTI server runs both the ACD call processing application and the separate MIS application, such as Insight, as well as other CTI applications.

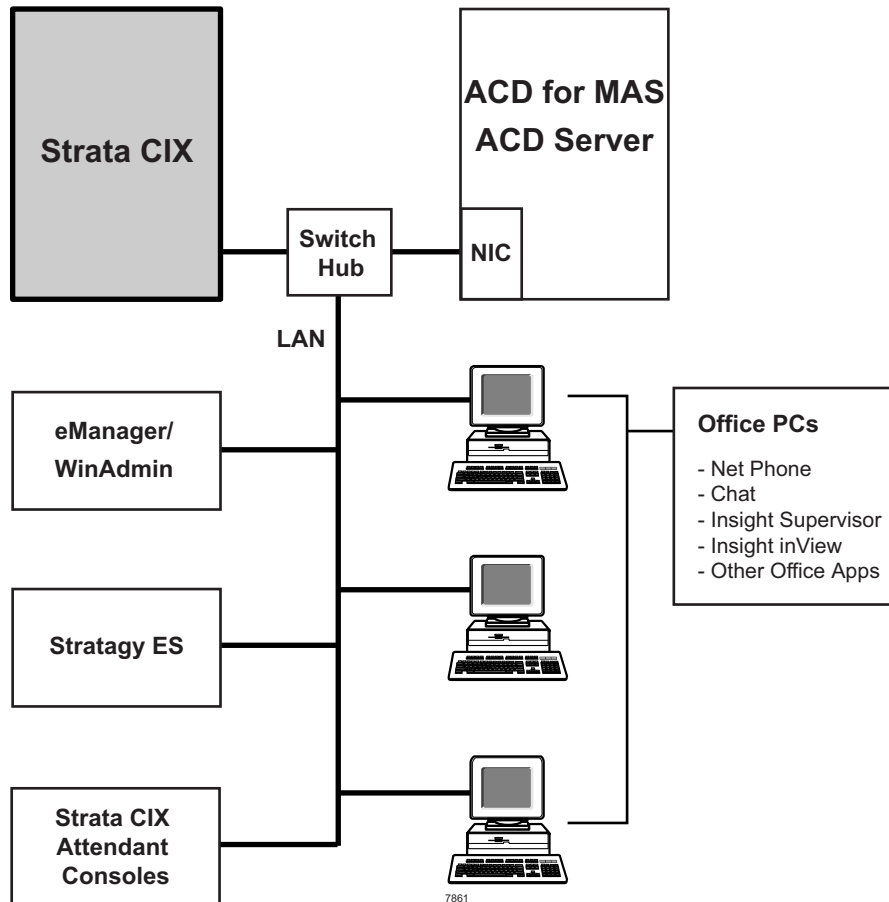
Strata provides a number of services to support ACD beyond the CSTA link. These services allow features and functions to occur in an orderly manner within the PBX. All calls are handled by the PBX at the instruction of the external software. See [Chapter 7 – CTI / ACD Applications](#) for more information.

## Network Configuration

There are two ways to configure the ACD system with the Strata.

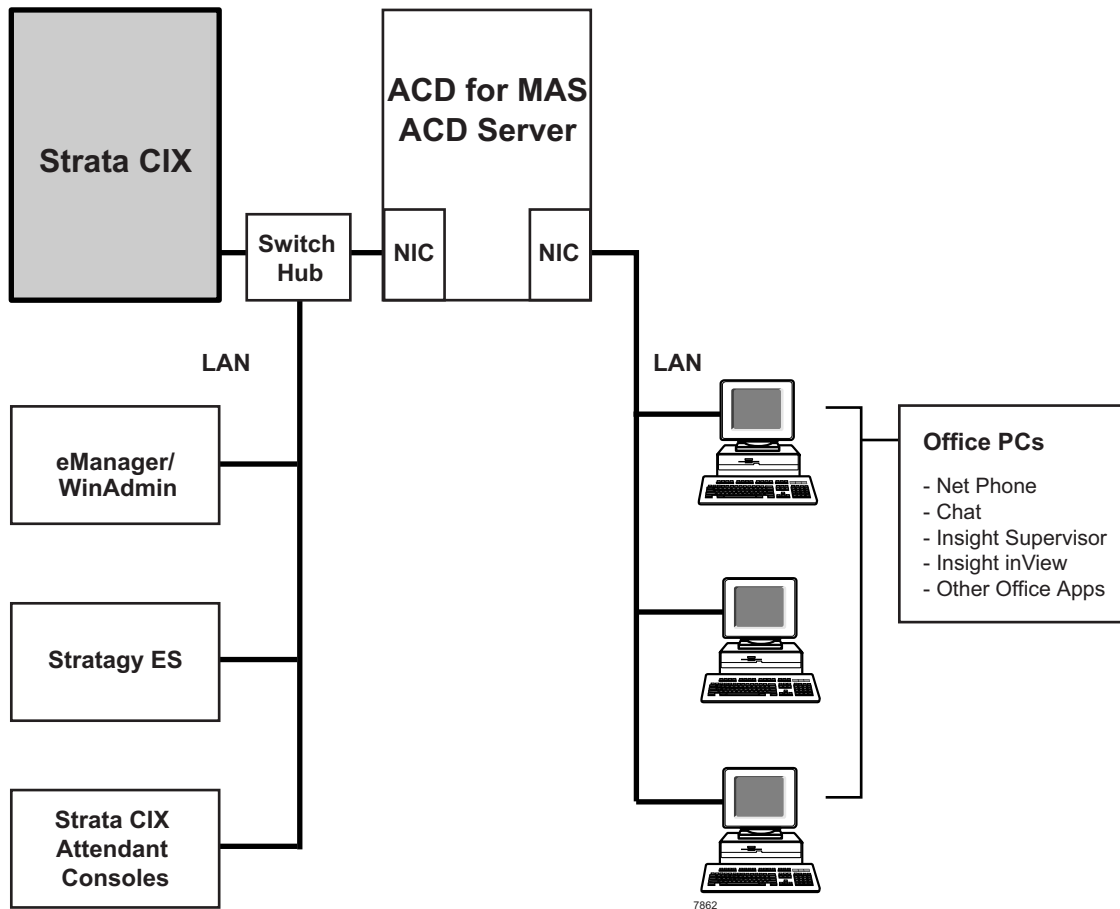
### Single NIC Configuration

The first is with a single Network Interface Card (NIC), where the Strata and all the users are connected directly to the customer's Local Area Network (LAN) and must be coordinated with the rules for that LAN (see illustration below).



## Dual NIC Configuration

The second method, dual NIC configuration, enables you to separate the office PCs from the core telephone system. This separates traffic for both the telephone equipment and the customer's other uses for an in-house LAN (see illustration below).



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# Telephone Features

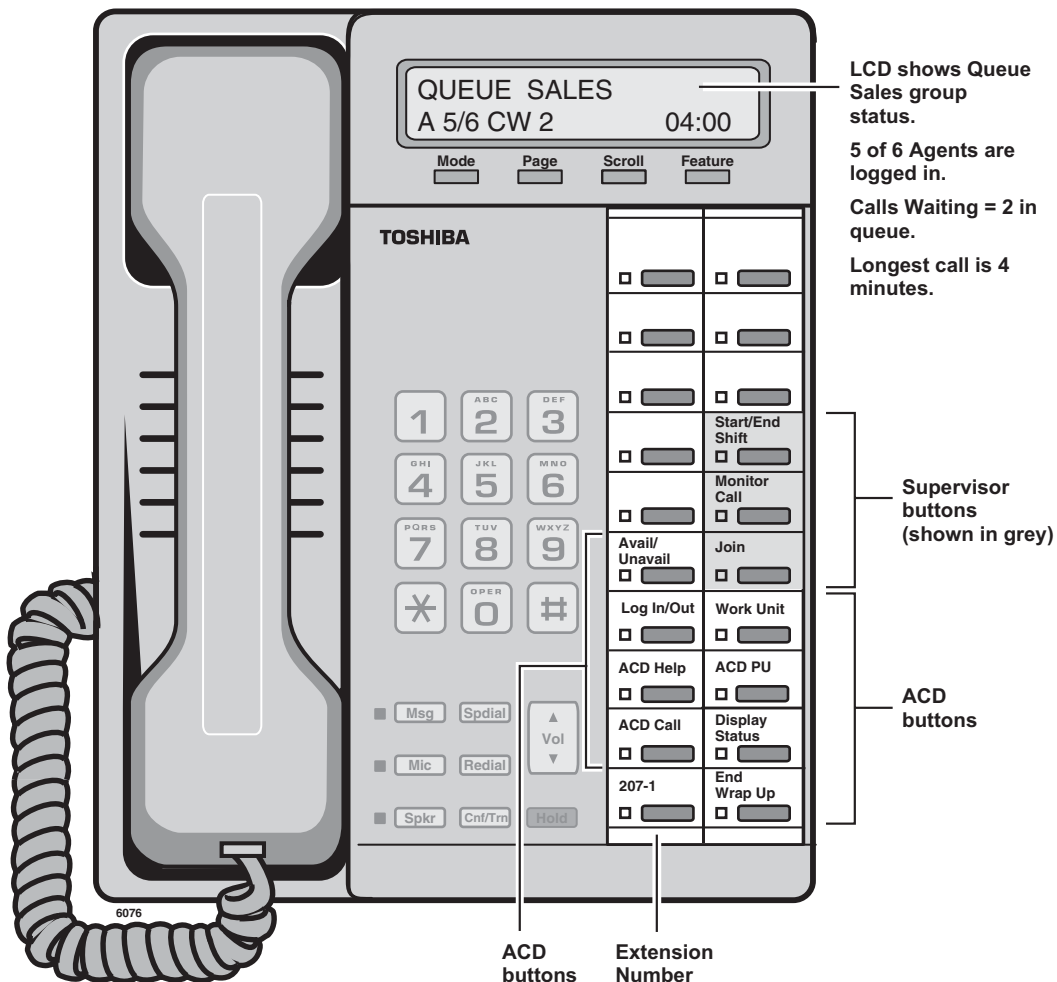
# 2

This chapter covers the telephone features for ACD Agents and Supervisors.

ACD Agents can use a Toshiba Strata 3000- or 2000-series digital telephone to log into an ACD Group, provided that the telephone has a unique, single-appearing extension. Toshiba recommends using a Strata 3000-series Liquid Crystal Display (LCD) telephone for all Agents requiring display functions. The Strata 3000-series LCD digital telephone has improved data handling capabilities for instantaneous display updates. If the Strata 2000-series LCD digital telephone is used, the display will go blank for one to several seconds during ACD information updates.

Tones are provided for most features to indicate “entry accepted,” “entry rejected,” etc., for those Agents and Supervisors who do not have an LCD telephone.

A DKT3000-series model telephone with typical ACD feature buttons is shown below.



# Agent Telephone Features

The following features are available from the Strata DKT3000 or 2000-series telephone or from the OAISYS Net Phone, an on-screen PC telephone.

## Log In/Log Out

After entering a valid Agent ID, password (optional), and queue number, the telephone becomes available for receiving ACD calls and the ACD feature codes are activated. The extension that is used to log into an ACD Group becomes the telephone's ACD Call button.

After logging out, the ACD features are deactivated on the telephone and the telephone is logged out of the ACD Group. Non-ACD calls are not registered as PBX calls for MIS reporting purposes.

After all Agents have logged out, new ACD calls are redirected to the reroute destination. Calls currently in queue go to the overflow destination.

Agents are identified by name and an Agent ID code. A pass code can be assigned to each Agent for log in purposes. Agents log in or out using a DKT telephone or Net Phone. Each Agent is assigned a priority to allow calls to be routed to an available Agent with the highest priority for the enhanced version.

The Agent may have the following states:

- Logged Out – Not logged into the queue.
- Available – Logged in and available to handle the next call.
- Unavailable – Logged in, but not available to handle calls.
- Wrap Up Work – Not open to ACD calls, completing paperwork or other post ACD-call information before handling the next call. Also known as “After Call Work.”
- PBX Call – Logged in, but busy on the ACD Call button with a non-ACD Call.

## Available/Unavailable

This feature enables temporary unavailability for ACD calls without logging out. Unavailable status can be used for lunch and coffee breaks, or extended times away from the telephone during the shift.

While in the Unavailable status, calls are not delivered to that Agent. Agents can change their status by pressing the Avail/Unavail button.

An option is provided within each group to automatically place an Agent in the Unavailable status if the Agent does not answer an ACD call within the Ring Timing Interval. This avoids delivering calls to an Agent that does not answer calls because he/she failed to change status.

Calls stack up in queue if all Agents are Unavailable. An alarm can be set to trigger when too many calls are in queue. New calls go to the reroute destination only if all Agents log out. Calls in queue follow the overflow destination.

When using Net Phone to place an Agent in an Unavailable status, there are 10 codes that can be used to identify the reason for the unavailability. These codes are reported in the MIS reports and appear on the monitor screen.



## Wrap Up Time

This mode (also known as “After Call Work” mode) is a pre-defined mode with a time limit that enables an Agent to process information related to the last ACD call without interruption. When the wrap up time limit expires, ACD calls are routed to the Agent. The Agent can also have an End Wrap Up telephone button. When the Agent presses End Wrap Up, wrap up time ends in one second. An Agent can make/receive PBX calls during the wrap up time period.

## Work Unit

This feature enters an Account Code. The code is sent to the MIS reporting system for inclusion in its reports.

## ACD Help

Agents using digital telephones may have an ACD Help button on their telephone as a hot-line to the Supervisor for assistance. Pressing this feature button, alerts the ACD software to find the Supervisor, if logged in, and create a call to that location placing the current call on hold. Once the call is completed, the user may use PBX features to conference the caller into the call as a three-way call or hang up and return to the original caller.

Multiple Supervisors are allowed for each queue, so the ACD system can be set to use either a linear or round-robin method to find an available Supervisor.

## ACD Call Pickup

This feature provides an easy method for an Agent to quickly pick up a ringing ACD call on another Agent’s telephone. By pressing the ACD PU button, the Agent redirects the longest ringing call within the Agent’s group(s) to his/her telephone.

This feature follows these guidelines for picking up ACD calls:

- Both stations must be in the same ACD Group.
- The incoming call must be an ACD call for that group.
- Your ACD Call button must be idle.
- You must be in an available state.

## Auto Answer with Zip Tone

This option determines whether ACD auto-answers a call and then sends an audible tone to the connection. This feature is enabled on an Agent-by-Agent basis.

# Supervisor Telephone Features

ACD Group Supervisors must use a Toshiba Strata 3000-series digital telephone with an LCD. The LCD provides important information about the ACD Group or an individual Agent's activities.

The ACD Group Supervisor's log in enables access to features that are exclusive to Supervisors. Each Supervisor is identified by an ID code and a name. Each Supervisor can have a unique log in code. Supervisors can log in or out using a digital telephone or Net Phone.

- Start/End Shift is used to start or end an ACD shift. End Shift prevents calls from entering the ACD queue.
- Another ACD button is Monitor Call, which enables Supervisors to monitor Agent's conversations on ACD calls. Supervisors can also participate in the call by pressing Join Call.
- Both Agents and Supervisors can display the queue status, but Supervisors can display the call status of individual Agents.
- Agents can call the ACD Group Supervisor for help with an ACD call. The Supervisor can talk to the Agent with the ACD call on hold, or talk exclusively to the caller while the Agent drops out, or participate in a three-way conversation with the Agent and the ACD caller. When an Agent presses ACD Help, the call is routed to an available Supervisor using linear or round robin search. If the Supervisor is busy on the ACD Call button, the call is delivered to that button with the camp-on option, not overridden.
- Supervisors can opt to log in as an Agent in order to alleviate heavy call loads. They receive calls only when no agent is available for the next call.

## Log In/Log Out

The log in/log out procedure for the Supervisor is the same as for an Agent with one additional input. The Supervisor is asked to indicate if he/she wants to receive calls as an Agent. If yes, then the Supervisor is an Agent of last resort for that group.

In the Basic models, a Supervisor may only log into one group. In the Enhanced models, a Supervisor may log into multiple groups at the same time.

