

# FUJITSU Call Center System

## CCRM-1

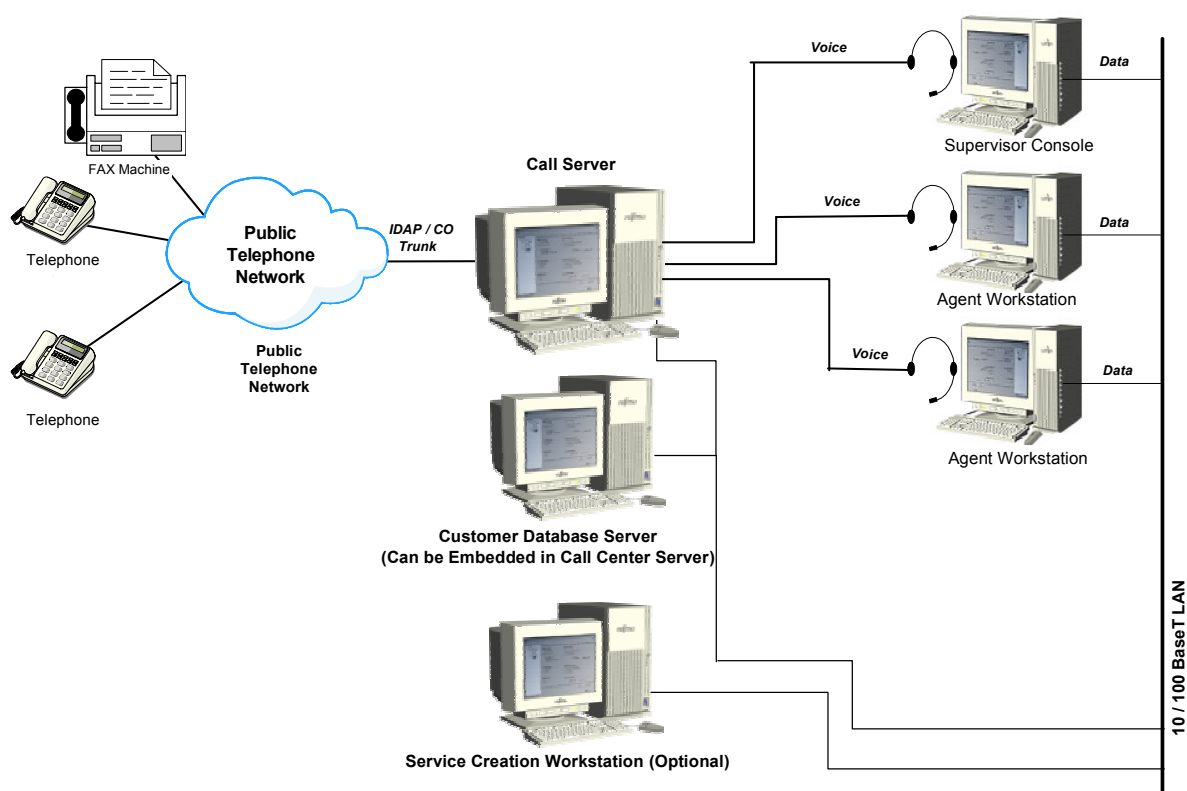
### Product Description

**(JAN 2004)**

## **INTRODUCTION**

FUJITSU Call Center System , CCRM-1 is a feature-rich Single-box solution targeted for Small and Medium Enterprises. It provides solutions that meet the growing needs of small-to-medium-sized call centers, improving efficiency and increase customer satisfaction. Using a minimum of a single call server box, FUJITSU Call Center provides customized routing of incoming calls (ACD), agent groups, interactive voice response (IVR), queue-on-agent-busy, queuing position announcement, supervisory monitoring, call logging, fax-on-demand and call center statistic reports of call traffic distribution and call details records.

### **System Configuration of FUJITSU Call Center System**



## **SYSTEM DIMENSION**

<i><b>Item</b></i>	<i><b>Type</b></i>	<i><b>Quantity Supported</b></i>
Network Interface	CO Trunk	4 ~ 32
	IDA-P / IDA-M	(1 ~ 3) x T1
Agent Stations	Headset	4 ~ 24
Supervision Console	PC Based	1
Service Creation Workstation	PC Based	1

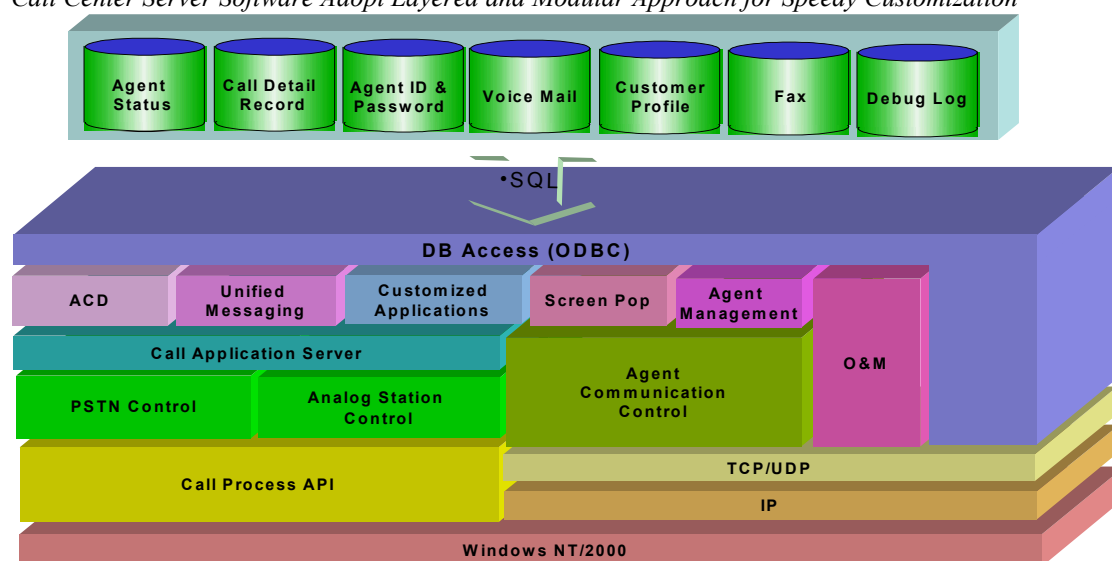
## **SYSTEM COMPONENTS**

### **Call Center Server**

The Call Server provides best-in-class skill-set routing, routing customers to the agents most qualified to serve them. In addition, it provides total call tracking, standard and customizable reports, scripting capabilities, and operates on an industry standard client-server platform.

The use of ODBC technology enables the call center to be flexibly connected to different kinds of customer database (e.g. MS-SQL, Access, Oracle SQL)

*Call Center Server Software Adopt Layered and Modular Approach for Speedy Customization*



*Specification of Call Center Server*

Item		FUJITSU Call Center Server	
Processor		Pentium®4 Processor	
	Frequency	2.4GHz	3.0GHz
	L2 Cache	256KB / 512KB	
	No. of CPU	1 or 2	
Memory		SDRAM (Registered) 256/512/1024MB	
	Standard	512MB	
	Maximum	4GB	
	No. of slots	8 x PCI	
I/O Slots	PCI	8 x PCI	
PSTN Interface		ISDN 23B+D or 4,8,12,16 Analog Trunks (96 max )	
Analog Station Interface		8 or 16 Line Card (48 max)	
3.5" Bays	Number	5	
	Harddisk	Ultra SCSI 160 RAID or IDE RAID (36G x 2)	
Device Bays	FDD	1.44MB/720KB fitted (std)	
	CD-ROM	40 x IDE fitted (std)	
Network Interface Card		100Base-TX/10Base-T x 1	
Wake on LAN		Yes (selectable)	
SCSI on Motherboard		1xUltra160 & 1x Ultra160 or narrow	
SVGA VRAM		4MB	
I/O Ports		Keyboard, PS/2 mouse, 1 x VGA, 2xserial, 1xparallel, 2xUSB	
Power Supply Unit		340W	
O/S		Windows NT 4.0 or Windows 2000	
Database		MS-SQL	
Dimensions	W x D x H (mm)	174 x 615 x 449 mm	
Weight		Max 35KG	

## Agent Station

The Agent Station is a windows-based software application running at the client PC. The Agent Station puts information conveniently to the agents (e.g. customer service representatives) allowing them to focus on listening to customers' needs rather than mouse and keyboard operations. This automation helps reducing a lot of human errors. The agents can make and receive phone calls simply by point and click of the mouse using the desktop telephony interface.

The Agent Station provides a graphical user interface at the PC screen. It will drive a screen-pops up with caller information and questioning scripts when a call is arrived. The function allows the agents to have the customer profile and review the recent activities of that customer before answering the call. Both the agent and the customer can jump into the main conversation about the main subject therefore the accuracy and efficiency of communication are enhanced.

