Chapter 10
CTI

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CTI (Computer Telephony Integration) is an integrated system of computer and telecommunication technology that allows the computer to share the switchboard's resources and the switchboard to share the computer's resources.
It offers cost reduction and convenience in usage for the operator and offers service improvement and handling time reduction function to the customer.

This chapter explains about the SmartOperator, the CTI system supported by the DCS Gateway system.

Smart Operator

This manual only introduces the functions and installation procedures for the Smart Operator function. Please look at the 'Smart Operator User Manual' supplied with the DCS Gateway system if you are going to use the Smart Operator function.

FEATURE DESCRIPTION

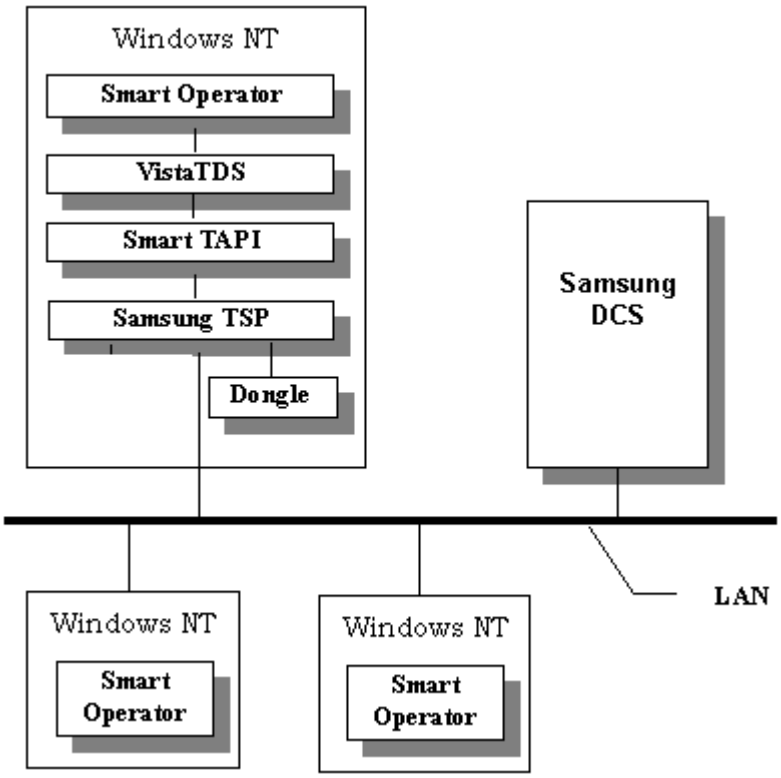
Smart Operator is an ATC (Attendant Console) based on PC that provides conveniently operated GUI (Graphical User Interface) and shows events occurring within the telephone communication system. Each event is to show the changes within the telephone communication system, such as trunk, extension, voice mail, and automatic reception port. For example, The reception ring message to the trunk line or extension pops up messages on the PC screen using the Smart Operator applied program and make the applicable icon blink. Extension events, such as "Off Hook", makes the applicable icon turn yellow. Smart Operator provides performance and convenience by using familiar user interface.

Smart Operator connects to the DCS Gateway using the serial port within the system. If the 16550 UART chipset is attached to the PC, serial cable can connect two machines within 90M. To reduce interference, it is advisable to use Category 5 level cable.

Smart Operator is a computer based Telephony application program that provides third party call control function, which was unique feature to existing telephone systems. Smart Operator program considers all extension, trunk, and customer as "Device."
In carrying out the call answering and transferring steps, these events will provide information needed to make the most practical call management method by renewing the user interface.
Smart Operator in run under IBM compatible computers with the NT 4.0 operating system.

Structure of Smart Operator

Smart Operator is based on client/server structure. “Server” is made up of several software components run under Windows NT. These components include **VistaTDS**(Telephony Dynamic Data Server), system interface module (Smart TAPI), and several application programs.