## Agent Assistance

Agents can call the ACD Group Supervisor(s) for assistance by pressing ACD Help on their telephones. ACD Help rings the Supervisor telephone if the Supervisor's ACD Call button is available. This feature enables the Agent to:

- Talk to a Supervisor with the ACD call on hold
- Talk to an ACD caller with the Supervisor dropping out of the call by hanging up
- Participate in a three-way conversation with the Supervisor and the ACD caller

## Call Monitoring/Join Call

Call Monitoring or Join Call enables the Supervisor to monitor conversations between an ACD Agent and caller. When the Supervisor presses Monitor Call, a one-way, listen-only path is established for the Supervisor. The monitoring feature does not apply to non-ACD calls. The Supervisor may participate in the conversation by pressing Join Call. This provides a three-way conference with the Agent and the caller.

Only one Supervisor can monitor an Agent at a time and that Agent must be a member of the group the Supervisor logged into. Monitoring continues until it is cancelled or the Agent logs out. The point of entry may be done with or without a warning tone to the existing parties of the call.

**Important!** *This feature is only intended for ACD Supervisors, so the Supervisor log in ID code should be kept confidential to prevent unauthorized use of this and other Supervisor features.*

### Notes

- Monitor only works when your telephone is idle.
- This feature is limited by the availability of conference channels. If there are no conference channels available, a reorder tone is heard.

## ACD Call Pickup

This feature works the same way as it does for Agents (see [page 17](#)).

## Queue Alarm Indication

Alarms may be created for indicating conditions within the queue that may need the attention of Agents and Supervisors. These indications can be made through ringing DKT telephones and through the LCD, or via pagers, or PC displays. LCD telephones provide the **CLR** (Clear) Soft Key to turn Alarms off.

## Start/End Shifts

An ACD Group Supervisor can have a Start/End Shift button on the telephone to start or end the shift for an ACD Group. When this button is used to enable or disable the queue, the ACD queue starts or stops receiving new calls. Calls already in queue remain there until handled by the remaining Agents.

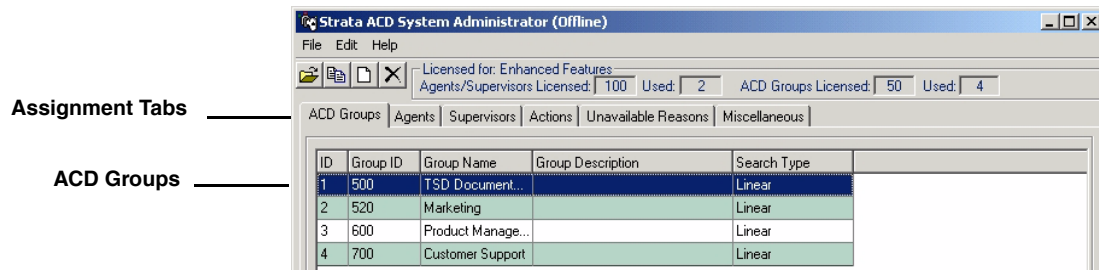
This capability can be used at the end of the work day or shift, or used during the normal shift to deflect calls during meetings when calls need to be handled in an After Shift manner.

There are two ways to start and end shifts: one way is from the telephone using the Start/End Shift button, the second is by using the administrative software, ACD System Administrator. From the ACD System Administrator, there are three different modes for enabling the queue: Always Enabled, Disabled or Scheduled. A scheduled Start/End Shift can be temporarily disabled.

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The Strata ACD System Administrator application enables Administrators to assign and organize Agents and Supervisors into ACD groups, as well as provide capabilities and actions needed for the call center.

ACD Administrators can easily change assignments for the categories represented by tabs (shown below).



## ACD Groups

Administrators can easily create or edit ACD Groups by selecting File > Create ACD Groups or by double-clicking on an existing group. This is described further in the following section, “Edit ACD Group Window.”

### Edit ACD Group Window

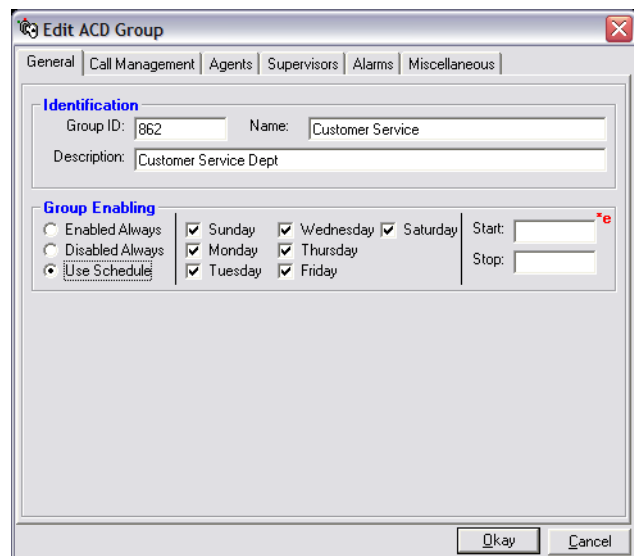
This window (shown right) enables the Administrator to assign the following:

#### General Tab

- Enable/Disable or schedule the queue (scheduling requires the Enhanced package)

#### Call Management Tab

- Time initial and periodic announcements
- Set overflow call time
- Reroute calls when disabled
- Reroute calls based on trigger actions (available in Enhanced package only)



### Agent and/or Supervisor Tab

- Set the Agent or Supervisor hunt method:
  - Basic ACD: linear, round robin or longest idle
  - Enhanced ACD: linear, round robin, longest idle, balanced call, and agent priority

**Note** Used only when more than one agent logs into the same group.

- Add or delete Agents to the group
- Timers:
  - No-Answer Advance – Set the time before a call advances to next Agent, if not answered.
  - Wrap-Up – Set length of Wrap Up time, no answer advance.

### Agent Tab Only

- Log out an Agent that doesn't answer within the Ring-No Answer time
- Make an Agent Unavailable if the agent doesn't answer within the Ring-No Answer time
- Allow the last agent to log out or go Unavailable only if there are no calls in queue

### Alarms Tab

Alarms can be generated when certain conditions occur in the queue. These alarms can be delivered to the Agents and Supervisor(s) for that group, or delivered to other devices to alert that a condition has occurred which needs attention.

Set the types of conditions that trigger alarms, and specifying actions made by the system (default or custom actions can be selected). The following alarms are preprogrammed into the system:

- Agent Utilization, Busy Ratio/percentage.
- Active Agents + Supers, Available Agents + Supers/number of agents.
- Call Abandoned
- Calls Waiting/number of calls.
- Longest Call Waiting/number of seconds.

### Miscellaneous Tab

- Route calls to the Preferred Agent set in this screen. Choices are: Never, Always, If preferred agent is missing on entry. Also sets a preferred-agent time out in seconds.
- Define initial priority level and set an escalation value to increment the call to the next priority value.
- Set the Music-on-hold (MOH) source to be used by the ACD group when calls are placed back into the queue.
- Attach a “scripting” reference (URL) to the call so that when a call arrives on an agent's telephone, the agent sees the “scripting” information to lead the agent through specific statements and questions.
- Set a calculated wait time based on number of seconds entered in this screen (available in Enhanced package only).

## Agents and Supervisors

The Agents and Supervisors tabs from the top level (shown on [page 21](#)) enables setting the following:

- Add or delete Agents or Supervisors to the group
- Assign Agents or Supervisor IDs and priorities

## Actions

From the Actions tab, users can view or change actions.

- Add, edit or delete actions. Although a number of predefined actions are provided with the software, new actions can be defined. New or existing Voice Assistant scripts and parameters can be used with the actions.
- Actions are programmable and used for many different purposes like: Announcement, Abandoned Calls, Overflow, Alarms, Notifications, etc.). Actions can encompass a number of types such as the following:
  - Transfer Call to VA/Announcement
  - Run VA Script
  - Transfer Call
  - Send Dynamic Data Exchange (DDE) Message
  - Log to File
  - Send LCD Message
  - Send Email
  - Announce with Callback (Enhanced version)
  - Interflow (Enhanced version)
  - Share Agents (Enhanced version)

## Unavailable Reasons

The DKT telephone has two fixed unavailable codes—Forced and General Unavailable. Forced is used when Strata ACD forces an agent unavailable due to a call not being answered in the allocated time frame. General is used when the manual button on the phone is used.

The 10 additional codes (Unavailable, On Break, Away from Desk, Wrapping Up, Making Calls, Sales Demo, In a Meeting, In Conference, Scheduling, Conference Call) are not available from the telephone, but can be entered using Net Phone. By clicking Change, these reasons can be changed to meet the customer's needs by replacing the text with your own customized text.

## Miscellaneous

From the Miscellaneous tab, users can view or change the following:

- Trunk Access Code – used to dial out (e.g., 8 or 9) when callbacks are used.
- Pilot DN – defines the Pilot DN where the ACD calls for the group will be delivered.
- Route Destination – Pilot DN destination for the routing point of an Intermediate Pilot DN.

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The Insight family of products are call center management software solutions that can be configured for businesses served by the Strata Business Telephone Systems and the ACD application. Insight may be purchased in many configurations to provide management solutions to both small, informal call centers requiring basic, single supervisor packages to large call centers requiring sophisticated, networked solutions. Each model is easily upgraded by entering new license codes which feature additional capabilities.

The management package is available in two versions: Insight and Insight Plus. Both systems are full-featured management tools for call center supervisors providing user-defined real time displays and historical reports. Both can support the inView LAN wallboard as an option as well as external, LED-based readerboards from Spectrum Corporation.

- **Insight** is designed for simple single Supervisor applications offering four types of real time windows, four real time window templates, and 15 varieties of reports which cover up to a year's worth of data. Wallboards are supported as previously noted.
- **Insight Plus** is an enhanced, networked solution supporting up to 100 supervisor positions. It provides more extensive display and reporting capabilities, including graphical information, forecasting, and data exporting.

Insight Plus provides four types of real time windows, and an unlimited number of real time templates, 35 kinds of reports which cover up to a year's worth of data.

**Note** The upgrade from Insight to Insight Plus only upgrades the initial single Supervisor position. If additional Supervisor positions are required these should be purchased separately.

## Configurations

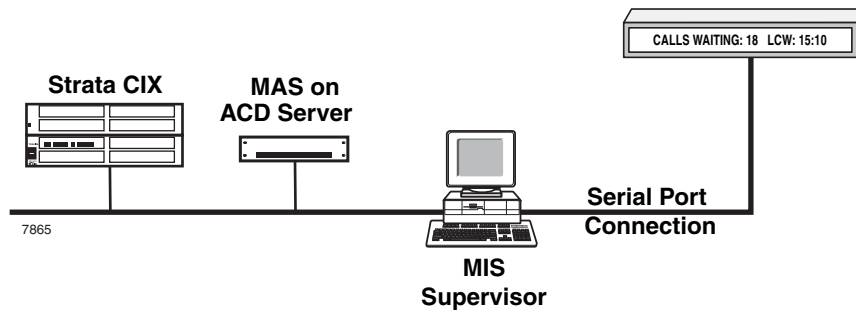
The configurations start with a single Supervisor position. System option modules can be added, including:

- External, wall mounted electronic reader boards for displaying information to a group.
- inView LAN-based PC displays that provide information to Agents or Supervisory personnel. (See "[inView Features](#)" on [page 35](#) for graphics of the displays.)
- Fully featured additional Supervisor positions that can be used to create and manage displays and reports for other departments across the LAN/WAN can be added to Insight Plus.

Typically, the server component (Gateway) is installed on the same PC as the ACD server and each Supervisor or inView Client is loaded on a Supervisor's or Agent's PC across the LAN/WAN.

## Single Supervisor Configurations

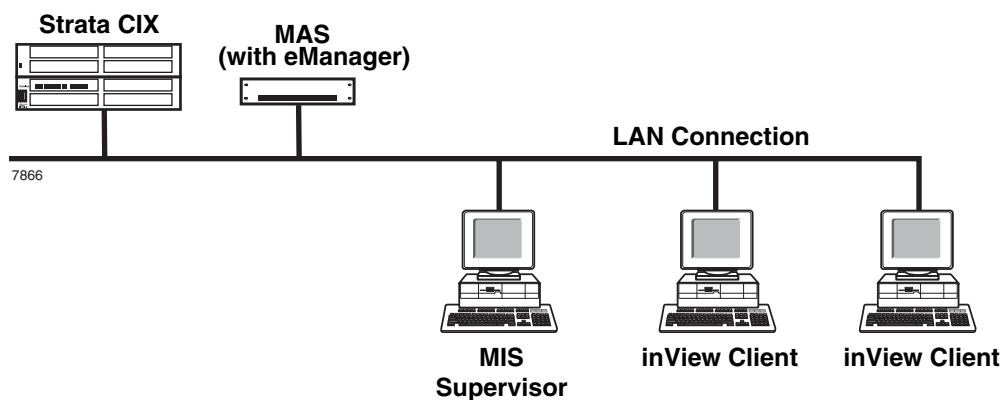
A single Supervisor configuration can be implemented using all Insight models. The software is installed as a Server. In this option, the client applications can run on the same PC as the server or across the LAN/WAN. All data is collected and reported from this single position. As with all Insight configurations, external electronic reader boards, such as a Spectrum Wallboard, can be added using an additional COM Port. An example of a single Supervisor configuration is shown below.



## Single Supervisor with inView Wallboard Clients

All Insight versions can be upgraded to support inView LAN wallboard clients. This is achieved by adding a new license code and installing client software in the relevant locations. The inView clients are licensed in a concurrent user mode so the software can be deployed in many locations and the number of users who can log on at any one time is controlled by the license.

The Insight controls a list of possible users which can be larger than the number of concurrent licenses. These clients can be started at any time and reflect the current status and statistics maintained by the MIS Server. An example of a single Supervisor with inView displays is shown below.

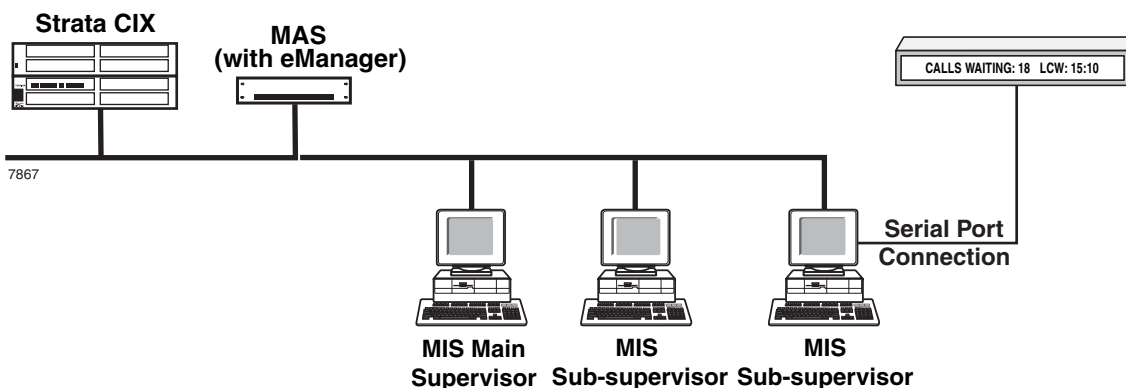


## Multiple Supervisors Configurations

Multiple Supervisor configurations are supported using the Insight Plus version.

In this scenario Insight Plus sub-supervisors as they are called, are installed on each client PC. The LAN is used to distribute event messages and to maintain configuration.

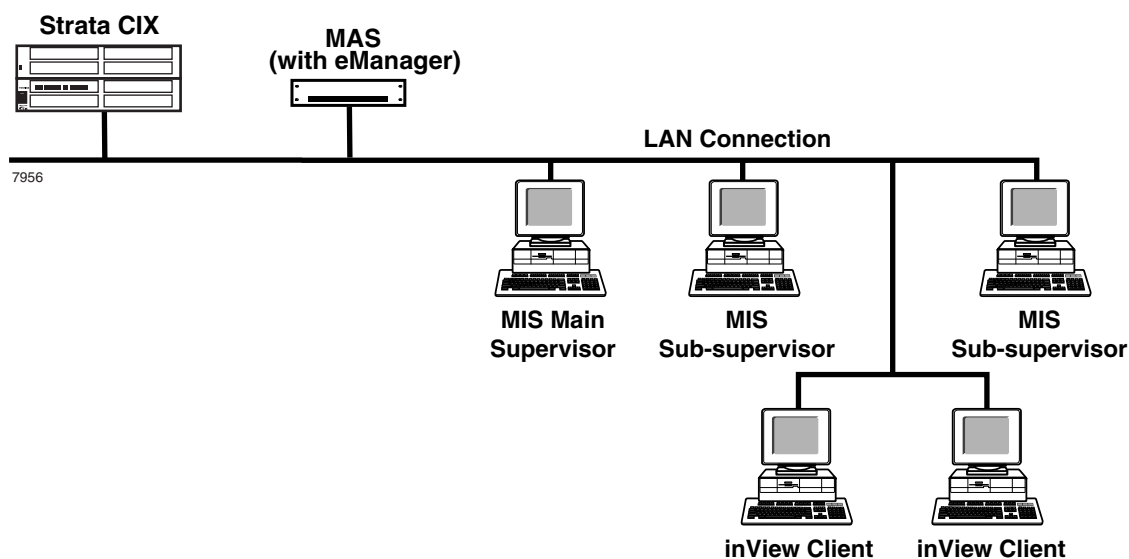
The Insight Gateway keeps an accurate database of events that individual MIS Supervisors can draw from to prepare reports. An example of a multiple MIS Client configuration is shown below.