### Specification of Agent Station

Item	Agent Station
Processor	Pentium® 200MHz or Above
Memory	32MB or Above
Display	SVGA Display Card and Monitor
Harddisk	2GB or above
Network Interface Card	100Base-TX/10Base-T x 1
I/O Ports	Keyboard, PS/2 mouse
O/S	Windows 95/98/Me/NT Workstation 4.0 or Windows 2000 Pro

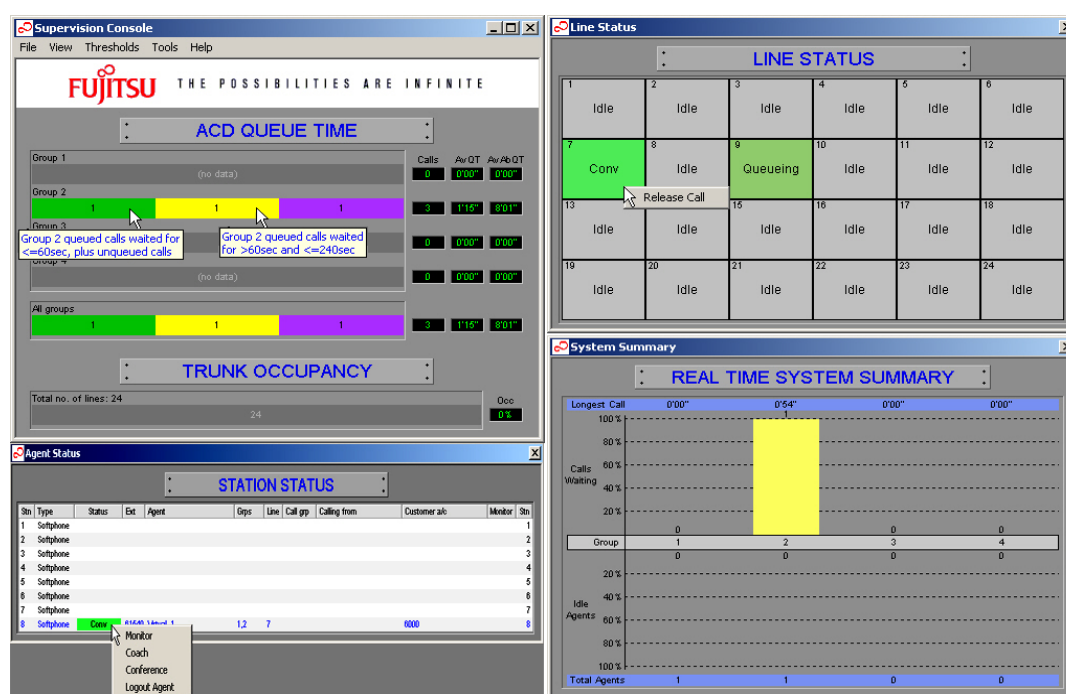
### Agent Station Screen

## Supervision Console

The Supervision Console is a Windows-based software application running on a PC. Being a separate console from Call server, the Supervisor can login (using supervisor password) and performs many operations such as real time system reporting screen, retrieve historical data, sorting our various system reports, passwords management, envision of the incoming lines, agent status, call statistic information, silent monitoring as well as listening to the call logging results.

*Call Center Supervision Console is the commander for the Call Center. It allows the Call Center Manager to monitor the system performance (e.g. agent status and queue statistics) in real-time at a glance. The supervisor can also use this console to generate a wide variety of standard and customizable reports and alter the system configuration (e.g. ACD logic, queue size).*

*Using the Supervision Console to monitor the call center at a glance*



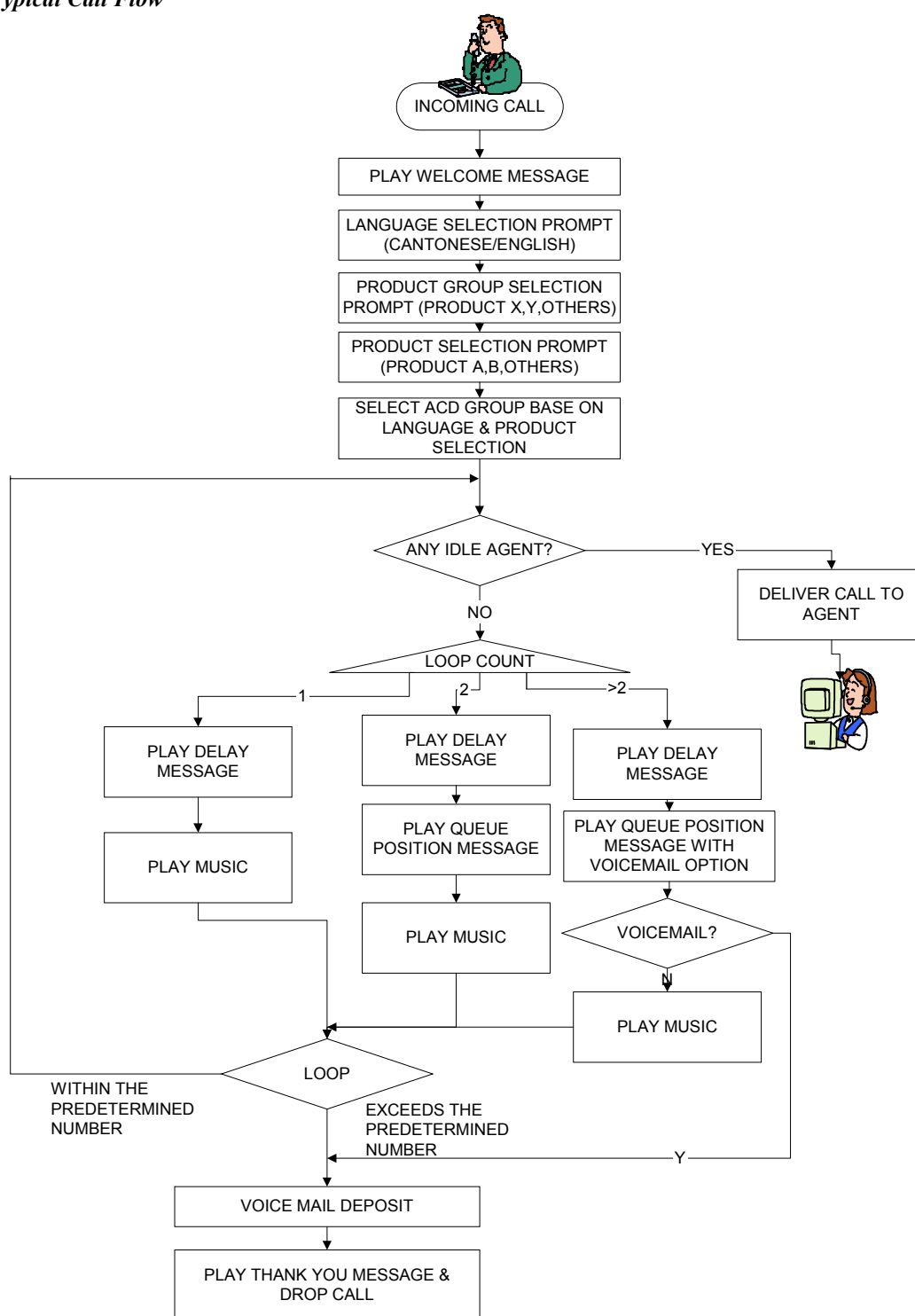
## Specification of Supervision Console

Item	Supervision Console
Processor	Pentium4® 1.8GHz or Above
Memory	256MB or Above
Display	SVGA Display Card and Monitor
Harddisk	2GB or above
Network Interface Card	100Base-TX/10Base-T x 1
I/O Ports	Keyboard, PS/2 mouse
O/S	Windows 2000 Pro

## Service Creation Workstation

The Service Creation Workstation is another windows-based software application designed to be run on a PC. The call centre administrator can design a new IVR Flow or modify the current IVR call-flow of the call center system using the GUI-based interface provided (drag and drop).