Server component resides within the Windows NT computer set up by the system integration company or end user. Smart Operator server PC connects to the telephony system or communication server using serial port or network interface. Client PC for Smart Operator connects to the server PC using the TCP/IP network.

SETTING THE MAP

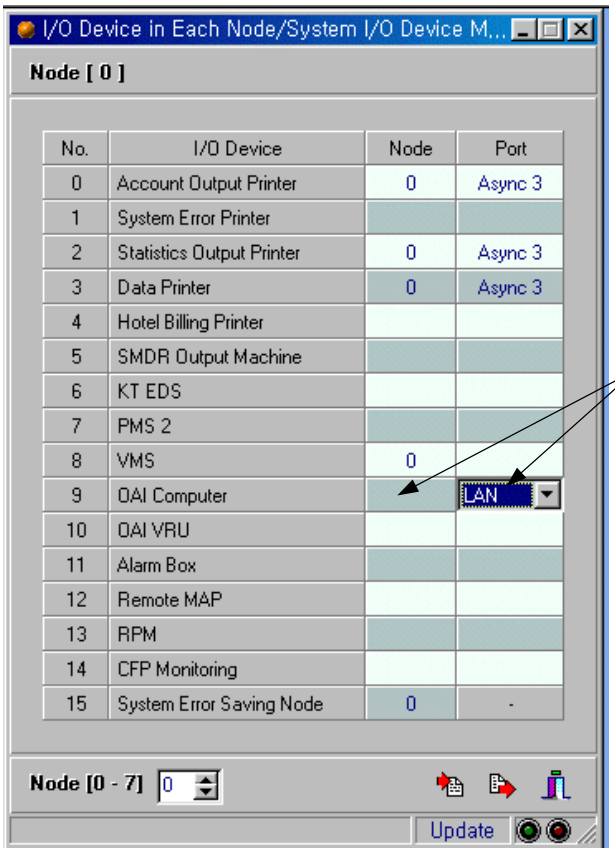
Looks at the options that have to be set up in MAP, the operating system of the DCS Gateway system, to use Smart Operator.

1. Confirming Port of OAI COMPUTER

Select the menu in the MAP screen as follows:

[System Management] ➔ [System I/O Device Management] ➔ [I/O Device in Each Node]

Press the [Rx] button and enter the node number of the DCS Gateway system connected to the computer. The setup values below then appear.



Check Note
Installation and operation procedures not handled by this manual are described in the installation manual or operation manual.

Confirm the Node and Port option of the OAI Computer.

When the Port is set up as Lan:

Confirm the IP Address of IPM and Infolink by referring to the '2. Setting Network Parameter' section. The IP Address of Infolink must be the same as that of the computer (Windows NT) with Smart Operator set up.

When the Port is set up as Asynch:

The I/O Port parameter value must be confirmed as follows in this case.

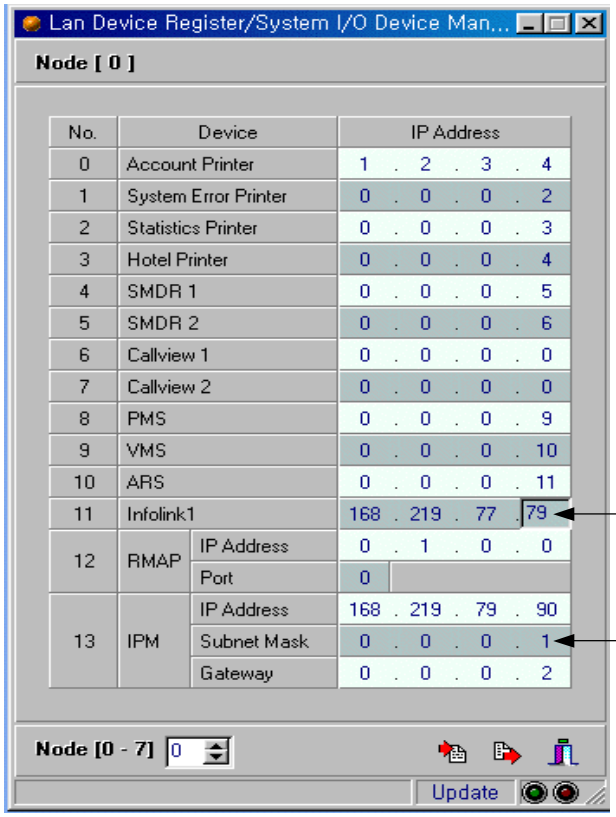
- Select the MAP menu as follows:
  [System Management]] => [System I/O Device Management] => [I/O Port Para.]
- The various setup options of the I/O port then comes up. Among these, the Port Block Status must be designated as Enable to use the other I/O port information set up.