## Multiple Supervisors with inView LAN Displays

The combinations of the previous configurations can be extended to include both MIS Supervisors and inView displays at the same time. This combination provides the best of both applications. Call center Supervisors can control the reports and Agents in that particular group while still providing key information to Agents or other management personnel using inView Client.

An example of multiple Supervisors with inView LAN displays is shown below.



## Client PC Requirements

Applies to Net Phone or Chat, Insight Supervisor or InView.

- Windows® XP Professional, ME, 2000, 98, or Windows NT® 4.0 PC workstation
- One NIC running TCP/IP
- One Pentium® PC – minimum 200 MHz

## System Functionality

The ACD MIS software is designed with a high degree of flexibility to suit the needs of a wide range of call centers. The sophistication of the product can be hidden until the call center manager is ready to use the enhanced capabilities of the MIS. To provide even more flexibility, there are several variants of the ACD MIS software, with a simple upgrade path between them:

- The entry-level product is called “Insight.”
- The enhanced product is known as “Insight Plus.” Order Insight upgrade.
- Additional Supervisor can be added on Insight Plus only.

## General Features

The following lists features which are provided by Insight and Insight Plus.

### License Options

There are options available with respect to sizing, wallboards and Supervisor positions. These options are controlled by the software protection (license key) system and the user license.

### Sizing

Both products may operate up to 1,000 named Agents, with 1,000 extensions and 280 lines (actual size may be limited by Strata system). Up to 500 groups and 100 supergroups are supported.

### Multiple Supervisors

Additional Supervisor positions are available with Insight Plus. The number of subsequent Supervisor positions available is limited to 100 positions total.

### Remote Access

Remote access is supported by Insight. To use this feature an additional remote access package, pcANYWHERE®, is required by the user and the Toshiba support service center.

### Password Protection

Password protection of the configuration is standard.

### Help File

There is a comprehensive context-sensitive help file with both products, which provides users with immediate on-line assistance on operation and programming. This is accessed using the F1 key.

### Alarms

Alarms are available to enable the Supervisor continue with their daily activities knowing they can rely on the MIS to tell them when there is a problem. Audible and visual alarms may be programmed at the individual device or group level. These alarms can be extended to the wallboard and visual only alarms to inView.

## Flexible Reporting

Reports can be compiled using statistics relating to any shift pattern, as defined by the call center manager. When compiling a report, the user defines the time period over which the report is compiled. This period can be defined to the nearest minute and is not limited to any time boundaries. For example, a report can be set to cover only information relating to the call center's night shift from the period of 11:04 p.m. on May 21, 2002 to 3:43 a.m. on June 3, 2002.

The resolution of event reports is to the second. For profile reports, the user may set the resolution to any integral value of minutes, hours, days or weeks.

## Automatic Reporting

The Automatic Reporting feature in Insight enables reports to be generated at user defined times. Different report templates can be set up to be generated at different time intervals and there is a choice of outputs, i.e., the reports could be sent to a printer, saved to disk, or exported. The reporting client must be operational for this option to be used.

## Automated Reporting Output Options

- **Print** – After a report is generated, it is automatically printed from the Insight default printer.
- **Close on Completion** – After a report is generated or after completion of selected output options, the report is removed from the Insight Reporter screen.
- **Save to file** – (Insight Plus only) The generated report is saved to the file name specified. Every time this option is run, the previous file is overwritten.
- **Export to file** – (Insight Plus only) Similar to “Save to file,” this option creates a text file that can be opened in another application, such as a spreadsheet package. Every time this option is run, the previous file is overwritten.
- **Basic Scheduling** – You can select hourly, daily or weekly and choose the time that the selected reports are generated.
- **Advanced Scheduling** – Provides more control over the frequency, starting date, starting time and control over the period of the report.

## Retrospective Analysis

Reports can be compiled even after software upgrades (including upgrades from Insight to Insight Plus) are installed, using data collected from the original installation date of the MIS. If a new report type is added to Insight, it can be used to analyze all previously collected MIS data.

## Insight Features

The entry level ACD MIS is known as Insight. In addition to the previously described general features Insight also has the following features:

- Four different types of real time windows
- Four real time templates created using any number of windows
- 15 types of reports that cover a maximum period of one year
- Wallboards
- inView LAN-based displays

## Real Time Displays

The following real time windows are available:

- Forty different parameters can be shown using the Large Character windows.
- Four different types of status displays:
  - Agents
  - Lines
  - Extensions
  - Queues
- Four different types of statistics displays:
  - Agent Groups
  - DID Groups
  - Extension Groups
  - Line Groups



These displays may be configured to report on individual devices, device groups or on a supergroup (groups of groups). The only limit to the number that can be displayed at any one time is the size of the screen and the size of each window. Four real time templates may be created and saved at any time. An example of Real Time Displays is shown above.

# Insight Plus Features

The enhanced ACD MIS product is the Insight Plus. As well as the general features described previously, Insight Plus supports the following:

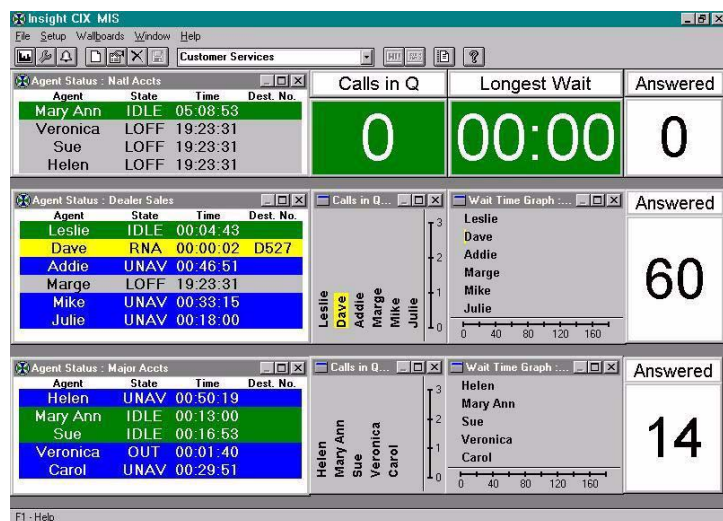
- Any number of real time templates
- Thirty-five types of reports that cover a maximum period of one year
- Ability to export reports in comma delimited format to spreadsheet packages like Excel or Lotus® 1-2-3®, where information can be displayed in graphical format.
- Sub-supervisors support

## Insight Plus Real Time Displays

The following real time windows are available:

- Over 700 different parameters can be shown using the Large Character windows.

- Four different types of status displays:
  - Agents
  - Lines
  - Extensions
  - Queues
- Ten types of statistics displays:
  - Agents
  - Agent Groups
  - Lines
  - Line Groups
  - Extensions
  - Extension Groups
  - Queues
  - Queue Supervisors
  - DIDs
  - DID Groups
- Two different types of graphical displays:
  - Wait Time
  - Calls Waiting



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These displays may be configured to report on individual devices, device groups or on a supergroup (groups of groups). The only limit to the number that can be shown at one time is the size of the screen and the size of each window. An unlimited number of real time templates may be created and saved at any time. An example of Real Time Displays with graphs is shown above.

A floating “favorites” toolbar can be used to display most-frequently used templates as tabs for easy selection.

# Strata Reports

Reports can be viewed on screen and printed, but cannot be saved. The maximum period of an individual report is one year. To view data over a period of two years, it is necessary to compile two consecutive reports (each covering one year). Reports can be compiled using data collected from the time the product was first installed. A sample Agent Report is shown below.

24 Hour START: Monday 11/08/97 14:30 STOP: Tuesday 12/08/97 15:30	<b>Demonstration</b> All Reports on Insight CIX	Page 1 of 13 on 10/07/98
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Agent Traffic for All Agents											Part 1 of 2	
Agent	Total				Answered Calls					Performance		
	Calls	Ave. Time	% Use	Call Rate	Calls	Ave. Call	Ave. Talk	Ave. Wrap	Call Rate	Short Calls	Long Calls	GOS
Andrew Parker	0	00:00	0.0	0.0	0	00:00	00:00	00:00	0.0	0	0	100.0
Dave Stringer	0	00:00	0.0	0.0	0	00:00	00:00	00:00	0.0	0	0	100.0
Dale Whitaker	0	00:00	0.0	0.0	0	00:00	00:00	00:00	0.0	0	0	100.0
Beverly Cardner	0	00:00	0.0	0.0	0	00:00	00:00	00:00	0.0	0	0	100.0
Phil Oshell	0	00:00	0.0	0.0	0	00:00	00:00	00:00	0.0	0	0	100.0
Jane Yearsley	0	00:00	0.0	0.0	0	00:00	00:00	00:00	0.0	0	0	100.0
Jenny Harrington	0	00:00	0.0	0.0	0	00:00	00:00	00:00	0.0	0	0	100.0
Alan Hobson	0	00:00	0.0	0.0	0	00:00	00:00	00:00	0.0	0	0	100.0
Gareth Wear	0	00:00	0.0	0.0	0	00:00	00:00	00:00	0.0	0	0	100.0
Tracey Oldman	0	00:00	0.0	0.0	0	00:00	00:00	00:00	0.0	0	0	100.0
Allison Halton	0	00:00	0.0	0.0	0	00:00	00:00	00:00	0.0	0	0	100.0
Helen Yaud	0	00:00	0.0	0.0	0	00:00	00:00	00:00	0.0	0	0	100.0
<b>Total</b>	0	00:00	0.0	0.0	0	00:00	00:00	00:00	0.0	0	0	100.0

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A sample Agent Group Statistics Report is shown below.

24 Hour START: Wednesday 10/28/02 00:00 STOP: Wednesday 10/28/02 23:59	<b>TSD Irvine</b> Technical Support	Page 4 of 15 on 11/02/02
--	--	--------------------------------

Agent Group Traffic for Tech Support				Part 1 of 1
Agent Group	IVR Q	KS (Q)	VM (Q)	
Calls answered	79	75	57	
Calls intercom	0	0	0	
Calls outgoing	0	11	7	
Average answered call time	01:02	13:31	15:30	
Average wrapup time	00:01	02:29	02:27	
Average intercom call time	00:00	00:00	00:00	
Average outgoing call time	00:00	10:09	08:07	
Longest answered call time	01:49	49:22	01:05:01	
Longest wrapup time	00:03	03:16	03:15	
Longest intercom call time	00:00	00:00	00:00	
Longest outgoing call time	00:00	56:05	21:27	
Minimum agents logged on	0	0	0	
Maximum agents logged on	2	4	4	
Number of short calls	0	0	0	
Number of long calls	0	0	0	
G.O.S.(%)	100.0	100.0	100.0	

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## Types of Reports

This section defines the types of reports that are available for the user. The terms used on the reports are explained in the next section.

**Note** [Table 3](#) lists all of the report types. A ✓ in the column designates whether the report is available using the Insight and/or Insight Plus software.

**Table 3 Available Reports**

Report Type	Available for	Insight	Insight Plus	Description
Event	Agents		✓	Provides a step-by-step account of what is occurring on a particular device. Each event shown per line with important information.
	Extensions		✓	
	Line Groups		✓	
Traffic	Agents	✓	✓	Traffic Reports are designed to give an overview of activity and performance of all members of a group. Each device is shown per line with call statistics presented in columnar format.
	Extensions		✓	
	Queue	✓	✓	
	DID		✓	
	Lines		✓	
Group Traffic	Agent Groups	✓	✓	Group Traffic Reports are designed to give an overview and comparison of activity and performance against certain parameters. Each line reports call statistics and performance. Each group of the super group are displayed in a side-by-side columnar format.
	DID Groups	✓	✓	
	Extension Groups		✓	
	Queue Group	✓	✓	
	Line Groups	✓	✓	
Super Group Traffic	Queue Group	✓	✓	Super Group Traffic Reports are designed to give an overview and comparison of activity and performance against certain parameters. Each line reports call statistics and performance. Each group of the super group is displayed in a side-by-side columnar format.
Traffic Profile	Agents		✓	Shows activity of particular device for selected performance parameters. Each line reports a time period with call statistics for a particular device reported in a columnar format.
	DID		✓	
	Queue	✓	✓	
	Extensions		✓	
Group Traffic Profile	Agent Groups		✓	Shows peak and quiet times for a particular group. Each line reports call statistics for a particular group reported over a profile time period.
	DID Groups	✓	✓	
	Extension Groups		✓	
	Queue Group	✓	✓	
	Line Groups	✓	✓	
Utilization	Agents	✓	✓	Utilization Reports can be used to see how the resources in a particular group are being used. Each line reports a particular device with statistics displayed as the percentage of time involved in a given activity in a columnar format.
	Extensions		✓	

**Table 3 Available Reports (continued)**

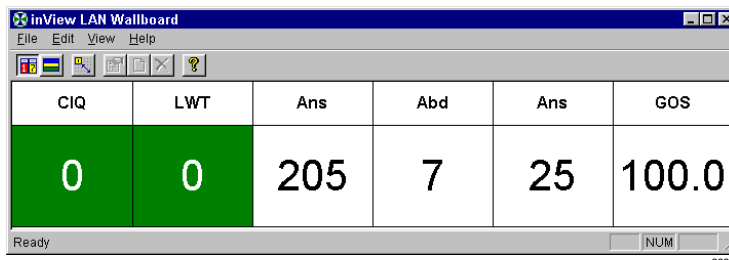
Report Type	Available for	Insight	Insight Plus	Description
Utilization Profile	Agents	✓	✓	Utilization Profile reports show the peaks and valleys of a selected device over the selected time periods. Each line reports a time period with statistics displayed as a percentage of time in a given activity in a columnar format.
	Extensions		✓	
Contention	Agent Super Groups		✓	Contention Reports are used to show the amount of time (%) a line or agent is free over the reporting period. Each line shows a number of idle devices and each group in a columnar format.
	Extension Super Groups		✓	
	Line Super Groups		✓	
Contention Profile	Agent Super Groups		✓	Contention Profiles provide a view when devices are busiest over the period defined. Each line shows a number of idle devices and time profiles in a columnar format.
	Extension Super Groups		✓	
	Line Super Groups			
Wait Time Distribution	DID Super Groups	✓	✓	Wait Time Distribution Reports are used to profile the times into a chart. Each line reports a time period for the groups shown in a columnar format.
	DID Groups	✓	✓	
	Line Super Groups	✓	✓	
Wrap-up Time Distribution	Agent Super Groups		✓	Wait Time Distribution Reports are used to profile the times into a chart. Each line reports a time period for the groups shown in a columnar format.
	Agent Groups		✓	
Call Time Distribution	Agent Groups		✓	Wait Time Distribution Reports are used to profile the times into a chart. Each line reports a time period for the groups shown in a columnar format.
	DID Groups		✓	
	Extension Groups		✓	
	Line Groups		✓	
	Agent Super Groups		✓	
	DID Super Groups		✓	
	Ext. Super Groups		✓	
	Line Super Groups		✓	
Account Code	Acct Code Groups	✓	✓	Account Code Reports present information relating the purpose of the call as defined by the user. Each line reports the statistics for an account code number.
Forecast	Agent Groups		✓	The report shows the original data for the period and modified data combined with the effects of the modifications.
	Line Groups		✓	
Forecast Profile	Agent Groups		✓	The profile report shows the effect of data modification over selected time periods.
	Line Groups		✓	

# inView Features

Examples of the two different types of views are shown below:

## Wallboard

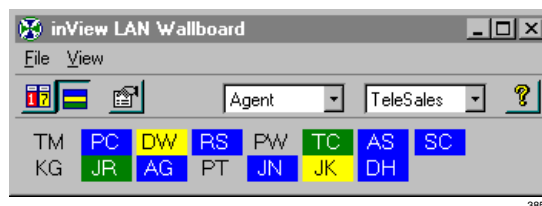
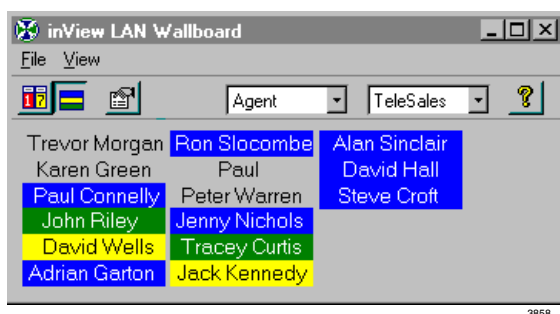
Wallboard View which displays statistics in a large character format (shown below).