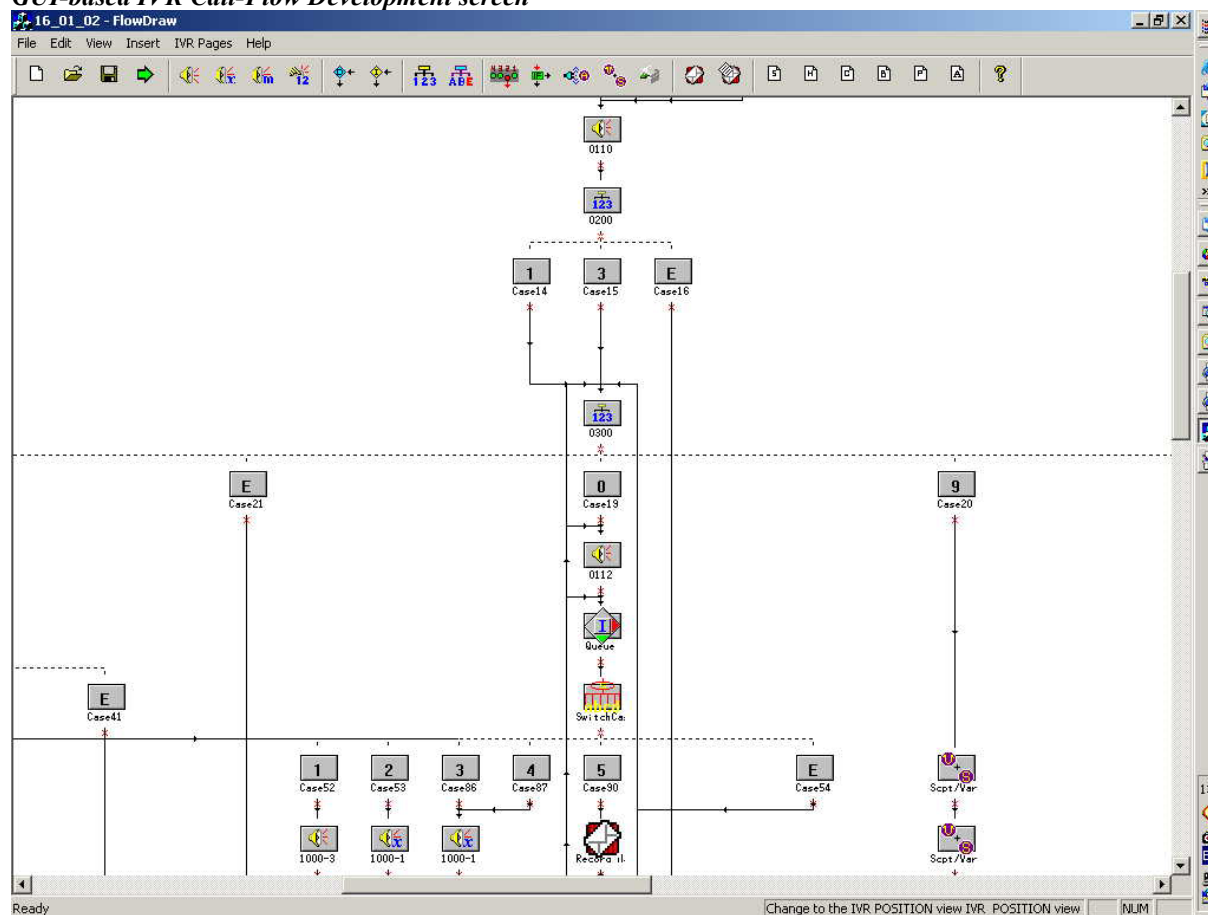
### A Typical Call Flow



**Specification of Service Creation Workstation**

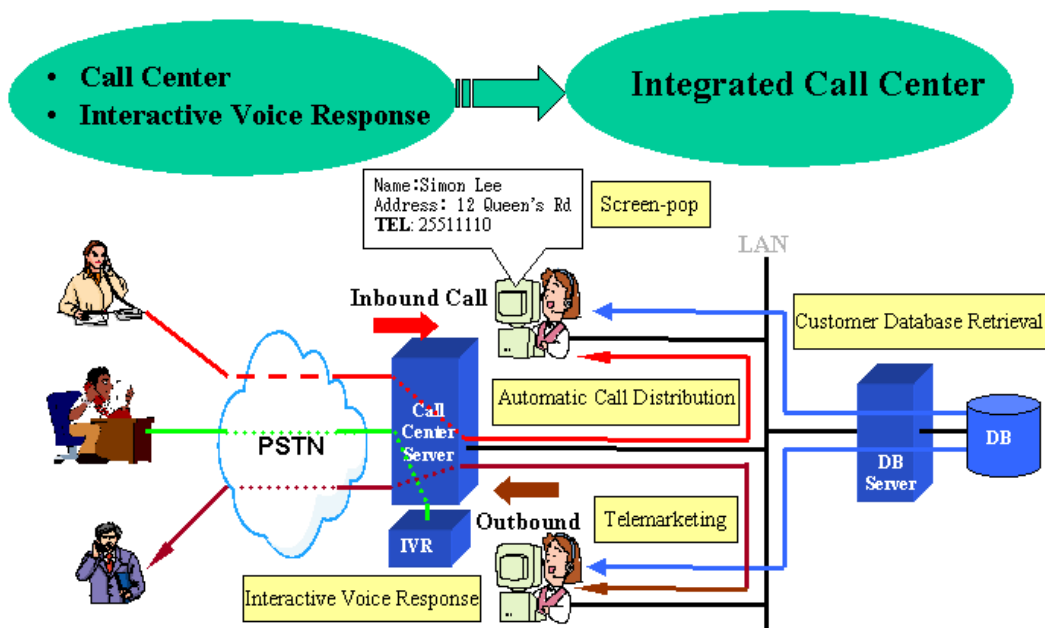
Item	Service Creation Workstation
Processor	Pentium 4® 1.8GHz or Above
Memory	128MB or Above
Display	SVGA Display Card and Monitor
Harddisk	2GB or above
Network Interface Card	100Base-TX/10Base-T x 1
I/O Ports	Keyboard, PS/2 mouse
O/S	Windows 95/98/Me/WinNT Workstation 4.0 or Windows 2000 Pro

**GUI-based IVR Call-Flow Development screen**





## SYSTEM FEATURES OUTLINE



### Features of FUJITSU Call Center System

Customer Contact is the main key factor to the Business Growth and Success. With FUJITSU Call Center CCRM-1, all the calls from your customers will be handled smoothly and effectively. The call flow ( answering scheme) management of the call centre can be tailored made to inline with the good servicing characteristic of your company. The main features of FUJITSU Call Center System CCRM-1 are described below.

#### Call Routing (DNIS, Caller ID, IVR Input, Skill-set) –

Using skill-sets such as language fluency, technical expertise or product knowledge, the agents can be organized into several skill-set-groups within which independent ACD algorithm (e.g. Longest Idle) can be applied.

ACD logic working together with IVR sub-system can select the best-suited agent to be delivered with the call. Base on the customer input (touchtone) to the IVR to select the language and product group/sub-group, idle agent with the closest skill-set in the selected ACD group will be selected for call delivery.

DNIS and/or Caller ID are carried with the call into the call center server to access information and services which is being used to select a call routing scheme automatically. In addition, IVR input (e.g. language preference, service request) from customer can also be used for routing the call to the appropriate resource like customer service representatives (agents). Skill-set Routing ensures the customer will be served with an agent with the competent skills. Skills could be the ability to communicate in the same foreign language or the ability to

## ***FUJITSU Call Center System CCRM-1 – Product Description***

answer the detail questions of a product. Intelligent Skill based call distribution reduces the needs to transfer the caller couple of times and provides personalized service experience to customer.

### ***Interactive Voice Response (IVR) –***

IVR automates otherwise routine inquiries and other transactions by enabling the caller to communicate with a host computer through touch-tone key presses or speech recognition. This process gives the customer direct, confidential access to information and services available 24 hours a day and 7 days a week. The IVR as the front line to identity the caller for skill based, DNIS or other types of call routing, filtering out customers who look for human attention and performs a lot of automatic tasks (i.e. fix information announcement, account balance information) so that call volume handled by agents are reduced significantly.

### ***Customizable Announcement –***

Greeting, Busy, Day/Night and Information (e.g. for advertisement) announcements can be easily customizable to meet the rapid change on business operations and marketing campaigns. Customer can make new recording at anytime with CCRM-1 online and the change will be heard by the next incoming call.

### ***Customizable IVR Flow –***

The IVR logic and flow can be amended by the Service Creation Workstation which is built-in with a GUI-based (drag-and-drop) IVR-call-flow development tool.

### ***On-line Update of IVR Flow –***

From time to time, IVR flow may be changed base on business needs. When a new IVR flow has been designed, the system need not be shut down for the update. The supervisor or system manager can use the supervision console to activate the new IVR flow following some simple procedures.

### ***Queue Position Announcement –***

Incoming caller who has been put in queue waiting for an idle agent can hear an announcement about the current queue position and / or estimated waiting time to be served.

### ***In-Queue Voice Mail Option –***

System voice mail deposit can be activated when a customer is waiting in call queue. The caller is offered to press a key to activate the voicemail service to leave a message while he/she is waiting in the ACD queue.