2. Setting up Network Parameter

Select the menu in the MAP menu as follows:

[System Management] => [System I/O Device Management] => [Lan Device Register]

Press the [Rx] button and enter the node number of the DCS Gateway system connected to the computer. The system's setup values then comes up as follows:



- Confirm the value of IPM Address, Subnet Mask, and Gateway. This value is the network information of the DCS Gateway system. If the IPM Address is changed, it must be corrected here.
- Confirm the Infolink 1 IP Address. This IP Address must be the same to the IP Address of the computer (Windows NT) with Smart Operator. If this IP Address is changed, correct it here.

Transmit the corrected value to the system by pressing the [Tx] button.

3. Designating ACD Service

Select the [Port Information(Total)] menu in the MAP.
Enter the node number of the connected DCS Gateway system at the bottom of the Port Information screen and press the [Node/Port Rx] button. The following screen then comes up.

- Select ACD Agent for Special Service category.
- Select OAI Terminal by checking it.

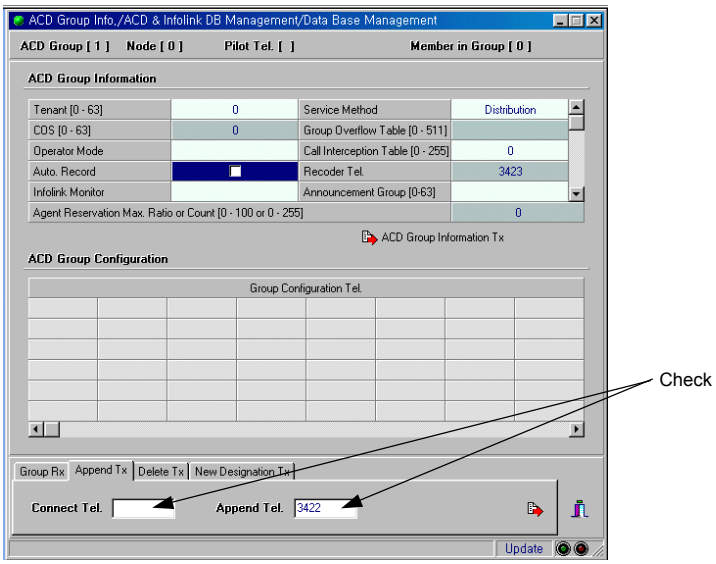
If there is a modified value, press the [Tx] key and transmit the changed value to the system.

4. Organizing Telephone Numbers in the ACD Group

Select the MAP menu through the following stages.

[Database Management] => [ACD & Infolink DB Management] => [ACD Group Info]

When the ACD Group Information screen appears, enter the ACD Group number and press the [Group Rx] button.
Then the organizing data appears on the screen as follows:



Adding Telephone Numbers

You can add or remove telephone numbers that are to be organized by the ACD Group.