The user can configure inView to provide key performance information selecting up to 8 large character windows from the list available options. These are the same windows available in the Insight or Insight Plus supervisor, real time client.

## Status View

Status view shows the status of individual Agents with either long or short names (see below). The status is presented using a colored background to represent each Agent's status.



Messaging to and from inView clients is supported subject to access rights controlled in the configurator at the supervisor client.

# Spectrum Electronic Wall Boards

Electronic wallboards are supported by Insight and Insight Plus. Up to six wallboards may be connected to each Supervisor's PC to display call center status data. This provides visibility of important call center event information to both Supervisors and Agents. The Supervisor can also send custom, user-defined text information to the electronic wallboard which can be used for general information or motivational messages.

One Insight client can support up to 6 addressable wallboards which can be configured independently of each other to provide information relevant to any particular group of lines or agents.

Wallboard drivers supplied are compatible with the Shorekarn Messagemaker and a range of Spectrum Inc. wallboards, including:

- Shorekarn Messagemaker 2 x 16
- Spectrum 1512C 1 x 15
- Spectrum 1023C 1 x 20
- Spectrum 3214C 2 x 20

## Multiple Wallboards

Multiple wallboards can be connected to the Insight application PC. Wallboard templates (shown below) can be created and added to a schedule (shown below) which can provide key performance information to single or multiple groups of agents.



Wallboard Template



Wallboard Schedule

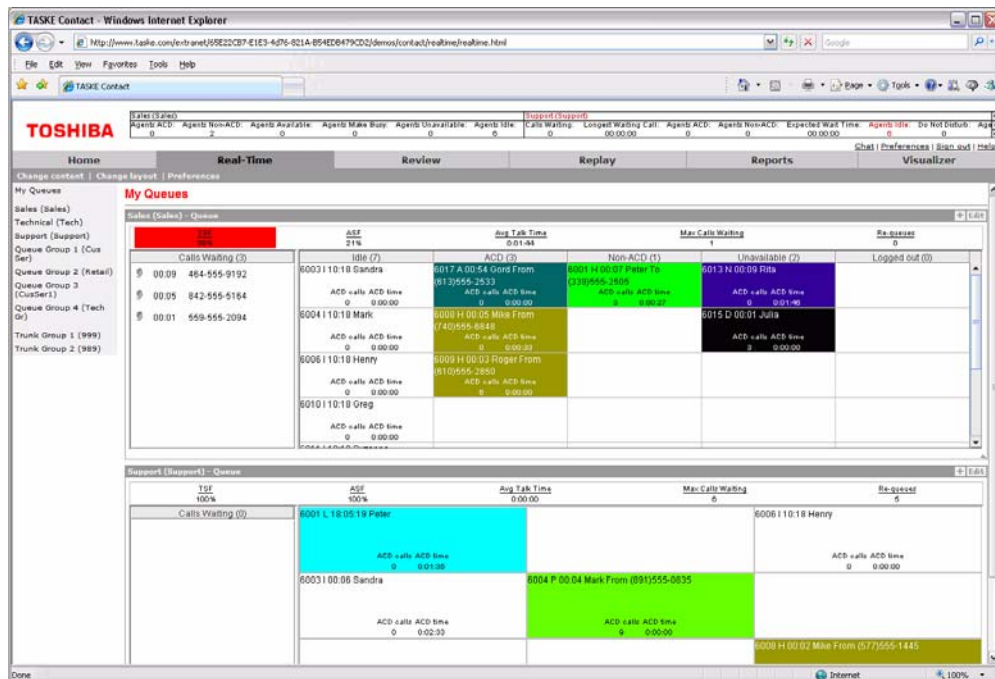
## TASKE Contact

TASKE Contact provides a suite of easy-to-use management tools that enable a contact center supervisor to manage their agents, set and meet service levels and provide vital management information on call activity. TASKE Contact is a robust management application that's easy to use and includes Real-time display and reports on the web browser. TASKE Contact has several add-on modules to further enhance the application and includes Contact Desktop, Display Central, TASKE Enterprise Client and TASKE Work Force Management Interface.

### Real Time Display

For a quick and comprehensive overview of contact center activity, the Real Time display provides the supervision with real-time and historical information on overall company performance, agent or group activity and queue status through the web interface. The monitor also tracks a variety of important contact center indicators, including agents available, longest call waiting, calls answered and average talk time.

TASKE Replay plays back historical agent or queue activity. The Replay's trigger feature makes it easy to pinpoint the source of inefficiencies in contact center performance by automatically halting playback at pre-selected thresholds. For example, the progressive display can be set to stop at the first abandoned call of the day to verify queue volume and agent actions at that time.



## Reports

Through simple, intuitive menus, managers can generate more than 150 standard reports on call details, abandoned calls, individual agent activity, agent groups, extensions, trunks, queue groups, activity codes and more. With straightforward report templates that can be saved and conveniently used again, managers can quickly compile detailed call activity data.

TASKE Reports (shown below) cover daily, weekly, monthly, and yearly timeframes; and reports can be customized to highlight key information. Automatic report printing can be scheduled for any time of the day, or exported to spreadsheet, database or text files, even HTML for the World Wide Web. With an Internet connection and Web browser, users can view reports posted on the company intranet or Internet site while on the road.



## Display Central

Tasker Display Central is a tool for sharing critical call center information among agents and supervisors. By taking advantage of large screen technologies such as LCD and/or plasma displays, Display Central integrates real-time statistics as well as dynamic data from a wide range of business applications. Tasker DisplayCentral Designer allows the administrator to configure and customize the DisplayCentral screen to satisfy the specific needs of the customer.



## **TASKE Desktop (Optional Agent Desktop Application)**

With Agent Desktop, agents can view and react to current contact center conditions in situations where wall-mounted reader boards are impractical. Agent Desktop displays user-specified, real-time contact center data on an agent's computer monitor.

Optional Desktop Advanced provides agents with the rule to execute the action triggered by an event.

## **TASKE Enterprise (Option)**

TASKE Enterprise, an add-on module to TASKE Contact, provides managers with the convenience of viewing business data from multiple telephone system locations in real-time using a single network connection. With Enterprise, managers don't have to connect to each separate server in order to view reports and monitor statistics with a familiar user interface.

## **TASKE Workforce Management Interface (Option)**

The TASKE Workforce Management option provides integration to popular workforce management systems including IEX and Left Bank. The option provides automatic historical data imports, and with some systems real-time agent adherence.

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Toshiba Strata ACD system has optional products from various vendors to enhance its capabilities and to meet customers' needs. These products are integrated with the Strata ACD system to provide customers with contact center and other CTI solutions.

## Call Router

### The Right Person At The Right Time

In today's interactive business environment, getting your callers to the appropriate person or group quickly is extremely important. Routing calls based on the identity of the caller improves service and focuses business efforts. The Call Router is an intelligent call routing system that uses caller information and schedules to automatically route calls to a particular person, call group or automated application. Whether your business has dedicated territories, a customer service or technical support group, help desks or functional departments, routing calls makes good business sense. As a business grows, it takes more than an experienced receptionist to handle the increasing call volume and number of employees. With Call Router you can provide your top customers with priority service while directing non-paying callers to your collections department.

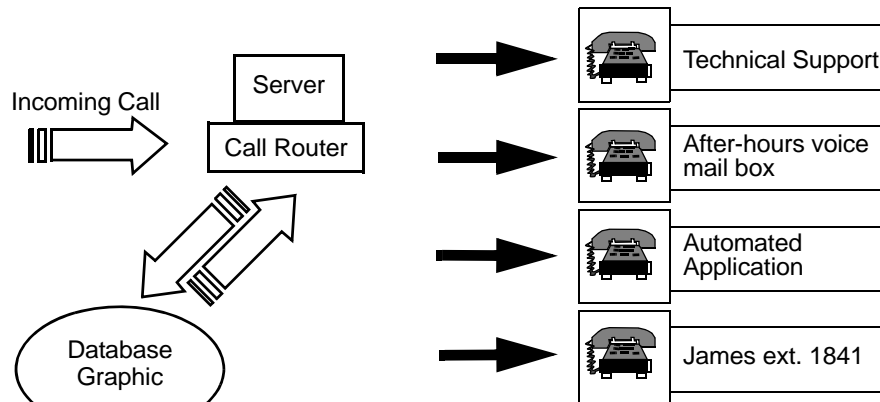
### Intelligent Routing

Call Router utilizes Caller ID or database information to identify each call and quickly route it to the person or group best suited to service it. Callers can also be prompted to input identifying information, such as an account, serial or phone number to assist in routing the call. The caller's information is entered into the Call Router database, which stores the information for each caller. The database is capable of storing more than 1,500,000 entries, easily managing virtually any routing application. Call Router can be used with Net Phone for screen pop applications by attaching the collected information and database information into Net Phone's Call Notes so anyone who handles the call can see the customer-related information.

### 24/7

Most businesses do not operate around the clock and have customers who cannot contact them during normal business hours. The Call Router gets after-hours, weekend and holiday calls to the appropriate destination, forwards calls to an on-call person and transfers calls to alternate phone numbers. The Auto Learn feature allows the Call Router to recognize multiple telephone numbers from the same company and changes the Caller ID information to the main company number or an account number in the Call Router database. Call Router also changes or adds additional information about the incoming caller. A name can be associated with Caller ID information for easy identification by the answering party. Call Router prompts the incoming caller or Net Phone users for additional information and presents that new information each time a call is received from the original telephone number.

Call Router (shown in diagram below) ensures your customers reach the correct destination in a timely and efficient method.



Call Router routes incoming calls to the best destination using caller information or date/time schedules.

Call Router routes incoming calls to the best destination using caller information or date/time schedules.

## Voice Assistant IVR with ODBC Access

### Virtual Employee

Voice Assistant is a flexible Interactive Voice Response (IVR) system that acts as a virtual employee. It can, by automatically collecting data from callers, provide information back to them, or route the caller to another location, if needed. By combining a “voice” with your company’s customer database, Voice Assistant becomes an integral employee, providing customized service all day, every day, to your callers. Voice Assistant goes far beyond the capabilities of voice mail to deliver high-level voice processing applications.

### Actions Speak Louder than Words

Voice Assistant is the engine behind all voice processing capabilities in the Computer Telephony Solutions suite. Working in conjunction with other modules, Voice Assistant provides even more capabilities to each application, such as making announcements to callers, prompting callers for information, validating customer information, and playing a menu of options. For example, Voice Assistant enhances other applications, such as Call Router and Net Phone, by routing calls and performing screen pops based on information collected from each caller. The available IVR Option connects Voice Assistant with most industry-standard ODBC-compliant databases, enabling applications to provide customers with automated information including order entry, job status, site locations and customer surveys.

Voice Assistant’s Text-to-Speech (TTS) engine “speaks” the database information to the caller with its TTS capabilities instead of using recorded prompts. This is beneficial for applications with extensive information, such as requesting addresses or product information. The integrated design of the suite allows all the applications to work together, reducing the amount of hardware and software required for managing multiple voice processing functions.

Voice Assistant saves company resources and time by automating routine telephone processes, including collecting customer information and providing callers with routine and relevant information.

Description:

Caller enters identifying data through keypad.	Voice Assistant requests & retrieves customer information from company database.	Voice Assistant “speaks” information back to caller using recorded prompts or TTS engine.
--	--	---

The IVR Option for Voice Assistant that provides real-time access to a company’s Open Database Connectivity (ODBC) compliant database. With the IVR option, Voice Assistant can allow callers to access pertinent information such as account status and schedules.

## Net Phone

### Centralized Communication Tool

Look at any desktop in a call center or progressive company and you’re guaranteed to find a computer and a telephone. These critical communication tools are used constantly; yet they are seldom integrated. Instead, users become the “technology-integrator,” going back and forth for information and communication while reducing the level of customer service provided to callers. Net Phone leverages the power of the computer and telephone to bring one superior tool to the desktop. Net Phone manages incoming and outgoing call functions and synchronizes with a company’s operations, CRM or contact software. The versatility of Net Phone allows you to control calls, capture important customer data and provide customers with superior service.

### Advanced Call Management

Net Phone provides users with telephone features and call-handling functions directly from the computer. Dialing, answering, transferring, placing a call on hold and ending calls are all executable from the compact or expanded Net Phone view. Intelligent call keys display the Caller ID and status of each call, allowing users to efficiently manage multiple calls. Net Phone also allows you to dial a phone number from any program including contact, CRM, word processing, spreadsheet and presentation applications. The Call Notes feature allows users to attach important customer information to a call, which then follows the caller if they are transferred to another department or extension. This eliminates the need to ask a caller for the same information multiple times. Call notes can also display information collected from the IVR system.



## Screen Pops

Net Phone integrates with many of the leading contact manager and CRM programs with its flexible, multi-protocol software interface. When a phone call comes in, Net Phone triggers the software's database and automatically launches (pops-up) the caller's corresponding contact information.

Among the applications with which Net Phone integrates for screen pops are shown below:

**Note** Please check the OAISYS website for the latest information.

- Microsoft® Outlook®
- Tigerpaw Business Suite
- Lotus® Organizer
- Epicor's Clientele
- TeleMagic®
- Maximizer
- Salesforce.com®
- Uptrends™
- Ericom® PowerTerm
- ACT!®
- FrontRange™ Goldmine ®
- SalesLogix® for Sales
- Onyx Customer Center
- Microsoft Access®
- FrontRange HEAT®
- Microsoft Internet Explorer
- Netscape® Navigator
- Microsoft CRM (requires Call Router and IVR Option)

## ACD Viewer

ACD Viewer provides the agent with the realtime status and statistics information such as the agent status, longest waiting call and/or the number of calls waiting for the queue to which the agent logs in. ACD Viewer can be configured to generate a visible and/or audible alarm to the agent. Picture shown on previous page.

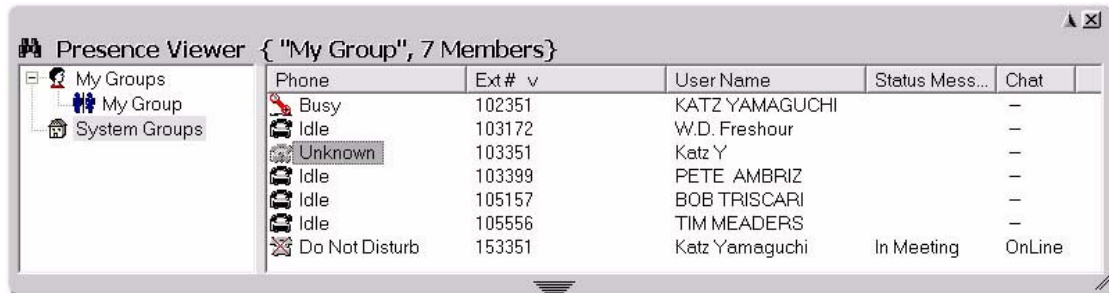
ACD Viewer requires the enhanced Strata ACD system.

## Personal Call Handler

The Personal Call Handler saves time by automatically performing routine call-handling events. Using a combination of triggering events, conditions and actions, Net Phone addresses each call or function based on the user or supervisor preferences. Net Phone can announce VIP calls with a particular tone from the PC, forward incoming calls from a specific number directly to voice mail, launch e-mail or contact programs, and log into an ACD group on start up.

## Presence Viewer

Presence Viewer is the integrated tool to provide the presence capability and chat capability. It provides the user with the phone status, status message set by Net Phone and/or chat Status of members that the user selects. Based on other member's status, the user can choose to make a call or send an instant message to the member from the Presence Viewer window.



## Chat

Chat is an instant messaging tool that can be purchased as a standalone product or as a standard feature of Net Phone. Chat is a great tool for getting a message to someone when they are busy on the phone or to get information in a less intrusive manner than calling the person.