### ***Automatic Call Distribution (ACD) –***

ACD enables the call center to handle large volumes of incoming calls efficiently by distributing them equitably among a designated group of answering agents, depending on the configuration of the IVR system by customer. The ACD function distributes the queuing calls so that the first incoming call is presented to the agent(s) base on one of the ACD algorithms. There are *Longest Idle*, *Uniform Call Distribution*, *Round Robin*, *Top Down* and *customized* ACD algorithms available in CCRM-1.

### ***Call Queuing –***

Incoming calls will be put in queue if all the agents are busy. Multiple waiting messages will be announced to customers in waiting queue to reduce their frustration. The call will be handled immediately once an idle agent is available.

***Re-Queue on Ring-to-answer Timeout –***

If the system has delivered the call to an idle agent but the agent does not answer the call within a pre-defined period of time (i.e. ring-to-answer timing ), that call will be re-queued to the ACD group's first queuing position.

***Queue Size Limitation –***

The supervisor can set the limitation to the maximum queue length of each ACD group. If this threshold is exceeded, further incoming calls will be released (after an announcement or busy tone) without holding the network channel and voice resources.

***Automatic Speech Recognition (ARS) –(optional)***

With the add-on ASR system module, the IVR is capable to recognize human speech up to 5 languages per system. The strengthen the power of the IVR to allow the users to select virtually unlimited items within a effective time (e.g. the conventional department store IVR flow) and extend the IVR service to people with keying in and short-term memory problems.

***Text-to-Speech Function (TTS) – (optional)***

With the add-on TTS system module, the IVR system can turn any text content (e.g. email, report etc...) as a result of an IVR search operation into human speech (up to 5 languages per system) to tell the callers. This virtually eliminate the necessity of IVR prompts recording everytime an IVR flow and the content are charged.

## ***FUJITSU Call Center System CCRM-1 – Product Description***

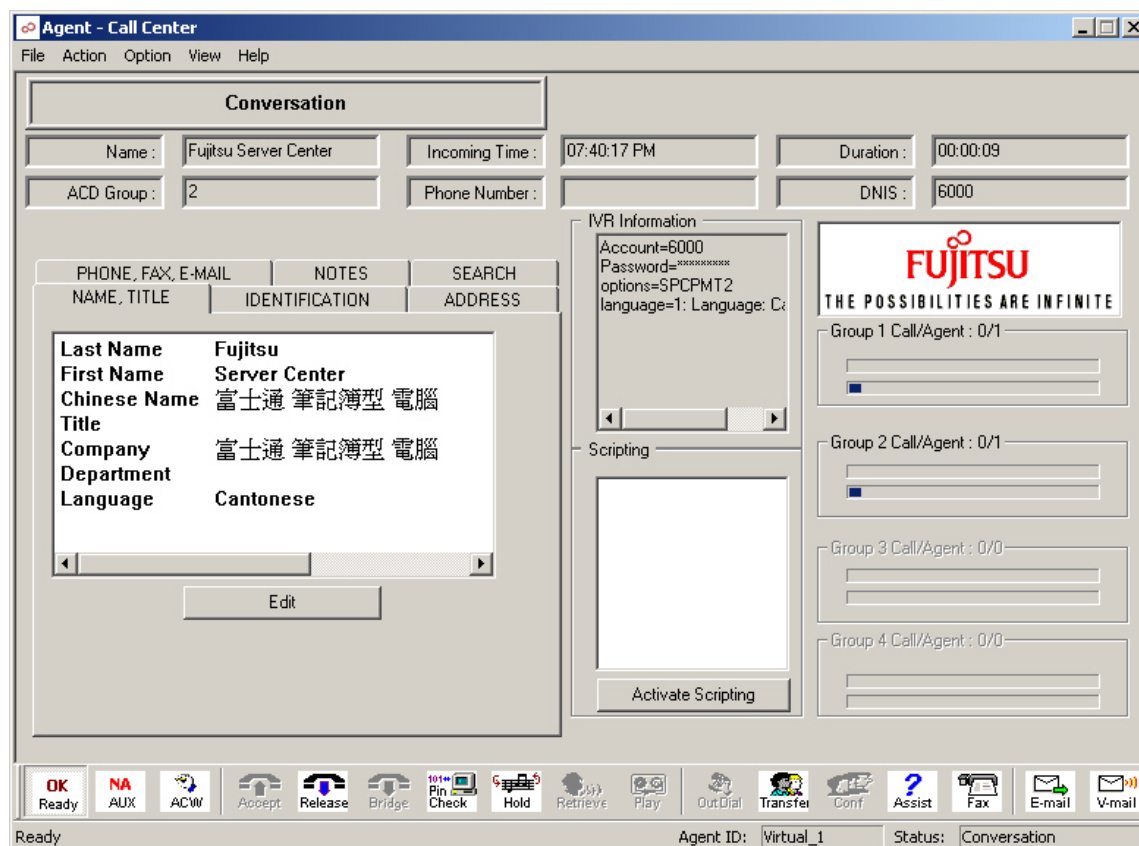
### ***Customer Relationship Management (CRM) Features***

#### **a) Screen Pops**

Screen Pops automatically display database information of the identified caller simultaneously with the call is ringing at the agent position. Typically, the agent would automatically be presented with the customer's name, address, and account status, as well as information on the customer's past activities with the company. This gives the agent a 'heads-up' on the needs of the customer, helping to reduce call duration by 20-45 seconds and to increase customer satisfaction.

The on-screen customer data pop-up menu can be used to update the customer data (e.g. telephone number, customer complaint contents)

#### ***Customer Data Screen-pop on Call Delivery***



The screenshot displays the 'Agent - Call Center' software interface. The main window is titled 'Agent - Call Center' and contains a menu bar (File, Action, Option, View, Help) and a toolbar with various call control icons (Ready, AUX, ACW, Accept, Release, Bridge, Pin Check, Hold, Retrieve, Play, Out Dial, Transfer, Conf, Assist, Fax, E-mail, V-mail). The interface is divided into several sections:

- Conversation Section:** Contains fields for Name (Fujitsu Server Center), Incoming Time (07:40:17 PM), Duration (00:00:09), ACD Group (2), Phone Number, and DNIS (6000).
- Customer Data Section:** A table with columns for PHONE, FAX, E-MAIL, NOTES, and SEARCH. The table contains the following data:
 

NAME, TITLE	IDENTIFICATION	ADDRESS
Last Name	Fujitsu	
First Name	Server Center	
Chinese Name	富士通 筆記簿型 電腦	
Title		
Company	富士通 筆記簿型 電腦	
Department		
Language	Cantonese	
- IVR Information Section:** Displays Account=6000, Password=XXXXXXXXXX, options=SPCPMT2, and language=1: Language: C.
- Scripting Section:** Includes a text area for scripting and an 'Activate Scripting' button.
- Group Call/Agent Section:** Displays the Fujitsu logo and the slogan 'THE POSSIBILITIES ARE INFINITE'. It also shows call counts for Group 1 (0/1), Group 2 (0/1), Group 3 (0/0), and Group 4 (0/0).

The status bar at the bottom shows 'Ready', 'Agent ID: Virtual\_1', and 'Status: Conversation'.

#### ***Chinese Language Support –***

The customer data on “screen-pop” can be in Chinese Language.

**b) Screen-Transfer**

When an agent transfers an ongoing conversation to another agent. The on-screen customer data will also be transferred to that agent. As the result, both agent can view the same customer data so that the customer will not be ask for the content of the previous conversation.

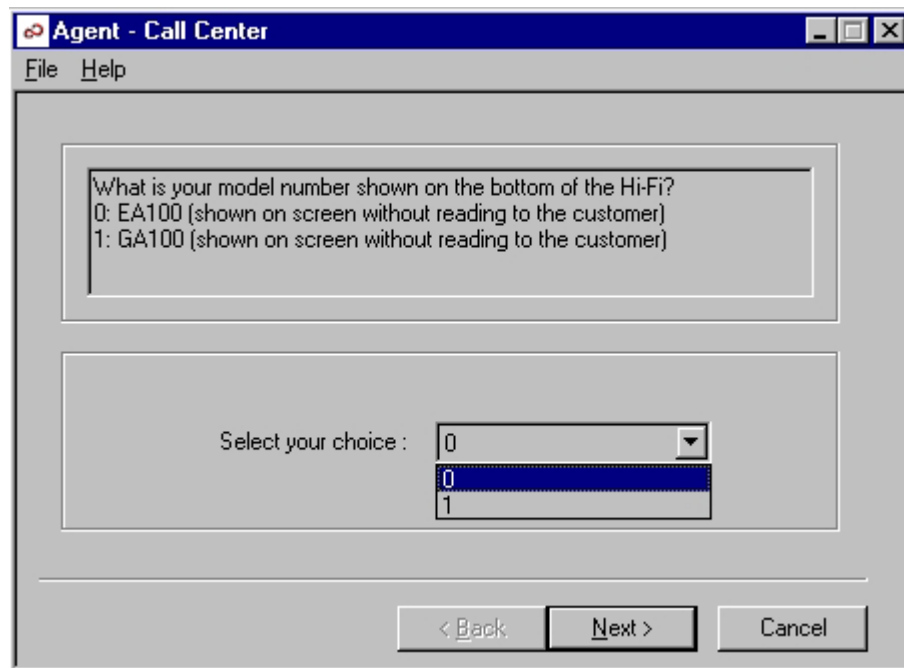
**c) Categorization of Customer Data**

The multi-tagged type agent screen-pop categorizes the customer data for easy reference by agents.

e.g. Basic Information,  
Detail Information,  
Recent Activities,  
Complaints, etc.