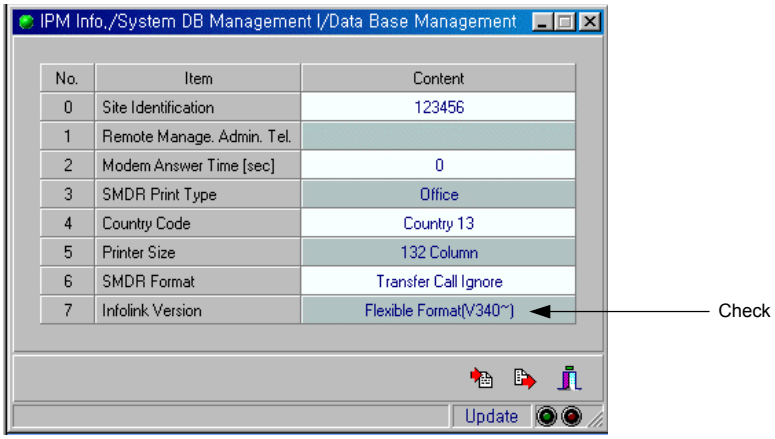
- Press the [Append Tx] tab and enter Connect Tel. and Append Tel.
- If you want to add a new telephone number right after the existing one, enter the existing telephone number in Connect Tel. and the new one in Append Tel. If nothing is entered in Connect Tel., the number entered in Append Tel. is added all the way at the front of the list.
- Press [Append Tx] and transmit the set value to the system.

5. Designating the Infolink version

Select the MAP menu through the following stages.

[Database Management] => [System DB Management I] => [IPM Info.]

Then the value received at the system is demonstrated as follows:



Check if Infolink is Fixed Format (~V330) or Flexible Format (V340~). This value should correspond with the LAN protocol type value that was designated at step number (5) of '**Installing the Samsung TSP**.'

INSTALLATION PROCEDURE

System Environment

The minimum computer system requirements for the installation of Smart Operator are as follows:

- IBM compatible computer
- Processor exceeding Intel 233Mhz (for first 250 machines)*
- Windows NT 4.0 Workstation and Service Pack 4
- 128 MB RAM (More if there are more than 300 machines)
- SVGA Accelerator card
- 15" SVGA monitor and True Color 24bit (17" recommended)
- 250 MB of usable hard disk space
- Usable serial port (connect to telephone call system using serial port)
- Usable round (hardware key) parallel port
- PCI type network interface card
- TAPI 2.x for Windows NT
- Dual Pentium processor recommended for system with more than 300 machines.

The hardware equipment essential for the use of Smart Operator is as follows:

- DCS Gateway system
- Round (Hardware key supplied with Smart Operator)

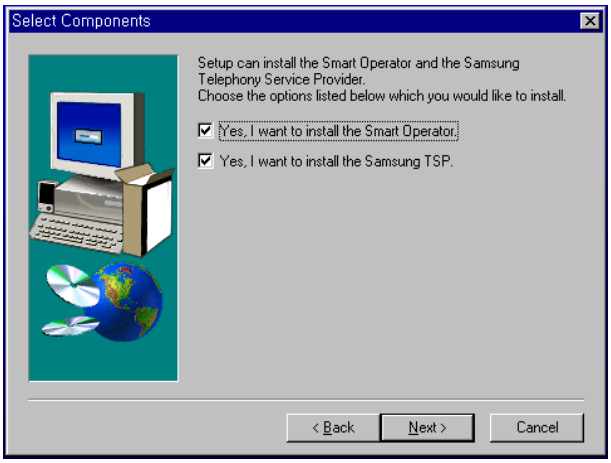
Installing Hardware

Check to see if the TCP/IP network protocol is properly installed and organized in the computer.
Connect the dongle to Windows NT server's parallel port.
Set up the category related to the Smart Operator at the DCS Gateway system's MAP.

Installing Software

Insert the Smart Operator installation program CD into the CD-ROM drive.