## Programmable Keys

Net Phone has many different User Programmable keys on the main screen and Side Window. These keys can be easily configured by the user as “DSS” keys, “Feature” keys, “Speed Dial” keys, “User Action” keys, “ACD” keys, etc. This provides the user with one-touch access to features, applications, files, phone numbers, employees and more.

**Note** Directory Numbers (DNs) controlled by Net phone or used for DSS should not have CO/ GCO/ Pool Line key or any other shared line or DN.

To change any of these keys simply right-click the mouse over the keys and use the Setup keys window to configure the settings for the keys.

**Note** To swap the configuration of two programmable keys, you can simply drag-and-drop one to the other. To do this, hold the Ctrl key down while using the left mouse button to drag a key to another location. Some key types will not swap with other keys. Extra Buttons will swap with Extra Buttons, but not with Main Screen buttons, etc.

## Call History

Net Phone automatically creates a log of calls dialed and received on the local telephone extension. The Call History can be searched for specific calls by date, telephone number, name or account code. Calls can be automatically dialed by double clicking the call in the Call History window. The entire Call History or a search result can easily be printed or exported to a file.

## Directory

The Net Phone provides a powerful set of directory features that allow you to look up and dial PBX extensions with a click of your mouse. The directory is automatically generated by the system so it is always up to date with every extension. It can easily be searched by name, and printed or exported

## Hot Key Dialing

The “Dial Hot key” allows you to dial a number from any application. For example, you may have a phone number in a Microsoft Word® document that you want to dial. You simply highlight the number in the Word document and press a hot key combination. The hot key combination dials the number in Net Phone.

**Note** The Hot Key combination is F11 by default, however, this can be changed to meet your individual needs.

## Voice Over IP (VoIP)

Net Phone provides VoIP capability as an option. By adding the headset, an agent can use Net Phone to take a call and to get a screen pop. This feature is especially useful for an agent working from their home. Net Phone supports both BIPU and LIPU.

**Note** Net Phone with VoIP may not be used as the replacement to the phone since some phone buttons such as PDN, PhDN, GCO, etc. are not available on Net Phone.

### Applications:

- Call Centers
- Telephone Power Users
- Receptionists
- Sales Representatives
- Help Desks

### System Requirements:

- Connectivity to a TCP/IP network
- IBM compatible PC
- Windows 98/Windows NT/Windows 2000/ Windows XP/ Windows Terminal Services or Citrix
- Minimum Pentium/66 MHz
- 10Mb free disk space

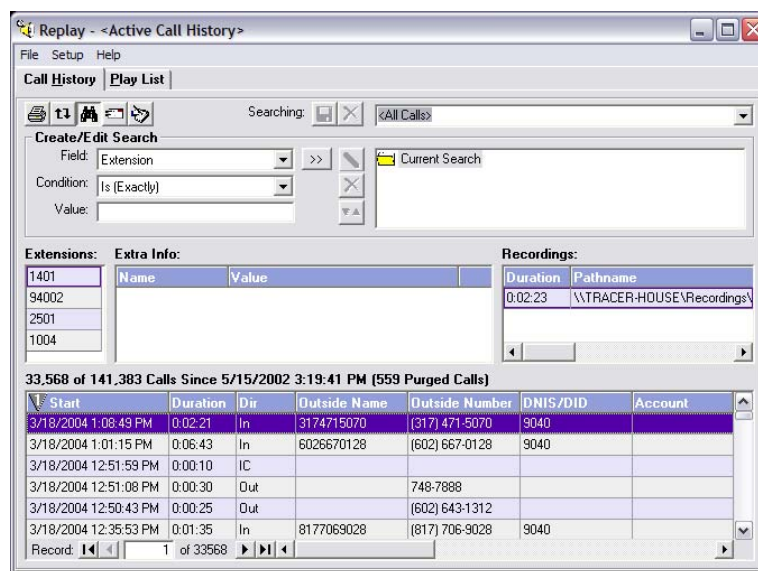
# OASYS Tracer

## Calls Recording and Monitoring

Tracer is a CTI enabled digital call recording/logging system that records, stores, organizes and plays back telephone calls to avoid the disputed communications that can result in huge business liabilities. Tracer can also help improve the quality of your business operations including training, quality control and customer service.

Tracer taps directly to analog and digital (T1 and PRI) telephone lines and eliminates the need for converters, channel banks or patches. Calls are recorded from start to finish, and Tracer automatically inserts bookmarks in every recording whenever calls are transferred or put on hold. When used together with Net Phone, users can have a recording status indicator and the ability to start and stop recordings or insert bookmarks at important points in a call.

Tracer Replay is included with Tracer and used to retrieve and play back recordings. Replay streams the audio from wherever the recording is stored and allows searching by any collected information criteria.



- Cradle to Grave Recording** Captures every moment of the call, even while the caller is on hold.
- Look-Back Recording** Records an entire conversation, even if the recording was initiated after the call began.
- After-Call Actions** Actions can be taken after a call ends, including sending an e-mail or instant text message, or launching another program to take some action.
- Selective Recording** Records specific or random extensions, groups of extensions, or every extension.
- Call Monitoring** Authorized users can monitor calls as they're happening, whether those calls are being recorded or not.

## Advanced Recording Technology

### Digital tap Technology

Tracer attaches or taps directly to analog and digital (T-1 & PRI) telephone lines and eliminates the need for converters, channel banks or “patches,” thereby reducing the overall implementation costs.

### “Cradle to Grave” Recording

With Tracer, calls are recorded from start to finish, or “cradle to grave,” which means you can listen to what callers said, even when they were on hold or leaving voice mail.

### CTI Enabled

Tracer integrates directly with the Strata telephone system, so specific calls can be recorded, or not recorded, based on who is calling and whom they are calling.

### Bookmarks

Tracer automatically inserts “bookmarks” in every recording whenever calls are transferred or put on hold. With bookmarks, finding particular calls or specific parts of calls is easy and significantly decreases the amount of time needed to retrieve and play back the recordings.

### Desktop Control

With the optional Net Phone, users can have a recording status indicator and the ability to start and stop recordings or insert bookmarks at important points in a call.

### Look Back Recording

With Tracer’s “Look Back Recording” feature, once the recording button is pressed, a complete recording of the entire conversation is saved, even the part before the recording was initiated. This is particularly helpful if your company does not normally record all calls.

### E-Mail Notification

With Tracer’s E-mail feature, you can automatically e-mail a recording copy to a particular person or group based on recording triggers.

### Call Monitoring

Tracer provides authorized users the ability to view real-time call activity and listen to calls via their PC as they happen. The configurable monitoring can be limited to just calls over certain trunk groups, by DID/DNIS numbers, with certain ANI or to specified extensions.

Users can listen to calls even when they are not being recorded, and recordings can be user initiated. Call monitoring can be paused and restarted in mid-stream. Users can request an e-mail of the call recording, which is sent as soon as the call terminates.



## Configuration Information

To meet whatever size and operational characteristics users need, Tracer has three basic models, Standard, Advanced and Advanced Plus. The Advanced and Advanced Plus models can also be configured with a RAID1 option for storage. A series of hardware cards is offered to match needs for the types of trunks to be connected to Tracer.

Standard	<p>Tower chassis, Celeron-based system</p> <ul style="list-style-type: none"> <li>• 80GB hard drive/256MB memory</li> <li>• CD-ROM RW drive for archive storage</li> <li>• 4 PCI slots (Recommend 48 ports maximum)</li> <li>• Supports up to 10 Replay clients (5 recommended due to MSDE throttling throughput above 5 clients)</li> </ul>
Advanced	<p>Rack Mounting, Pentium 4 based system</p> <ul style="list-style-type: none"> <li>• 80 and 120GB hard drives/512 MB memory</li> <li>• DVD RW drive for archive storage</li> <li>• 4 PCI slots supporting up to 96 digital ports or 64 analog ports</li> <li>• Supports up to 10 Replay clients (5 recommended due to MSDE throttling throughput above 5 clients)</li> </ul>
Advanced Plus	<p>Rack Mounting, Pentium 4 based system with Dual Power Supplies</p> <ul style="list-style-type: none"> <li>• 120 and 200GB hard drives/1GB memory</li> <li>• DVD RW drive for archive storage</li> <li>• 4 PCI slots supporting up to 192 digital ports or 64 analog ports</li> <li>• Includes Windows 2000 and SQL Server with 5 access licenses</li> <li>• Supports unlimited Replay clients (requires MS access licenses)</li> <li>• Optional RAID1 controller and duplicate 80/120 GB hard drive</li> </ul>

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Strata ACD products provide a series of applications for meeting a customer's CTI and call center needs. This chapter provides application examples to assist in identifying a customer's needs. Each application example provides a description of the application, how the call flow works and a set of components needed to provide the solution.

Remember, these are just examples to assist in putting together solutions for making your CTI or call center application function. You may need to apply several of these examples to build the application your customer desires.

## CTI Applications

Net Phone may be deployed with or without the Strata ACD module. The two most common applications are providing screen-pops for Strata users and using the Chat application for a silent, text-based messaging system.

### Screen Pop Applications

Screen-pops provide information about the caller before an Agent answers the call. This enables call screening and provides more personalized service for callers.

This system OAI application is very cost effective when only 7~10 desktops need this capability as compared to the Desktop OAI link. In addition, an Installation Wizard makes connections with popular applications quite simple and the Net Phone (PC telephone) interface offers many more choices for personalizing and screening calls.

### Chat

This is a instant text messaging system that enables Agents to get quick answers while talking on the telephone. It also enables Agents to send messages to someone who is using the telephone. Chat can be applied throughout the organization, thus the communication is only limited by those who have the service and currently make themselves available.

This application requires the Net Server and an OAISYS Chat module on the user's desktop PC.

# Basic ACD Applications

## Typical ACD Queuing

Call centers are designed to handle the largest volume of calls using the fewest number of Agents, thus calls are expected to wait in queue for an available Agent. Music or intelligent announcements can be played to inform the caller of the status of the call. Announcements include an “Initial Announcement” and a “Periodic Announcement.”

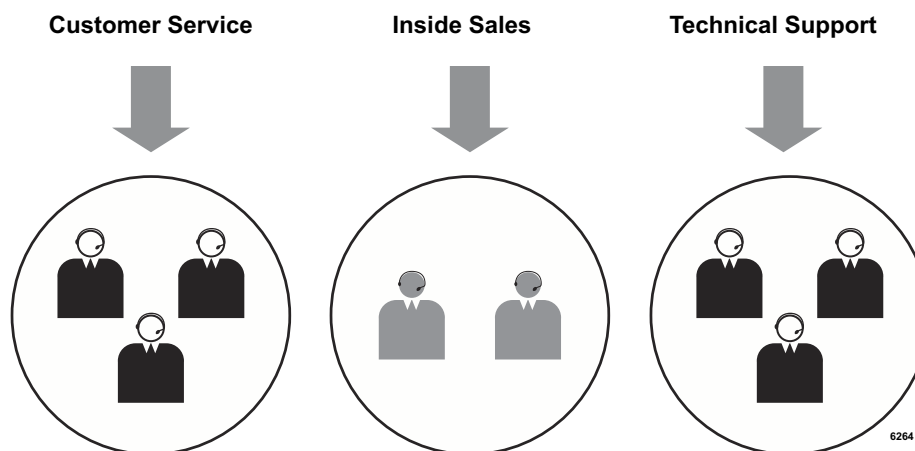
Agents log into a queue to receive calls. Reroute and overflow destination routing is offered to handle calls during alternate time periods or certain conditions.

Basic ACD call queuing provides a method to distribute calls to a group of Agents that have registered their availability. One of the most common distribution methods is called “Most Idle Agent.” This method finds the Agent who has been idle the longest to handle the next call. Other methods include “round-robin search,” which finds the next Agent by rotating the call in a circular fashion or “linear search,” which always starts with the same person and progresses down a list of available Agents.

## Example

The figure below shows three different groups for this organization, Inside Sales, Customer Service, and Technical Support. Each group has its own set of Agents and a Supervisor for handling calls.

- Calls arrive into the queue based upon Strata programming. CO lines or DNIS numbers may route calls directly to the Pilot DN for the group or calls may be transferred into the queue via an operator or auto-attendant operation.
- Each group has its own “Initial” and “Periodic” announcements and music while waiting for an available Agent.
- Each group may choose the call distribution method from “Most Idle,” “Round Robin,” or “Linear.”
- The overflow destination and a reroute destination for the calls are programmed for each group. This overflow could be to another group, any other destination within the system including a Voice Mailbox or even an off-premises number.



# Call Routing Based on Geographic Territory

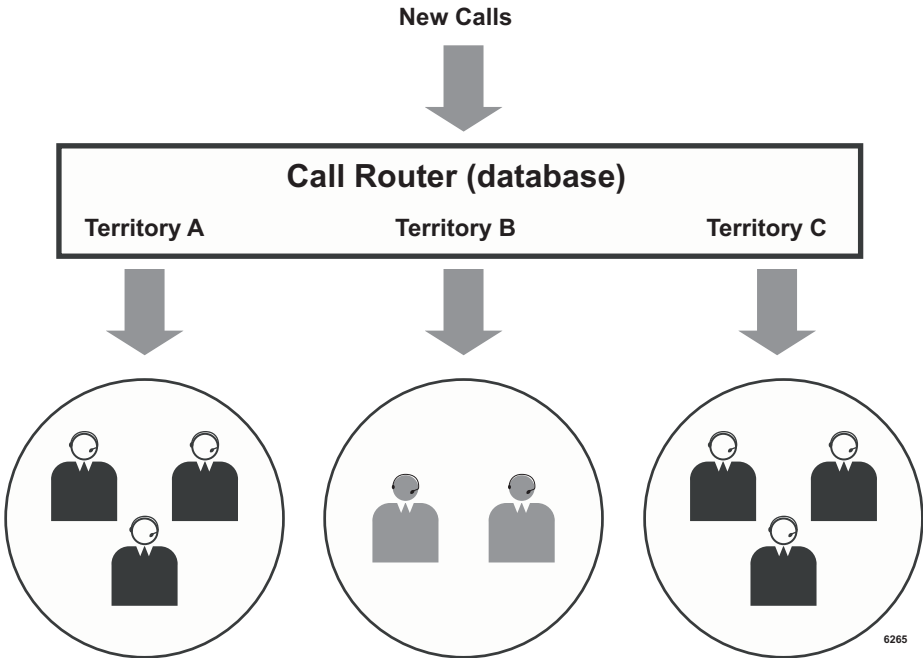
A very common application need is call routing based upon the territory of the originating call. This enables Agents to consistently handle customers from a specific territory and possibly to adjust work schedules for different time zones.

Routing calls based on the geographic territory requires identifying the location of the originating call. A customer could assign different numbers for each territory, thus using either DNIS or CO line routing to send the calls to the appropriate group. But many customers would like to use a common pool of lines and a single phone number to reach their business.

## Example

In this example, Caller ID is used to route the calls (see figure below). The customer needs an 800 number since Caller ID blocking does not affect 800 calls as it does general numbers. This ensures a greater chance of getting the identification from the public network to enable routing without the need to query the caller.

This application requires the optional Call Router module to create a database of known telephone numbers. This database has time of day scheduling to allow for different routing based upon time, day of the week, etc.



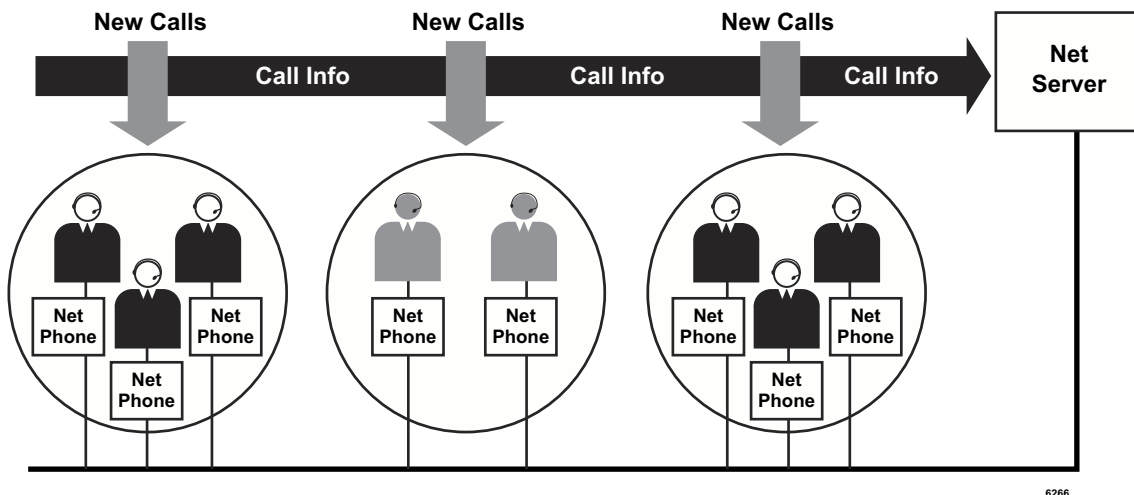
## Call Center with Screen Pops

Call center Agents that have PCs with the OAISYS Net Phone application can view pop-up screens that contain information about the caller. Net Phone can work with a variety of popular applications, such as Contact Managers, databases developed as part of the business operation, Customer Relationship Management (CRM) applications, Help Desk applications, etc.