**d) Scripting**

Standard questioning scripts (or hints) can be provided to help agents in asking customer's information for the customer record or service report. The script flow and contents can be customized easily by modifying a text-based configuration files. Scripts can be automatically popped-up at the agent station base on customer input (language and product selection) during the IVR session.



**e) Wrap-code**

Wrap-code entry by the agent at the end of each call can be used for detail analysis of customer requirement and can often help to provide better information for business or operation enhancement.

## Supervisory Features

### Real-Time System Monitor and Control –

Real-time System monitoring is performed at the supervision console. Trunk and Channel Status, ACD Groups and Agent Status, Call Queues and Alarm Status are all displayed in real-time on the supervision console. This allows the supervisor to easily investigate the problem (e.g. call overflow for individual services, insufficient agent for a certain ACD group, insufficient trunk for incoming call traffic) effectively with a corresponding alarm is displayed. The supervisor can view the traffic fluctuation and real-time incoming call status (including Caller ID, call status, etc.) and agent status via the Supervision Console.

### Trunk Status Monitor

Status and usage of each trunk circuit is shown and update in real time with multiple colours scheme in order that the Supervisor can view the system statuses away from the screen. The colours of an monitored item changes if it is exceed the predefined thresholds.

### Monitoring of Network Interface, Resources and ACD group status at Supervision Console



### Fax Resource Status Monitor

Status of fax ports is shown and update in real time.

### Agent Status Monitor

Status of each agent is shown and update in real time. Threshold can be set for each state to issue an alarm (by blinking on screen) when the threshold has been exceeded. For example, agent with conversation state exceeding 10 minutes will generate the alarm.

### Monitoring of Agent Status on Supervision Console

Agent ID	Line	Status	Ext	Calling from	Customer a/c
agent 1	2	ACW	1010		
agent 2	4	Conv	1011	21212333	1234567823555444
agent 3	17	Conv	1012	22523419	1234567834552555
agent 4	6	Conv	1013	24234234	8760366635543555

Agent ID	Grps	Line	Status	Ext	Calling from	Customer a/c
agent 1	1	2	ACW	1010		
agent 2	3,1	4	Conv	1011	21212333	1234567823555444
agent 3	1,2	17	Conv	1012	22523419	1234567834552555
agent 4	1,2,4	6	Conv	1013	24234234	8760366635543555
agent 5	4	10	Conv	1034	22555669	1234098756783456
agent 6	4,3,1,2	12	Conv	1035	22509888	1234567887654321
agent 7	4	7	Conv	1036	98077766	8876334446622333
agent 8	4	9	Conv	1037	22500991	6455756565223399
agent 9	4,2,3	1	OutDial	1023		
agent 10	4,1,2,3	3	Idle	1024		
agent 11	4,2,1	5	ACW	1025		

### Queued Call Information Monitor

The ACD group real-time status (e.g. status of agents, number of in-queue calls with call details like caller ID, trunk number and customer input to IVR prompts) is shown on the supervision console.

Seq	Line	Calling from	IVR info
1	10	23206888	Language=1;Account=120776;Password=*****;Script_Num=1;
2	3	27078137	Language=1;Account=126125;Password=*****;Script_Num=4;
3	22	93192191	Language=3;Account=113436;Password=*****;Script_Num=1;
4	11	28802688	Language=1;Account=100744;Password=*****;Script_Num=12;

***Warning Alert to Supervisor –***

The supervisor will be notified (by any agent) for assistance, advice, monitoring or conference. The supervisor will see the “blinking” agent on the supervision console.

***Configurable Warning Threshold Timing –***

Supervisor can easily discover possible problem in the call center because the agent, trunk and other resource status are continuously monitored automatically for unusual long duration “stuck” in certain state (e.g. conversation). For example, agent with work time exceeding a preset threshold value will be indicated on the supervision console with blinking effect to catch the attention of the supervisor. The threshold values of each state for each resource (e.g. Agent, trunk) can be freely set using the supervision console.

***Network Resource Control –***

The supervisor can set the limitation (in % of total network interface channels) to the maximum number of incoming calls that can be handled. If this threshold is exceeded, the incoming call is rejected (e.g. after playing busy tone) without holding the network channel. This facility allows the call center manager to reserve some channels for outgoing call (e.g. for fax sending).

***Override Procedure and Preset Time-based Routing –***

The supervisor can select and activate the override procedure at any time. All incoming calls will be treated with this override procedure, e.g. pre-recorded announcement. Call Center supervisor can also set the office hours limit (morning, afternoon, after-office-hours) within each has a different IVR and ACD routing.

***Force Sign-in and Sign-out –***

The supervisor can actively sign-in or sign-out agents when the necessary situation arises.



### Call Center Configuration Tool

The call center manager or supervisor can perform change of system parameters like ACD arrangement, agent profile change, timing (e.g. ring-to-answer timeout), alarm threshold setting (e.g. queue size over, long waiting time in queue). A web-based interface is provided for the following O&M activities in order to allow quick and flexible customization requirement.

- ACD Group Management
- Agent Profile Management
- DNIS Routing Configuration
- IVR Flow Configuration
- Trunk Usage Configuration
- Holiday, Time-zone and Office-Hour Configuration

### Supervisor can Change the Agent Profile using the Agent Management Page

The screenshot displays the 'Agent Management' page of the Fujitsu Call Center System. The browser window shows the URL 'http://callcenter1/callcenter1/index.asp'. The page features a sidebar with a navigation tree under 'Fujitsu Call Center System', including 'Call Center System', 'Profile Management', 'Agent', 'Supervisor', 'Customer', 'System Management', 'Reports', 'ACD Group Performance', 'Agent Activity', 'CDR List', 'Call Counting', 'Incoming Call Detail', 'Outgoing Call Detail', 'Transfer', 'Conference', 'Trunk Usage', 'Trunk Usage Summary', and 'Logout'. The main content area is titled 'Agent Management' and contains a table of agents. The table has columns for 'Name', 'Department Name', 'Title', and 'Email'. There are 'New Agent' and 'Delete' buttons at the top right and bottom right of the table.

	Name	Department Name	Title	Email
<input type="checkbox"/>	<a href="#">chu chu</a>	CSD	Engineer	<a href="mailto:ccchu@fujitsu.com.hk">ccchu@fujitsu.com.hk</a>
<input type="checkbox"/>	<a href="#">Fu Wong</a>	CSD	Project Member	<a href="mailto:kfwong@fujitsu.com.hk">kfwong@fujitsu.com.hk</a>
<input type="checkbox"/>	<a href="#">George Lee</a>	CSD	Project Member	<a href="mailto:georgelee@fujitsu.com.hk">georgelee@fujitsu.com.hk</a>
<input type="checkbox"/>	<a href="#">Ken Ngan</a>	CSD	Project member	<a href="mailto:kenggan@fujitsu.com.hk">kenggan@fujitsu.com.hk</a>
<input type="checkbox"/>	<a href="#">Kenneth Law</a>	CSD	Manager	<a href="mailto:kenneth@fujitsu.com.hk">kenneth@fujitsu.com.hk</a>
<input type="checkbox"/>	<a href="#">Macro Chan</a>	CSD	Project member	<a href="mailto:marco@fujitsu.com.hk">marco@fujitsu.com.hk</a>
<input type="checkbox"/>	<a href="#">Terry Lam</a>	CSD	Project Leader	<a href="mailto:terry@fujitsu.com.hk">terry@fujitsu.com.hk</a>
<input type="checkbox"/>	<a href="#">Winnie Hung</a>	CSD	Project Leader	<a href="mailto:winhung@fujitsu.com.hk">winhung@fujitsu.com.hk</a>

## FUJITSU Call Center System CCRM-1 – Product Description

### Call Center Historical Reports -

The supervisor can retrieve the daily, weekly, or monthly reports of the call center via the supervision console. These reports will reflect the performance of the call center over the period. This allows the supervisor of call center manager to spot out any problem (e.g. understaffing of agents, insufficient trunks, long ACD queue time).

### ACD Group Performance Report

This report can indicate the various call performance data (e.g. calls abandon rate, average & longest queue time, etc).