1. Click the Windows start button and select “Execution” menu.
2. If the CD-ROM drive is “E”, enter “E:\Smart Operator\DCSG\Setup.exe.”
3. The following screen appears:

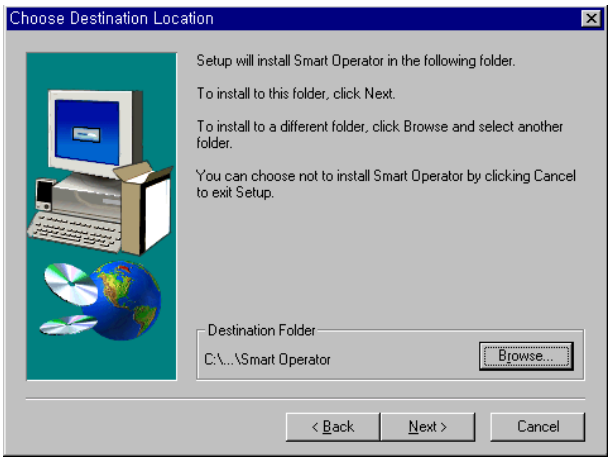


If you choose both options, the Samsung TSP is installed following the Smart Operator installation. Press the [Next] button if you want to continue the installation.

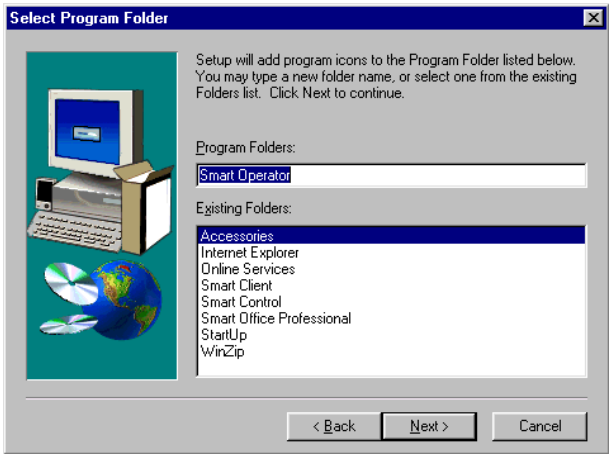
Installing Smart Operator

1. When you select Smart Operator for the install option at step (4) of software installation that had appeared before, the following screen appears: Press the [Next] button.

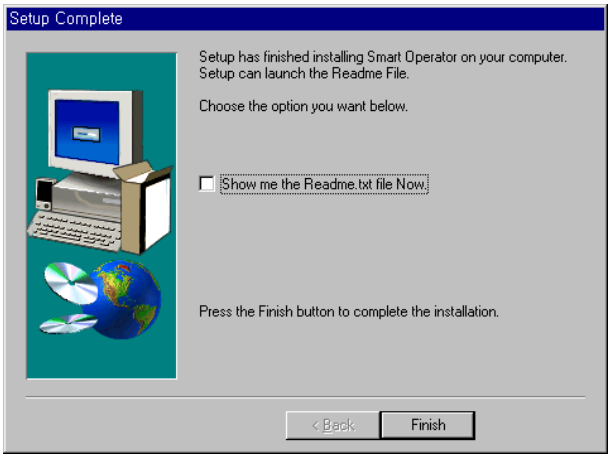
2. Specify the directory destination in which the Smart Operator is to be installed. The default value is “C:\Program Files\Samsung Electronics\Smart Operator.” Press the [Next] button.



3. Enter the program folder and press the [Next] button.



4. The following screen appears after the installation file has been fully copied. If you would like to see the contents of the Readme file, check the following item. Press the [Finish] button as the installation is complete.