The Net Phone Installation Wizard makes it easy to integrate with outside applications. Once the Net Phone software is loaded, information about the call is collected by the OAISYS Net Server.

### Example

Sometimes the information needed, such as the customer's account number, cannot be delivered by Strata, thus the IVR can be used to query the caller for the information (see figure below). The collected information is delivered to the Net Phone. As calls arrive on an Agent's telephone, the information about the caller is passed via the LAN to Net Phone running on each Agent's desktop PC to create the screen pop.



Net Phone offers a number of enabling methods for linking the standard database applications. A sample Net Phone screen is shown on [page 43](#).

# Account Number Routing

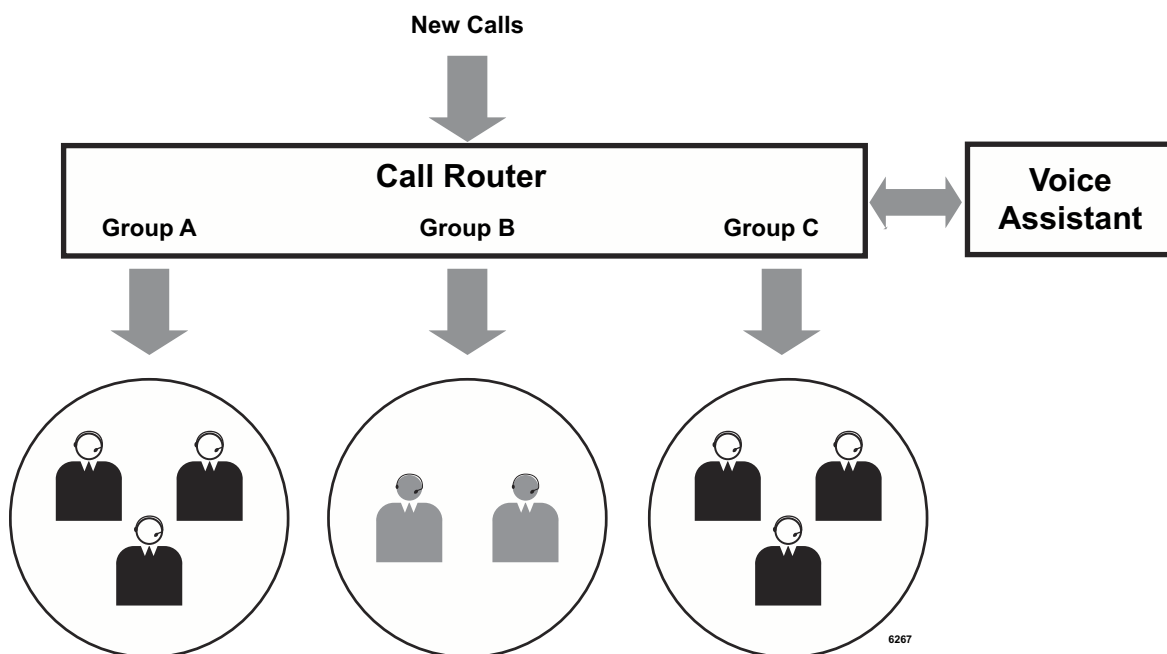
Some businesses prefer to assign Agents to handle selected groups of accounts. In this type of application, the callers are assigned account numbers which are used to determine where the call should be routed.

Since the public network does not provide account numbers, the ACD application must be set up to query a caller for an account number and then route the call to the Agent who is best suited to handle this account.

## Example

This application could be accomplished a couple of different ways, but in this example, the Call Router is used to build a database of account numbers and to determine the routing action where the call is to be handled (see figure below).

The Call Router uses a predefined script and the Voice Assistant to answer the call. The Voice Assistant requests the caller to enter an account number. This number is then passed to the Call Router which then does a “lookup” and issues a command to move the call to the appropriate call center group for that account.



# Enhanced ACD Applications

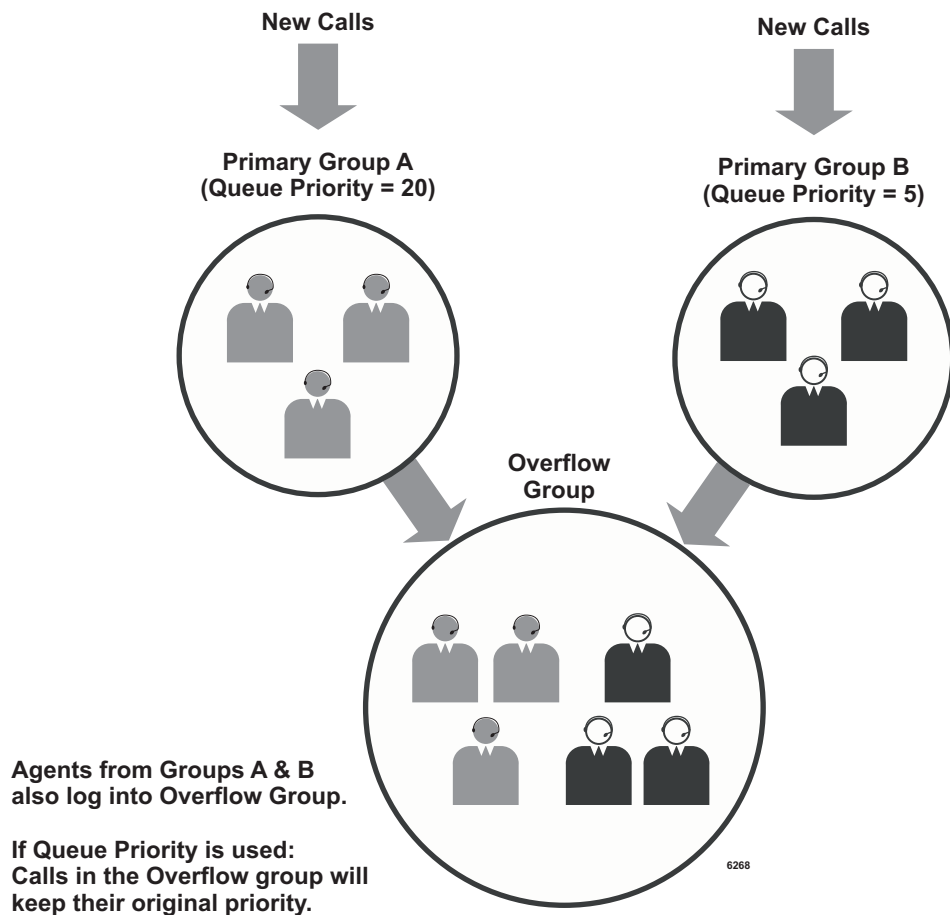
## Group Overflow with Look-back Routing

Many call centers need the ability to overflow calls to another group, expanding the pool of available Agents for handling a call in a timely manner. “Look-back” is the term commonly used to describe the ability to overflow to another group while continuing to look in the original group for an available Agent.

Some applications need groups to overflow to each other with this capability. This is often used where an equivalent group is capable of handling the call, but the groups are assigned a smaller area of expertise. With Strata ACD, a different technique is employed to simulate the “Look-back” function.

### Example

Typically all Agents need to be treated with the same priority for handling calls. A group should be created for each of the original groups, as well as an overflow call group (see figure below). If the call is not handled by the original group, then the call is re-directed to the overflow group per the overflow criteria. Each of the Agents log into a primary group and also log into the overflow group. Thus, in the following example, the number of Agents in the overflow group is the sum of all Agents in each of the primary groups.





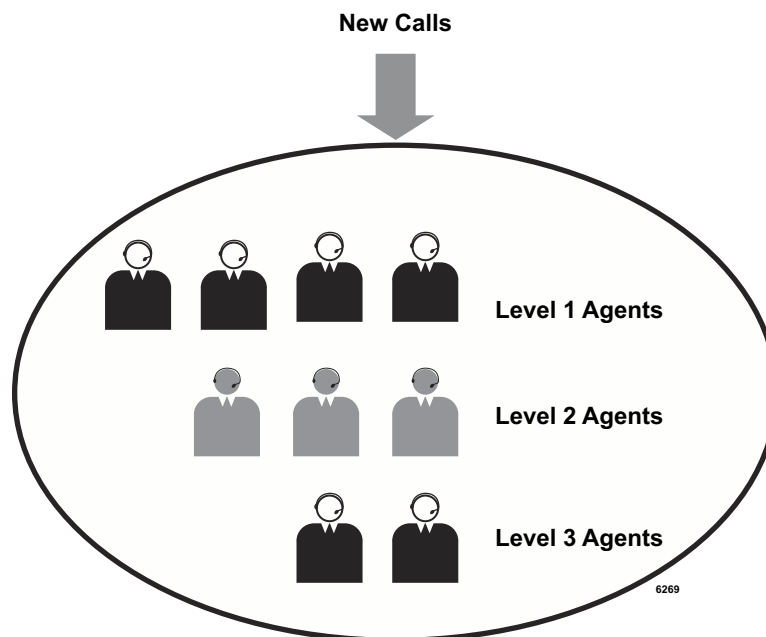
# Agent Priority Routing

When traffic is heavy, the Agent pool can be expanded based upon Agent priority levels. When all Agents are busy at one level, calls are automatically distributed to Agents at the next level.

## Example

One solution is to assign a high priority level to the primary answering Agents, and a lower priority level to other Agents (see figure below). Then, select Agent Priority as the routing method. Calls are delivered to Agents with the highest priority first using the longest idle method.

If all Agents of that level are busy or unavailable, the ACD searches for the next highest Agent priority level. This provides the ability to keep expanding the Agent pool based upon traffic conditions.



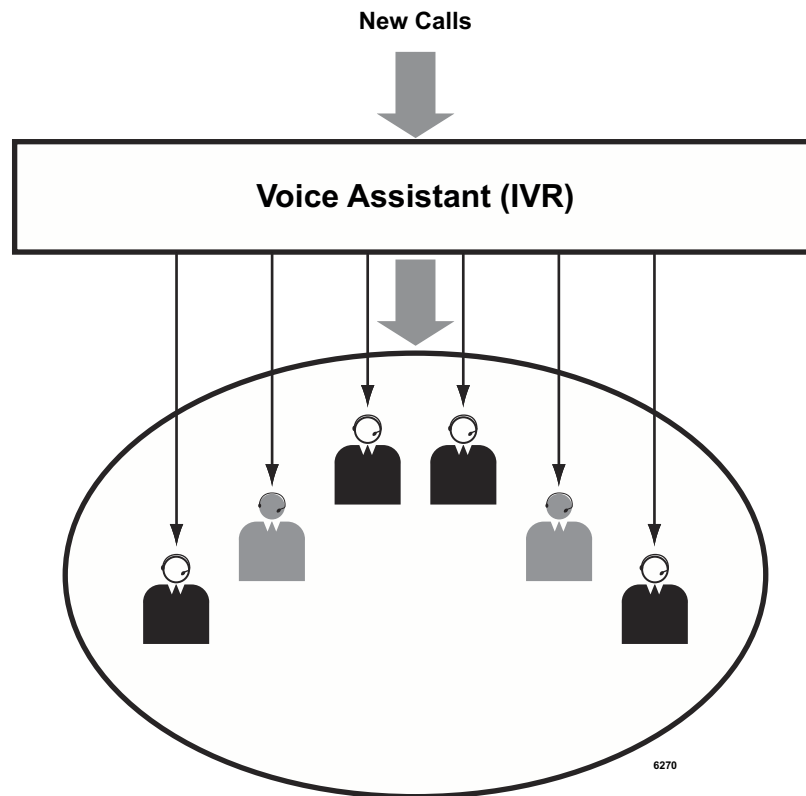
## Preferred Agent Priority

This capability can be very useful for applications where Agents are assigned specific accounts or cases and the caller knows this information. Typically, an IVR script is needed to collect the information about the preferred Agent. This could be as simple as using a database lookup based on an account or case number.

A Preferred Agent Priority allows a selected Agent to be the preference. If that Agent is busy or unavailable to take the call, the call enters the queue and is handled by the next available Agent (see figure below).

### Example

One example is a technical support line where on the original call the caller is given a call back number to use if any additional problems are encountered. If that caller needs to call back, the caller enters the number and the database lookup rings the same Agent that previously talked to that caller. If that Agent is not available, the call enters the queue. This provides priority treatment with a preference to connect the caller with someone who is familiar with the problem.



# Priority Call Handling

This feature enables some calls to receive priority handling in a seamless manner. It requires identifying the caller prior to placing the call into queue. Typically this is done using an IVR prompting script, or Caller ID, or by giving specific telephone numbers to certain callers.

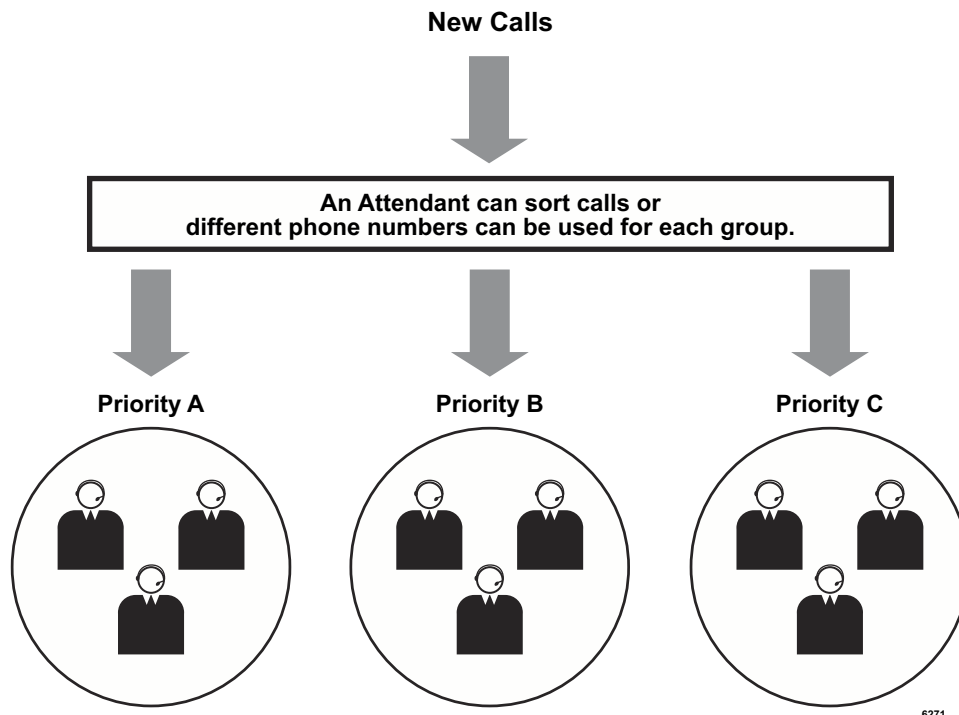
Caller ID is not always reliable since callers do not always call from the same telephone. The exclusive telephone number technique can lose effectiveness if people other than the intended user obtain the number.

One solution is to use the Call Router and Voice Assistant (IVR) to identify the caller. All calls are directed to the Pilot DN for the Call Router. The Call Router requests the Voice Assistant play an IVR script and direct the call to it. The Voice Assistant returns the account number entered, which is used by the Call Router to send the call to the appropriate queue. It then passes the initial priority value for that caller to Strata ACD, thus placing the call in the queue at a designated point rather than at the end of the queue.

## Example – Priority of Call Type

This method uses multiple ACD queues and routes the calls to the appropriate queue using direct ringing or DNIS routing (see the figure below).

Setting a different initial priority value to each queue and a common escalation value ensures that no caller is left in queue indefinitely. Callers to Priority A are treated with more favor than callers to Priority B. Likewise, callers to Priority B are treated more favorably than callers to Priority C. In this example, Agents need to log into Priority queues A, B, and C. Calls with the highest queue priority are delivered first.