#### Received Calls Report

View

Group

16 December 2002						
S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

[ [Received Call](#) ] , [ [Abandoned Call](#) ]

[Open Excel](#) , [\(00 - 08\)](#) , [\(08 - 18\)](#) , [\(18 - 00\)](#) , [\(All\)](#)

Time Period	Call Counting			Call Received Group by Seconds					Queue (Sec)	
	Total	Abandoned	Received	0 - <10	10 - <20	20 - <30	30 - <45	45+	Avg	Longest
2002-12-15 Sun	0	0	0	0	0	0	0	0	0	0
2002-12-16 Mon	103	4	99	89	1	0	0	9	00:06	01:59
2002-12-17 Tue	79	0	79	78	0	1	0	0	0	00:28
2002-12-18 Wed	92	3	89	83	2	0	2	2	00:02	01:00
2002-12-19 Thu	78	2	76	71	0	3	0	2	00:03	01:45
2002-12-20 Fri	87	2	85	78	3	1	1	2	00:04	03:43
2002-12-21 Sat	0	0	0	0	0	0	0	0	0	0

Sub Total :										
08:00 - 18:00	439	11	428	399	6	5	3	15	00:03	03:43

ALL										
Total	439	11	428	399	6	5	3	15	00:03	03:43

## Abandoned Calls Report

View

Group

16 December 2002						
S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

[ [Received Call](#) ], [ [Abandoned Call](#) ]

[Open Excel](#) , [\(00 - 08\)](#) , [\(08 - 18\)](#) , [\(18 - 00\)](#) , [\(All\)](#)

Time Period	Call Counting			Call Abandoned Group By Seconds					Queue (Sec)	
	Total	Received	Abandoned	0 - <10	10 - <20	20 - <30	30 - <45	45+	Avg	Longest
2002-12-15 Sun	0	0	0	0	0	0	0	0	0	0
2002-12-16 Mon	103	99	4	1	0	0	0	3	01:02	02:29
2002-12-17 Tue	79	79	0	0	0	0	0	0	0	0
2002-12-18 Wed	92	89	3	0	0	0	0	3	01:44	03:09
2002-12-19 Thu	78	76	2	0	1	0	0	1	00:46	01:19
2002-12-20 Fri	87	85	2	0	0	2	0	0	00:20	00:21
2002-12-21 Sat	0	0	0	0	0	0	0	0	0	0
<b>Sub Total :</b>										
08:00 - 18:00	439	428	11	1	1	2	0	7	01:03	03:09
<b>ALL</b>										
Total	439	428	11	1	1	2	0	7	01:03	03:09

## Trunk Usage Report

Trunk usage statistics is important information to indicate whether network interface resource is sufficient in the call center. Call center managers can refer to this information to judge trunk resource expansion necessity.

### Trunk Usage Record Summary

View

From

To

Interval

Line

Line 1

Line 2

Line 3

Line 4

Line 5

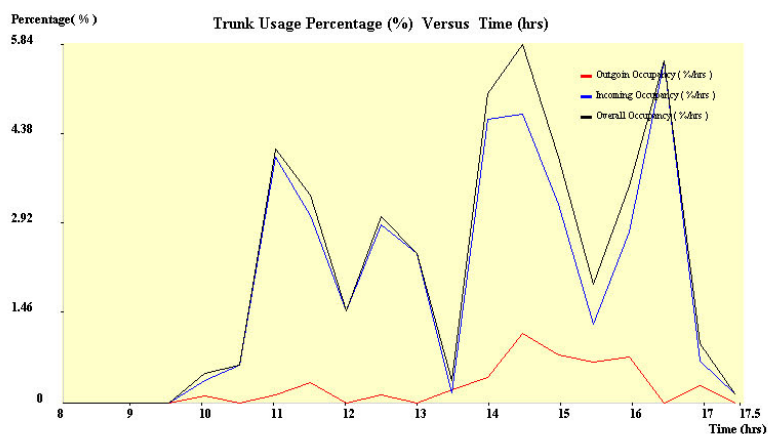
Line 6

< 16 September 2002 >

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

(00 - 08) , (08 - 18) , (18 - 00) , (All)

Time	Outgoing		Incoming		Overall	
	Usage(sec)	Occupancy(%)	Usage(sec)	Occupancy(%)	Usage(sec)	Occupancy(%)
08:00-08:30	0	0	0	0	0	0
08:30-09:00	0	0	0	0	0	0
09:00-09:30	0	0	0	0	0	0
09:30-10:00	0	0	0	0	0	0
10:00-10:30	00:51	0.12	02:36	0.36	03:27	0.48
10:30-11:00	0	0	04:30	0.62	04:30	0.62
11:00-11:30	00:57	0.13	28:51	4.01	29:48	4.14
11:30-12:00	02:22	0.33	22:01	3.06	24:23	3.39
12:00-12:30	0	0	10:48	1.5	10:48	1.5
12:30-13:00	00:59	0.14	20:51	2.9	21:50	3.03
13:00-13:30	0	0	17:34	2.44	17:34	2.44
13:30-14:00	01:30	0.21	01:08	0.16	02:38	0.37
14:00-14:30	03:02	0.42	33:16	4.62	36:18	5.04
14:30-15:00	08:13	1.14	33:51	4.7	42:04	5.84
15:00-15:30	05:35	0.78	23:14	3.23	28:49	4
15:30-16:00	04:47	0.66	09:12	1.28	13:59	1.94
16:00-16:30	05:25	0.75	19:59	2.78	25:24	3.53
16:30-17:00	0	0	40:08	5.57	40:08	5.57
17:00-17:30	02:00	0.28	04:59	0.69	06:59	0.97
17:30-18:00	0	0	01:05	0.15	01:05	0.15
<b>TOTAL</b>						
08:00-18:00	35:41	0.25	04:34:03	1.9	05:09:44	2.15



These graph requires ( Java[™] 2 Platform, Standard Edition version 1.4 software ) to view.

Best View at 1024 X 768 Pixels

If the graph doesnot appear, please download the latest java version from the link that showed at the following.

[Java\[™\] 2 Platform](#)

### ***Agent Activity Report***

Agent activity report provide statistics on agent performance such as conversation time, work time, average ring-to-answer time, etc.

### ***Call Detail Records –***

CDR that includes call activity timing, caller ID, agent ID, etc. is produced for each call (complete or incomplete)

### ***Silent Monitoring***

Conversation monitoring can be a useful tool for the supervisor to inspect the quality of agent's response to customer.

The Supervisor can start and stop call monitoring of any call at any time and can also choose to monitor the call of a dedicate agent. The supervisor can click a button to monitor a conversation between an agent and the customer, or click another button to force a conference, or click another button to coach the agent (whispering instructions).

### ***Monitoring***

The supervisor can hear the conversation between agent and customer but the voice from the supervisor cannot be heard neither by agent nor the customer.

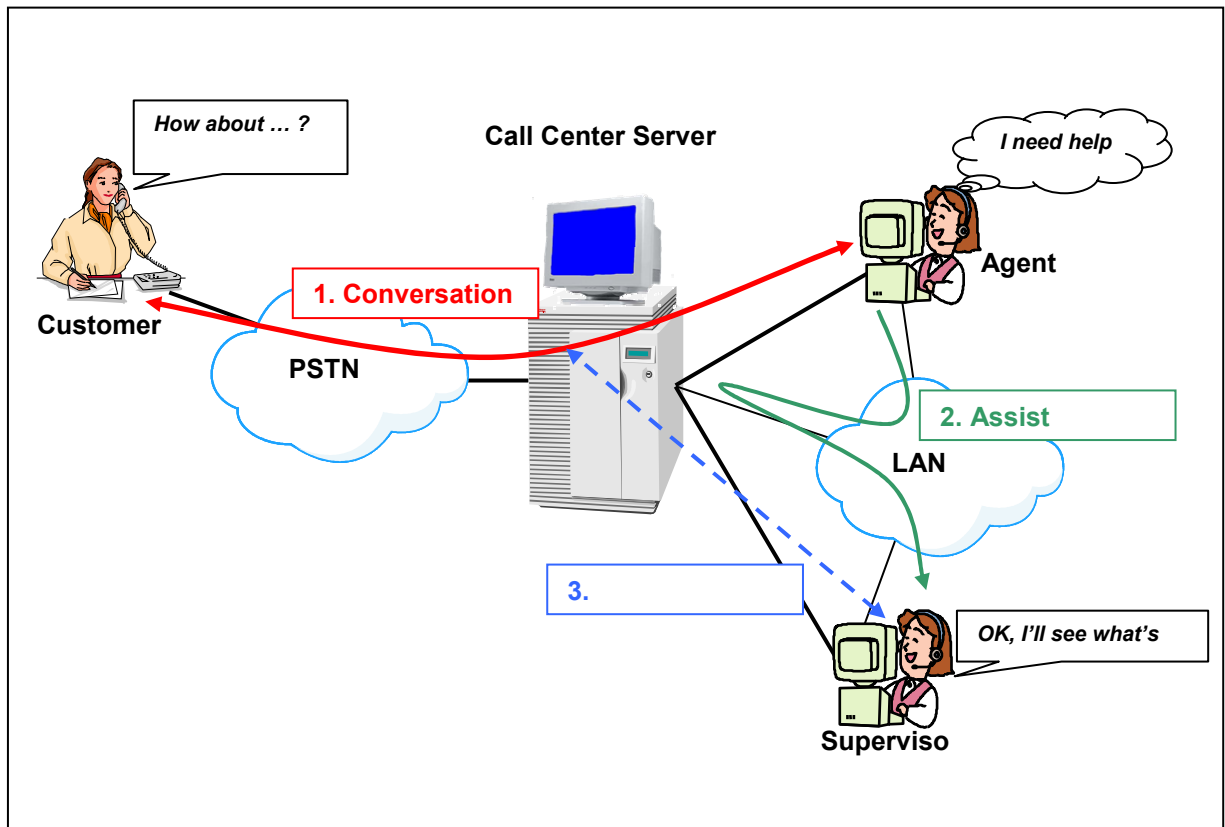
### ***Coaching***

The supervisor can hear the conversation between agent and customer and the agent can hear the advice from the supervisor. The customer can only hear the voice from the agent but not the supervisor.

### ***Conference***

All agent, customer and supervisor can talk in conference.

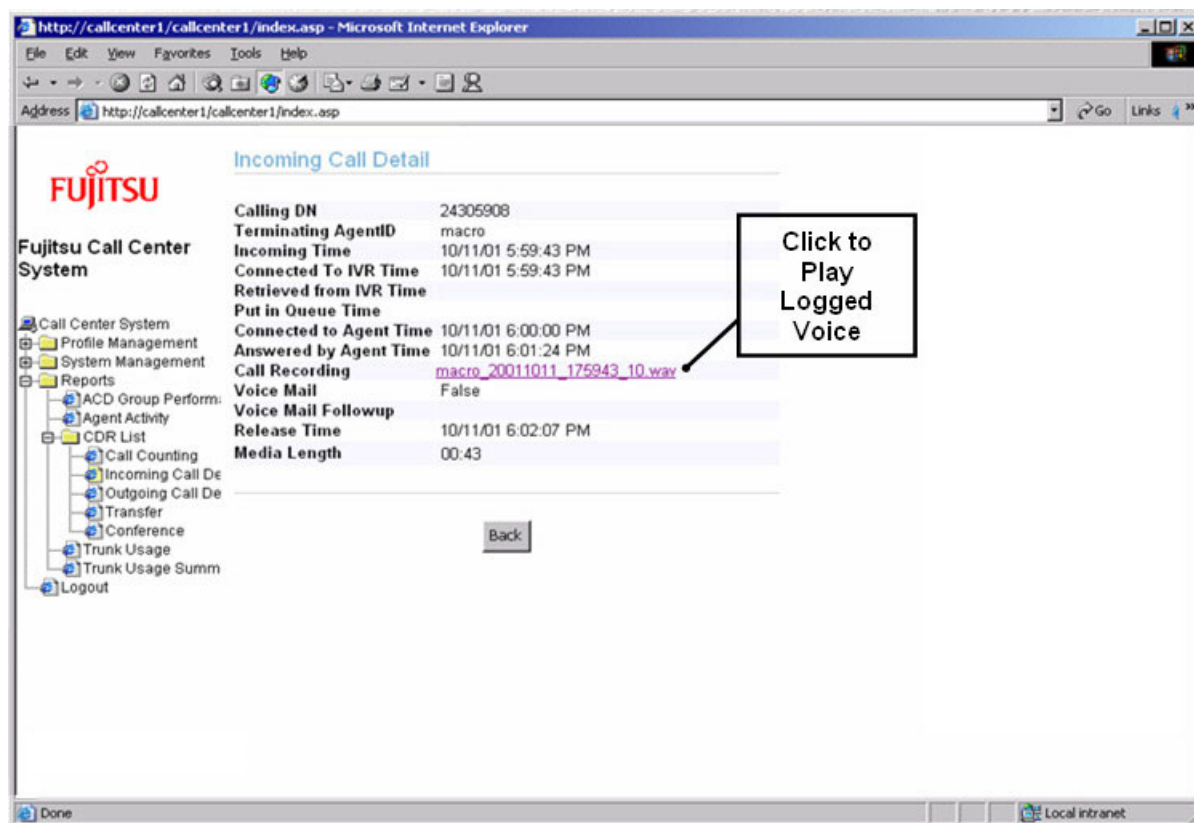
*Supervisor can Monitor and/or Coach the Agent Upon Assist Request from the Agent*



### ***Real-time Voice Recording and Playback –***

Quality of service is assured through call monitoring against various criteria and the results are used for coaching and improvements. The server provides automatic recording of all or specific inbound/outbound calls for coaching and tracking. All the recorded conversation is stored in media (e.g. Hard disk, Magnetic-Optical Disk) and can be retrieved and played-back for review at any time based on search keys like agent ID, call occurrence time, conversation duration, etc.

### ***Supervisor can Review and Replay the Recorded Conversation***



**System Features –**

The call center is equipped with basic PBX call processing features which allow the agents to use his/her station as desktop telephone.

- a) **Out-Dialing**  
Agent can make outgoing call to PSTN through the unified dialing pad on Windows UI of agent side. The agent can also use the phonebook to perform the out-dialing in order to avoid dialing to wrong numbers. When the agent is viewing certain field in the customer record which contain a phone number, he/she can press a quick key (F12) for calling out using this number.
- d) **Agent-to-Agent Call (Intercom)**  
The call center system supports intercom calling (i.e. one agent can call directly to another agent who has already login the system)
- c) **Direct Inward Call to Extension**  
Each agent is assigned an extension number for direct incoming call routing (using DNIS provided from the public network).
- d) **Call Hold**  
Agent can put a call on hold at any time during the conversation. The party being held will listen to a pre-recorded announcement or holding music.
- e) **Call Transfer**  
Agent can transfer the call to another analog agent. During the call transfer process, the caller ID (of the Transfer-from agent) is presented to the Transfer-to agent.
- f) **Conference**  
Any agent can initiate 3-party conference with any other agent. For example, when an Agent X receives an incoming call from the customer, and Agent X transfers the call to Agent Y, either Agent X or Agent Y can initiate the conference among Customer, Agent X and Agent Y.
- g) **Call Forwarding**  
The call center system can support call forwarding to outbound number. This feature can be effectively applied to forward those calls destined to specific DNIS to certain mobile phone numbers (e.g. field support staff).
- h) **Personal Voice Mailbox**  
Each agent can be provided with a personal voice mailbox which allows the caller to deposit voice mail (on busy or no answer) and the agent can access (review, playback, delete) voice mail in his/her mailbox using the agent station by on-screen click.

***System Voice Mail –***

System voice mail deposit can be activated under the following conditions:

- Customer who is waiting in call queue press a touchtone key
- An after-office-hour routing to VMS has been programmed and the incoming call is received before or after the pre-defined office hours

System voice mail can be accessed (review, playback and deleted) by on-screen click at the supervision console.

***Vacant Number Intercept –***

Calls that are directed to DNIS levels that are marked as un-used will be treated with pre-recorded announcement or busy tone. This feature is especially useful when the call center is serving as the business center in which each DNIS level represents different company.

***Voice and Fax Processing***

***Voice Mail Delivered in E-mail Attachment –***

Voice mail is converted to e-mail attachment for distribution by e-mail system.



### On-screen Voice Mailbox Access –

Both supervisor and agent can access the system and personal voice mailbox respectively using on-screen control. Voice mails that have been played completely are marked as “read”.

### On-screen Access of Voicemail

The screenshot displays the Fujitsu CCRM-1 Supervision Console interface. The main window is titled 'Supervision Console' and includes a menu bar (File, View, Thresholds, Tools, Help) and a toolbar. The interface is divided into several sections:

- ACD QUEUE T**: A section on the left showing queue statistics for Group 1 (40), Group 2 (3), Group 3 (26), and Group 4 (20). It also shows 'All groups' (89) and 'Total no. of lines: 24'.
- TRUNK OCCUP**: A section showing 'Total no. of lines: 24' and a value of 10.
- FAX OCCUPAN**: A section showing 'Total no. of lines: 24' and a value of 10.
- AGENT STAT**: A section showing agent status for agents 1 through 14, with various icons representing different states like 'ACW', 'Conv', 'Outdial', and 'AUX'.
- Voicemail**: A central window displaying a list of voicemail messages with columns for Date, Caller ID, DNIS, New, Duration, and Status. The list includes messages from May 1998, with caller IDs ranging from 23099034 to 23033034.
- LINE STATUS**: A window on the right showing a grid of line status indicators, including 'InComing', 'FaxSend', 'IVR', and 'Idle'.
- Customer a/c**: A window at the bottom right showing a list of customer accounts with columns for account number and name.