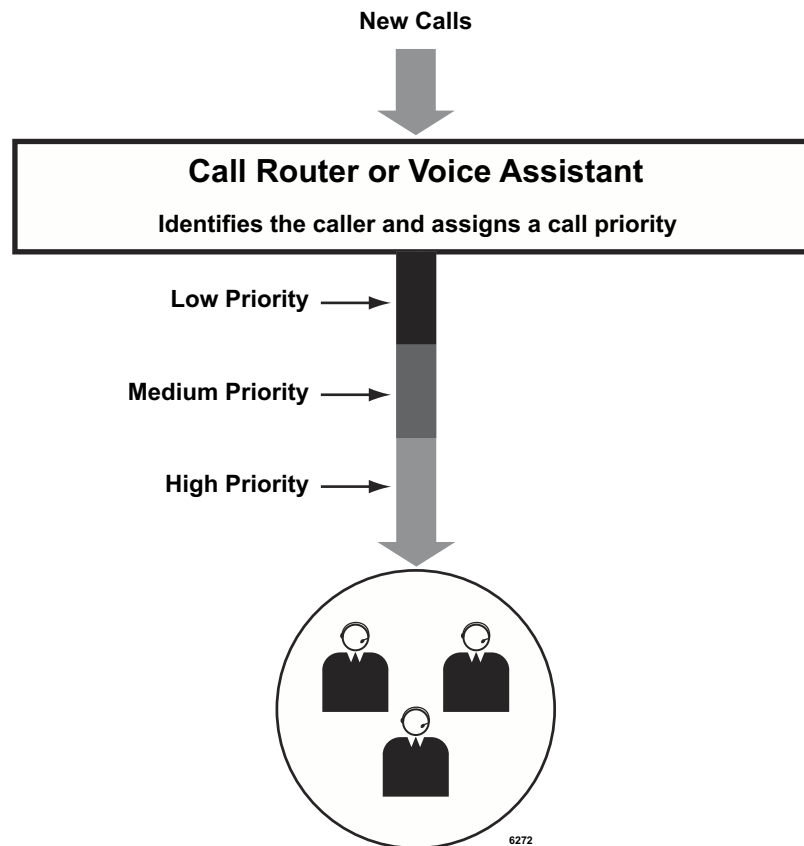
6271

## Example – Tiered Routing with Call Identity

The second method for providing a Tiered or Queue Priority uses the Call Router or the Voice Assistant to identify callers and assign a call priority (see figure below).

Once the caller is identified, the call is placed into one queue and a parameter is passed to Strata ACD to indicate the initial priority value for each call when it arrives. Thus calls begin in the queue at a designated point. Agents only need to log into one queue. The next available Agent receives the call with the highest priority value.

**Note** Net Phone can be used at the call's original answering point and buttons can be defined to transfer calls into a queue with specified initial priority values. This is a convenient way to place emergency calls into queue ahead of other callers.



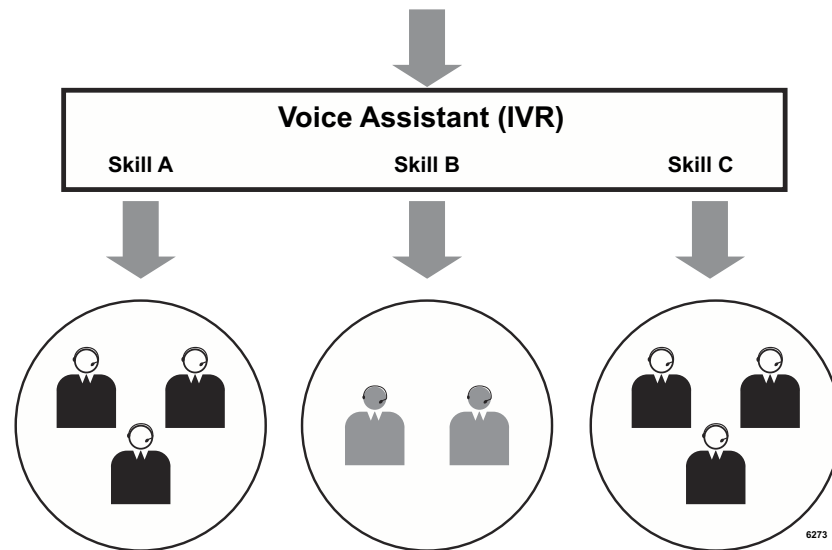
# Basic Skills-based Routing

Strata ACD provides a skills-based routing capability using multiple queues. Typically, the skills assessment is done by IVR posing a few simple questions.

## Example

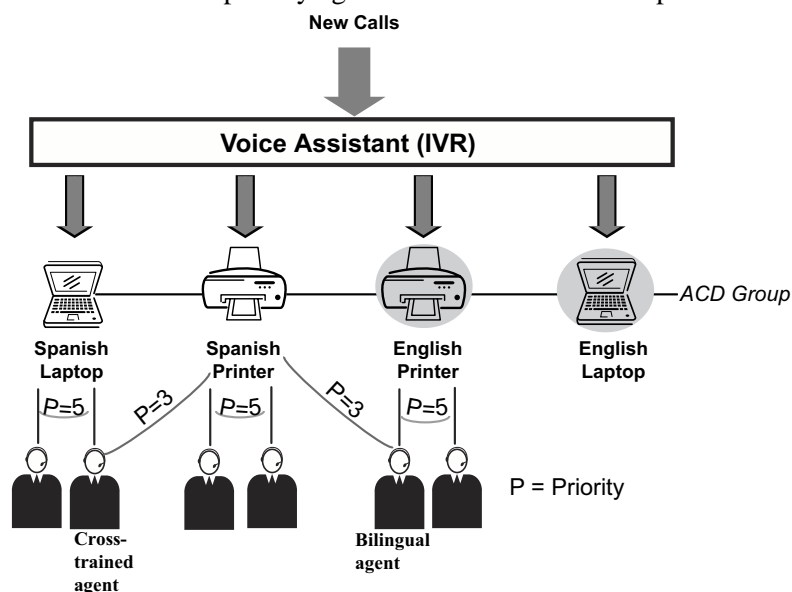
In this example, a script in the Voice Assistant (IVR) asks the caller for an English, Spanish or French speaking Agent.

The IVR routes the call into the appropriate queue for the skill selected (languages or Skills A, B or C, shown in the figure below). Agents log into the queues they have the skills to support. Agents are able to see the call type that is ringing in order to answer with the appropriate language.



It is also possible to implement more complex operations utilizing the multi-login feature.

An agent can be assigned a different priority per queue so that the agent with the most appropriate skill set is selected while lower priority agents can be used as back-up.



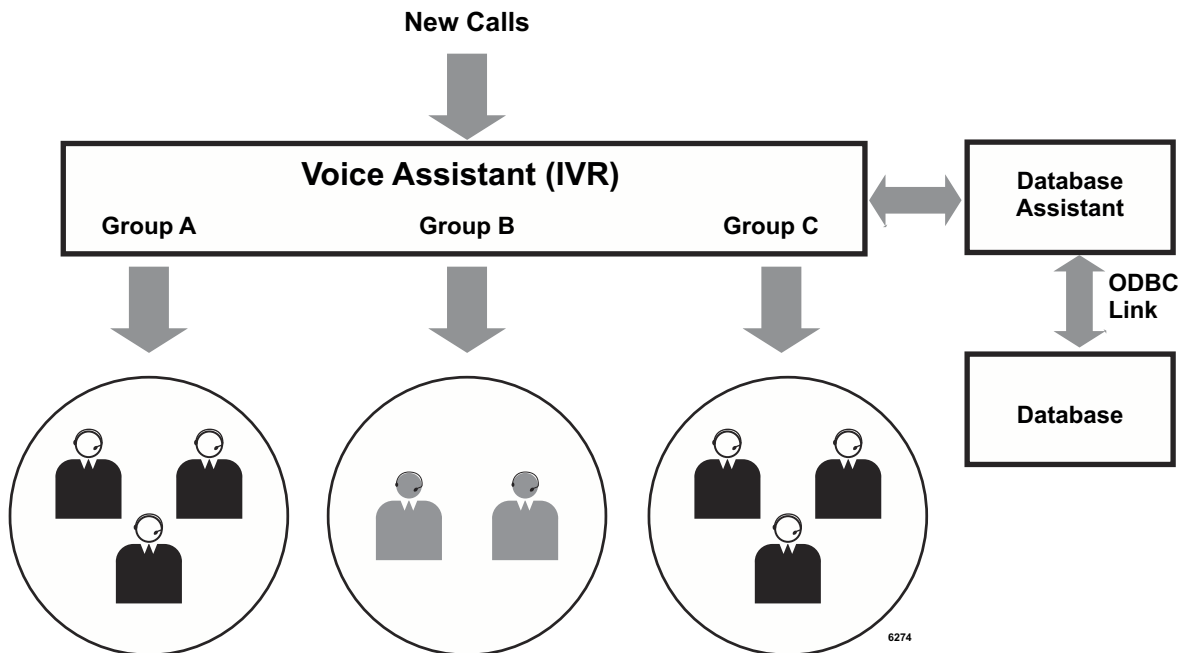
## Using Customer's Database

Many businesses have developed their own customer databases that can be used to identify the caller for better call handling.

### Example

The Voice Assistant IVR can query the caller for information, such as the caller's zip code. The information is sent to the Database Assistant that communicates with the customer database via an ODBC link. Specific information from the customer database can be relayed back to the Voice Assistant IVR so that the call can be routed to the appropriate group (see figure below).

The customer database information should be carefully checked to make sure there are no duplicate records and that the data entries are correct. For instance, telephone numbers should be in the appropriate fields and the entry format must be consistent so that Caller ID lookup works smoothly.



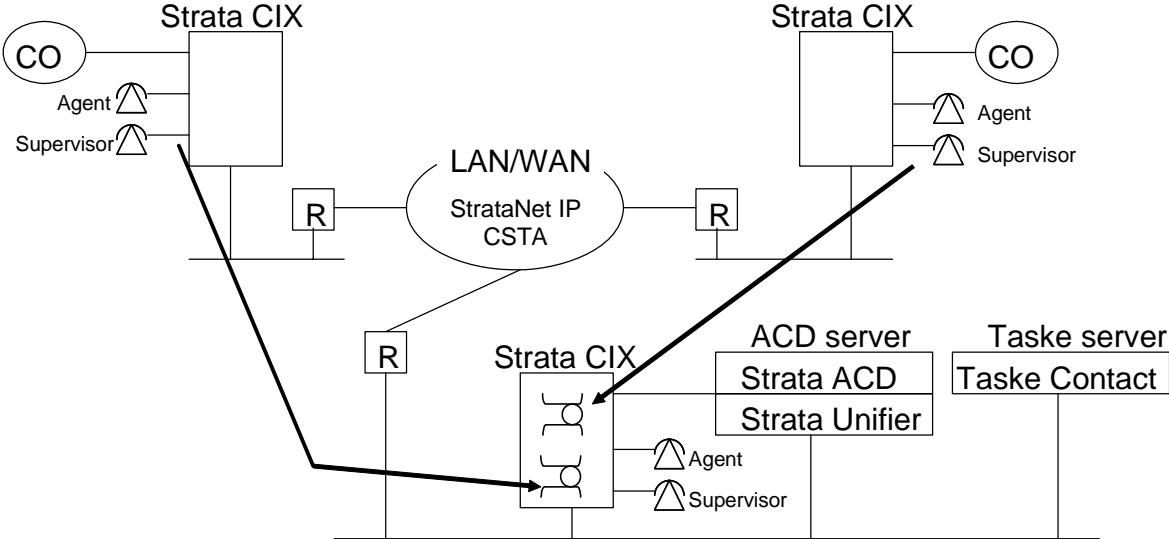
Strata ACD supports multi-site contact centers operations. Network ACD enables contact centers to distribute agents over the network to route calls to available agents on any system on the network. Strata ACD provides the look ahead routing where it can check the status of agents in other nodes before it routes the call to those agents. The MIS report covers agents and calls over the network.

Network ACD applications require the new software module, Strata Unifier, which integrates CTI links of all systems in the network to provide the single ACD operation. It can also extend the functionality of Net Phone over the network so that new features such as Network DSS/BLF and/or Chat between users in multiple nodes.

## Overview

Network ACD consists of three major components, Strata CIX, Strata ACD, and Strata Unifier. There is one Strata ACD system on the network which controls up to 10 call centers on the network. Following figure shows the overview of Network ACD.

All the queues (ACD pilots) are configured in the main node, and all Voice Assistant ports of Strata ACD are also connected to the main node. Agents, supervisors, and incoming CO trunks can be located at remote nodes.

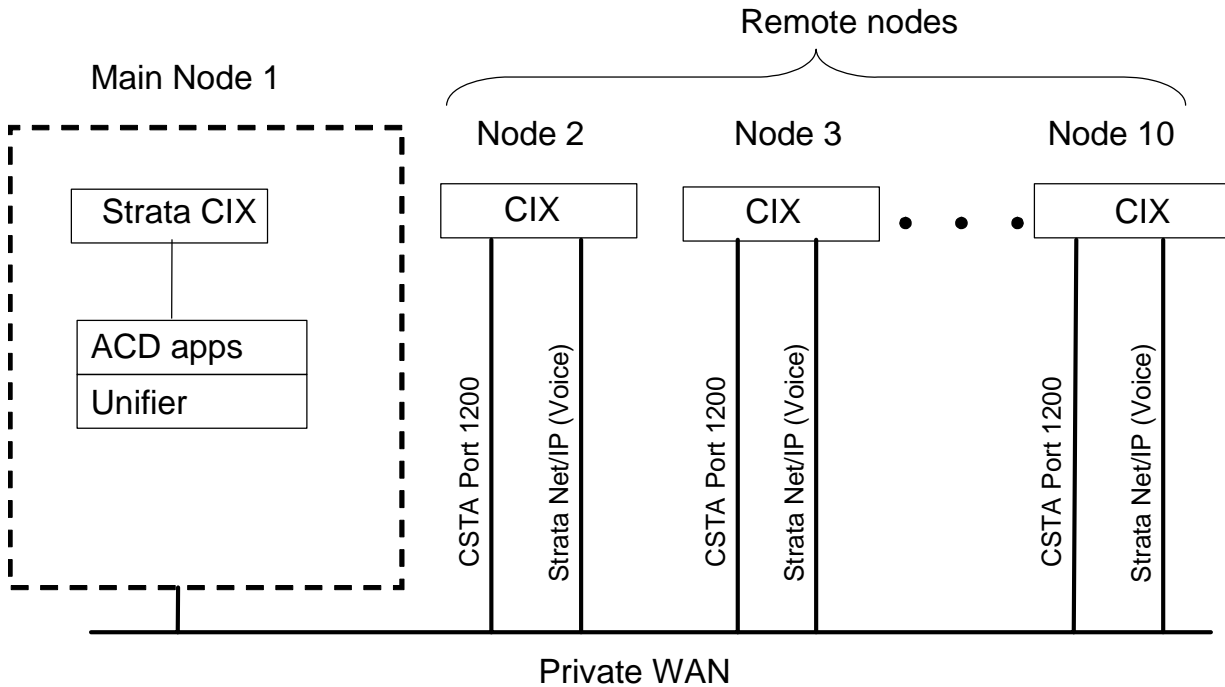


# Strata Unifier

Strata Unifier software consolidates multiple CSTA streams from CIX systems from multiple locations and feed the single stream of the information to applications such as Strata ACD. Applications do not have to be aware of the network configuration since the CSTA stream to the application is same as the single node system.

Strata Unifier needs to run on the ACD server and requires its own license to operate. Each Strata CIX must have the valid CSTA license (LIC-ACD) to work as a part of the Network ACD operation, and it must be interconnected to other Strata CIX through Strata Net/IP.

Strata Unifier supports up to ten Strata CIX nodes.