### Remote Access of Voice Mailbox –

The supervisor or the agents can remote dial-in to access the call center system voice mail and personal voice mail respectively. Actions like voice mail review, save and delete can be performed using remote-access.

### Fax-on-demand –

Customer can request the call center system for a fax (e.g. application forms) through IVR process. After the customer the key in the fax number, the system will place the request on the outgoing fax queue. The fax will then be sent to the customer's fax number.

### Fax Mail Delivered in E-mail Attachment –

Fax mail is converted to e-mail attachment (TIF format) for distribution by e-mail system.

### Volume Fax-in, Fax-out and Fax Server Functions – (optional)

With the add-on Fax Server Sub-system, sophisticated, integrated fax server function can be provided.

## ***Agent Features***

### ***Graphical User Interface –***

The familiar Windows interface and user-friendly screens make operation simple and training of new agents and supervisors easy.

### ***Login/Logout –***

Agents to login the agent station use individual user ID and password.

### ***Sign-on and Sign-off –***

After login operation, an agent can sign-on to start accepting customer calls (distributed from call center). An agent can sign-off from his/her work position at anytime. In the sign-off status, an agent can originate and receive private calls using the Agent Station just like a usual telephone.

### ***Work Time and Not Ready Status –***

Any agent can change his/her position status to the skip call distribution to its position.

### ***Call Delivery, Conversation and Holding –***

An agent can use the agent station to receive incoming call, achieve conversation with the customer and perform call holding.

### ***Free Sitting –***

Agents (Customer Service Representatives) can login to any Agent Station installed in the call center system. The agent profile (e.g. ACD Group allowed, skill-set) will be loaded from the call center system database base on the login agent ID. Call distributed to the agent will then be routed to that Agent Station.

### ***Call Waiting Status –***

The ACD group real-time status (e.g. number of login agents, number of calls in queue) is shown on the agent station interface. In this way, the agent can have an idea of how his/her own ACD group is performing. Depending on the system setting, the agent station can also show the status of each agent in the ACD group that he/she belongs to.

### ***Voice Mail Access –***

Voice mail can be accessed (review, playback and deleted) by on-screen click at any agent station. Voice mails that have been played completely are marked as “read”.

### ***Multiple Agent Status Timeout –***

The agent status is timed for different scenarios.

For Work Time status, the option can be set by the call center manager (supervisor) so that the Work Time status of an agent will be automatically returns to *Ready* status after preset timeout (e.g. 3 minutes) occurs. This timing value can be set on a per-agent basis by the supervisor via the supervision console.

When a call is distributed to the agent and the agent does not answer the call within timing, the call is diverted to another available agent in the ACD group.

***Ring-no-answer Forced Logout –***

When a call is distributed to the agent and the agent does not answer the call within timing, the call is diverted to another available agent in the ACD group. The agent who does not answer the call within the specified timing can be automatically logout from the system and “locked” to prevent further login. Only the supervisor can “unlock” this “locked” agent.

***Shortcut Keys –***

Function keys (e.g. F2) are available for agent to access agent station functions quickly and conveniently.

***Supervisor Assist Request Button –***

Pressing the “Supervisor Assist” button will notify the supervisor for advice, monitoring or conference. The supervisor will see the “blinking” agent on the supervision console.

***Agent-Controlled Outgoing Fax –***

The agent can select the fax source (e.g. application forms, product information) and activate the sending of the fax to the customer. The fax request is placed to the fax queue for processing by the call center server system.

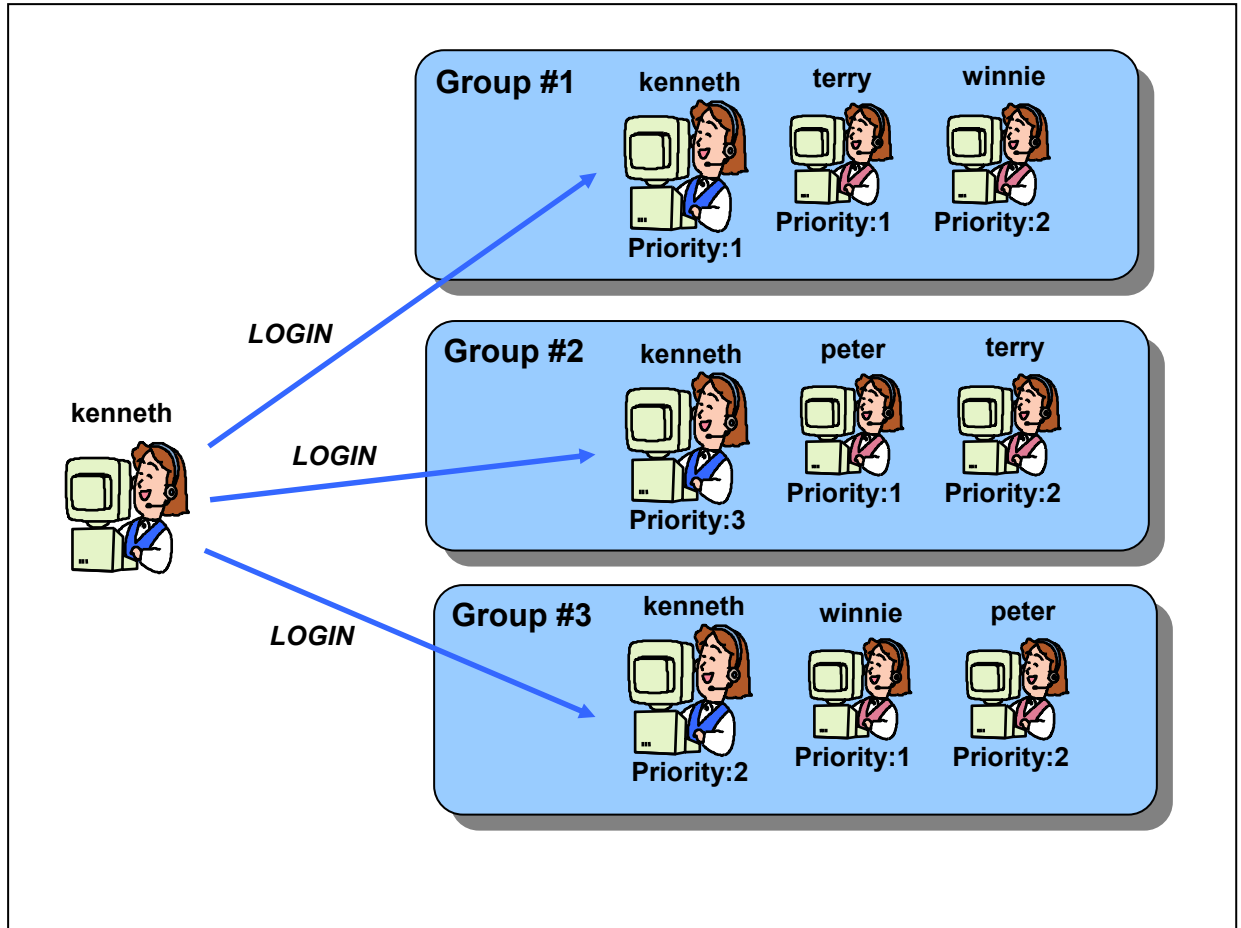
***Scheduled Outbound Fax –***

The agent can schedule to send fax at a specified date and time. The fax request is placed to the fax queue and the system will execute the fax sending at the scheduled time.

### Multiple ACD Group Login –

Each agent can simultaneously login a maximum of 3 ACD groups with different priorities. The priority can be assigned for each login. This feature is especially useful for efficient operation in small call center with few agent positions.

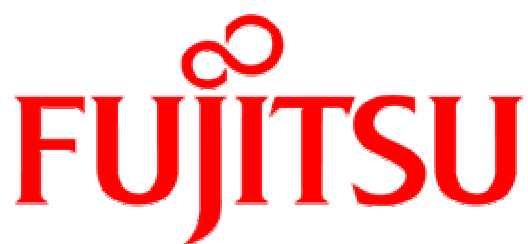
*Agent “kenneth” is logging in to Group#1 ,#2 & #3 with different priorities*



### Security and Authorization –

Agent activities like login actions (success and failure) are logged with timestamps and other details inside the system for security tracking.

When the customer requests service that requires authorization (e.g. PIN of customer), the agent can trigger the password-verification scenario (customer input the password using the keypad with the agent temporary off-line). The system will handle the verification process and only return the call to the agent with a True or False result.



**T H E   P O S S I B I L I T I E S   A R E   I N F I N I T E**