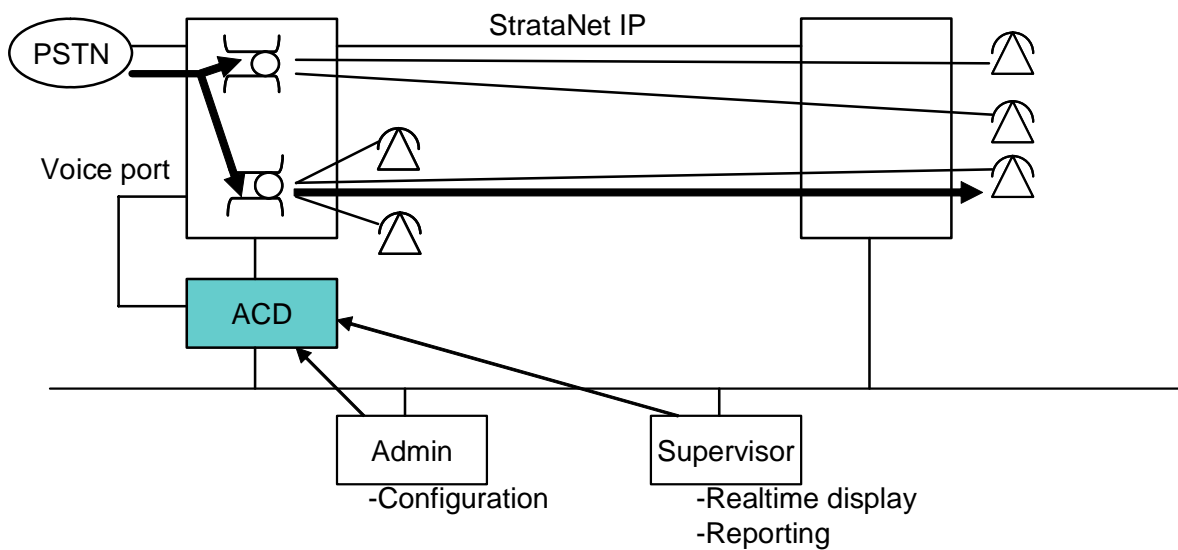


# Strata ACD

Strata ACD supports multi-site Network ACD environment through Strata Unifier. All the ACD queues are implemented on one of nodes. Agents or supervisors can be located on any of nodes on the network. Each node may have CO (Central Office) trunks for ACD calls.

## Remote Agents

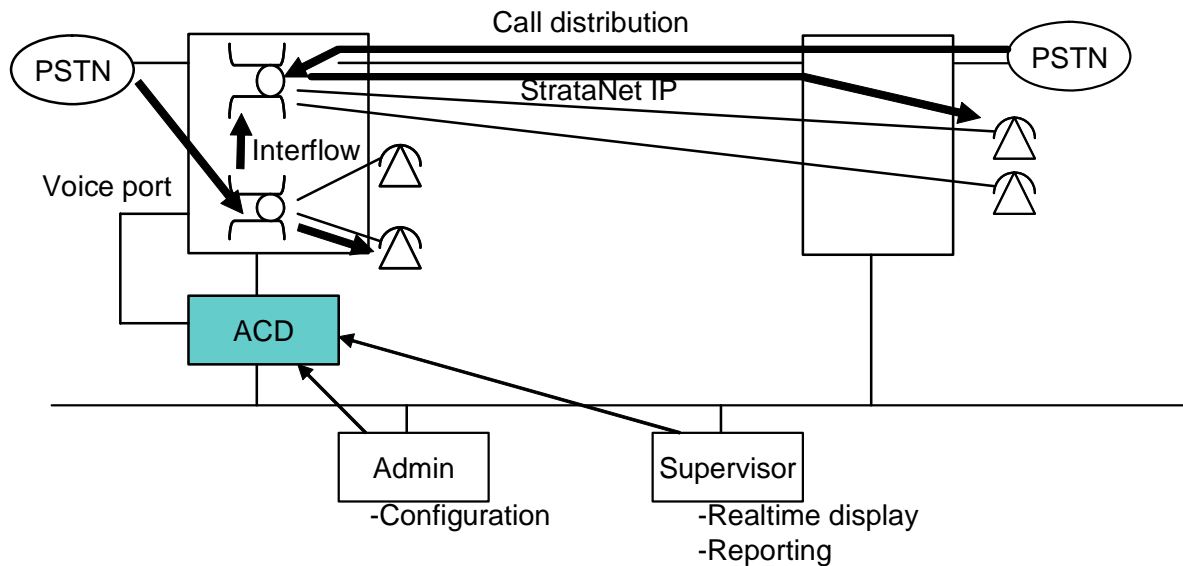
Remote agents operations can be implemented by placing agents on remote nodes and assigning them to a queue. Typically, ACD calls are coming to the main node queues and are routed to any available agents regardless of locations. It is also possible to assign a lower priority to remote agents so that agents in the main node mostly take calls to reduce the traffic between nodes.



## Network Routing

Mid size call centers may have relatively large remote node operations. The customer may have ACD calls coming to each node so that local agents can handle those calls while requiring the routing between nodes.

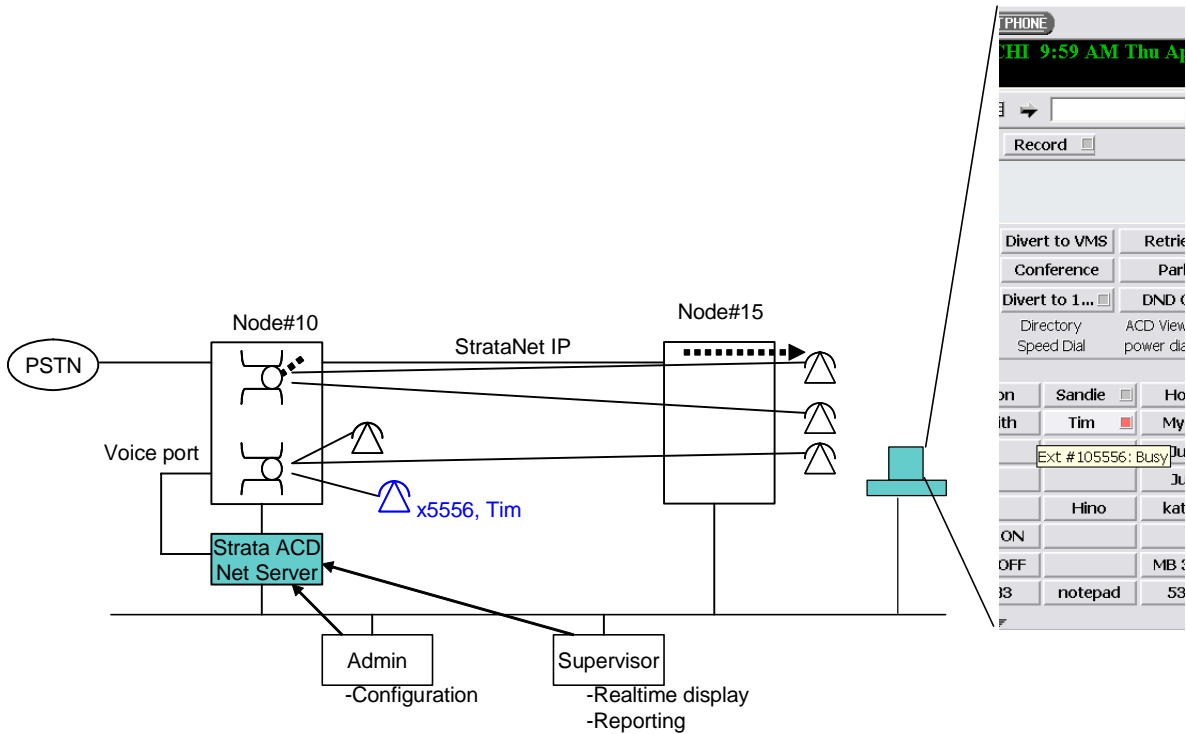
Interflow between nodes can be easily implemented by assigning all the agents in the node to a queue. Typically, agents are handling calls to their node. However, if other groups in other nodes are busy, they can be interflowed to the queue assigned for other nodes. Strata ACD's enhanced capabilities such as checking the status of the target group and/or Share Agents can be used for inter node routing.



**Important!** Strata ACD must have the license to cover all the agents/supervisors on the network.

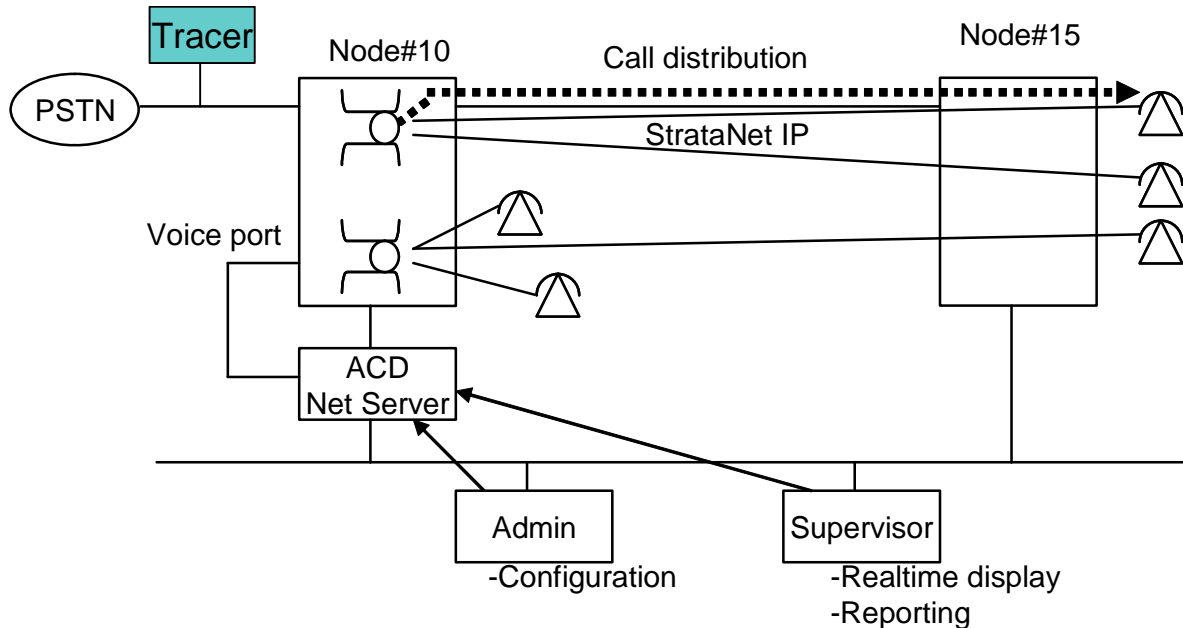
## Net Phone

Net Phone is compatible with Strata Unifier, and as an added capability, Net Phone DSS (Direct Station Select) capability is extended over the network. Users can see the status of other phones in a different node from the Net Phone. Users can also have a chat session with users on different nodes.



## OAISYS Tracer

OAISYS Tracer product is also compatible with Strata Unifier for network operation. By using the Strata Unifier, the Tracer can record the call and map the call to the extension on different nodes so that the call has the correct information for archiving and searching.



If there are multiple incoming CO trunks, a Tracer system can be connected to each CO trunk, and all Tracer systems can be connected to the single Strata ACD system.

Please consult OAISYS for this configuration.

## TASKE

TASKE Contact software is compatible with the Network ACD environment and provides the administrator with the centralized realtime display and reporting capability.

TASKE Contact ACD monitor provides the realtime status information on any queue and agent on the network. TASKE Contact Report can provide all the queue and agent activities on the network so that the supervisor/manager can report the entire call center activities without consolidating the report. TASKE Call Visualizer shows how each call is processed in detail wherever the call may be routed. All of these capabilities are available either through TASKE client software or web browser based access.

## Licenses

Each Strata CIX node that is a part of Network ACD must have the valid ACD license (LIC-ACD).

One Strata ACD system is required on the network, and it must have the enough agent licenses for all the agents/supervisors on the network.

The license for the Strata Unifier to support the intended number of nodes is required.

## Hardware

Network ACD is supported on MAS, MicroMAS, ACD-CT2-PRO-R2, ACD-CT4-SVR, or ACD-CT8-SVR.

1GB of memory is required to run Network ACD.

When using the MAS or MicroMAS to run Network ACD; Strata ACD and Unifier must be the only applications running on these systems. Voice Mail should not be running on the same MAS. TASKE must run on a different PC.

**Note** If TASKE Contact is required, TASKE Contact Server software needs to run on a separate PC. Please see the PC requirement from TASKE (<http://www.taske.com/support/knowledgearticles/toshiba/kb60001.html>).

## Network

The network requirement to implement Network ACD are listed below. Perform the network assessment prior to Network ACD introduction.

Strata network	Strata Net IP (mesh configuration)
Max round trip delay	100ms
Max packet loss	0.5%
Bandwidth	More than 1.5Mbps both ways
Strata Net IP channels	Enough number of Strata Net IP channels between each node.

## Capacity

Following table shows the capacity of the entire system including multiple nodes. In addition to this, each system in the network cannot exceed its capacity.

Items	Capacity
Nodes	10
Agents/supervisors	360
Pilot DN's (ACD groups)	Limited by each Strata CIX
VA ports	96*
Traffic	1000 calls per hour

\* Actual capacity depends on the Strata CTX/CIX system and the ACD server.

## Interactions with other Applications

Following show Network ACD interactions with other applications:

- A node in the network may go down or lose the CSTA connection to the Unifier. In this case, calls will not be routed to agents in that node. If there are queues in those nodes, calls will not be routed to other nodes.
- If one of links is down during the call, the affected call may be reported to be terminated although the call itself may still exist. When the call still exists after the link is recovered, the call may be treated as a new call, and if the call spans across nodes, it may be treated as separate call at each node, and therefore, they may be counted as two calls.
- Network ACD supports distributed ACD resources (agents and queues) over the network. However, it does not support the generic distributed network operation. Therefore, when the call is forwarded, transferred, and/or overflowed to an extension and other devices, the ACD may report that the call goes to another node. When this call comes back to the same node, ACD may report that it is a different call from the original call, and two calls may be reported.
- When the call is diverted, forwarded, or transferred to an extension other than the ACD agent, ACD may show that the call is cleared although the call still exists in the other node. This happens when the extra link is released by the route Strata Net release link feature.
- When one of the CTI links to the node from the Unifier is down, calls will not be routed or delivered to queues and/or agents in that node until the link is reconnected.
- The Unifier has the capability to accommodate some network delay. However, the delay is more than it can handle, following symptoms may be observed. In this case, it is necessary to examine the network to make sure it support the requirement listed in this document.
  - ACD admin screen and/or report shows that the call is non ACD call
  - The call across the network may considered to be two calls, and involved agents may be reported as handling a non ACD call.
  - The call may be dropped.
- Strata Net has the capability to release the extra link when the connection becomes loopback. It requires a temporary additional B-ch to perform the operation. If no extra B-ch is available at that time, the link will not be released, and the call is treats as two independent segments to avoid further mi reporting. In this case, the single call becomes two, and involved agents may be considered to handle a non ACD call.
- Supervisors or agents cannot pick up or retrieve a call in a different node.
- Users cannot configure the phone to use the flexible key to perform the one touch operation. Following sequence can transfer the existing call to pre-programmed destination by the single button press. However, this operation is not supported by Strata Unifier.  
[Cnf/Trn][dialing digits][Spkr]
- When a Callback call is made, the system follows the access code defined in the node where Voice Announcement port is connected regardless of the agent location. Therefore, if the agent is in Node#1 and the VA port is in Node#2, the callback call may be generated to the PSTN from the node#2. Therefore, in general, it is recommended to use LCR to route the call by specifying the LCR access code in the Trunk Access Code in the Miscellaneous tab in ACD Administration screen. If all calls need to be generated from the trunk in a certain node, node ID needs to be specified in the Trunk Access Code. It is strongly recommended to have the enough number of trunks for callback calls. Otherwise, the callback call may be lost due to all trunks busy.

- When the overflow destination of the ACD queue is a UCD group, the call may not be overflowed to UCD overflow destination, and the call may come back to the ACD queue. Therefore, it is strongly recommended to use an ACD group instead.
- MCG cannot be used for ACD operation such as overflow destination. Please use an ACD group instead.
- When upgrading Strata CIX, it is necessary to remove and reconnect the LAN cable to the Strata CIX to reset the link after the Strata CIX system is restarted to ensure that the link is fully restored after the upgrade.
- At the time or after the conference is established and the controller is dropped, no more consultation call may be able to be established as the system prohibits the possibility of creating a conference call with multiple conference master. At this time, TRN/CNF does not work. If necessary, the call needs to be reestablished.
- OCA (Off-hook Call Announcement) is not supported in network ACD environment. If it is used for the agent, the system may recognize the agent status incorrectly and may route a call to an agent who is not available to take a call.
- SPLIT operation is not supported. If done, the call may be reported as a non ACD call.

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