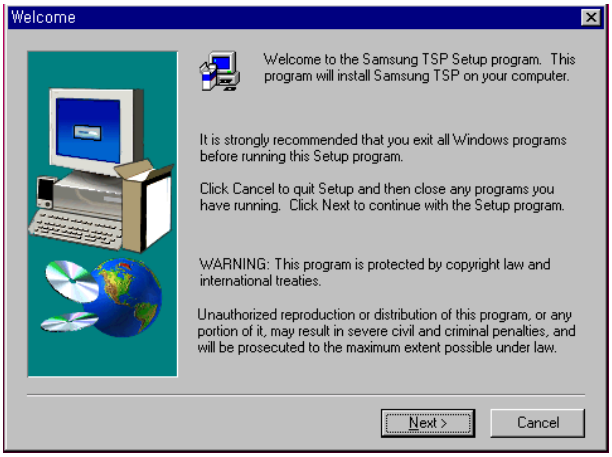
Installing Samsung TSP

If you want to transmit and receive the event to and from the DCS Gateway system, you must install Samsung TSP (Telephony Service Provider). The service name shown on the service window of Windows control panel is Samsung DCS Gateway TAPI Service.

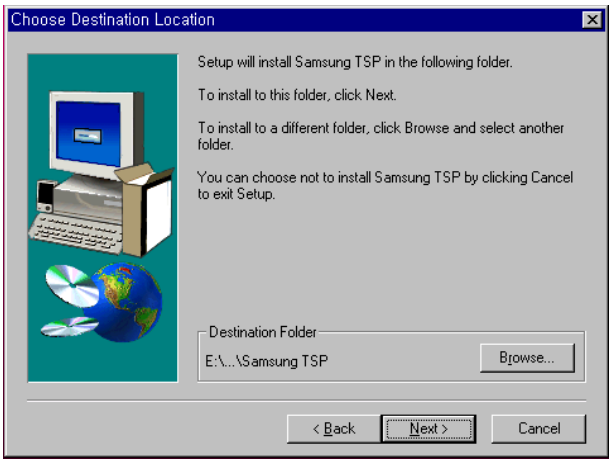
If Microsoft TAPI 2.1 Service is not installed in Windows NT system, you must install and start this first before installing Samsung TSP.

Begin the installation.

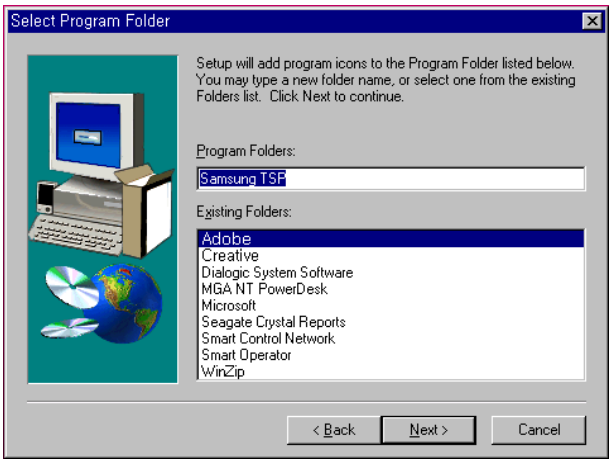
1. When you select Smart TSP for the install option at step (4) of Software Installation, the following screen appears:
   Press the [Next] button.



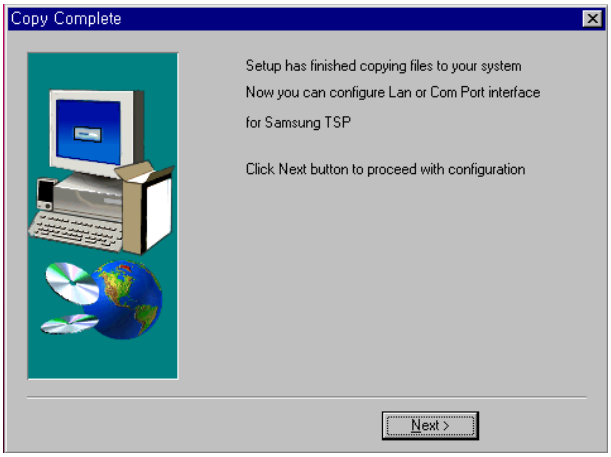
2. Specify the directory where Samsung TSP is to be installed and press the [Next] button.



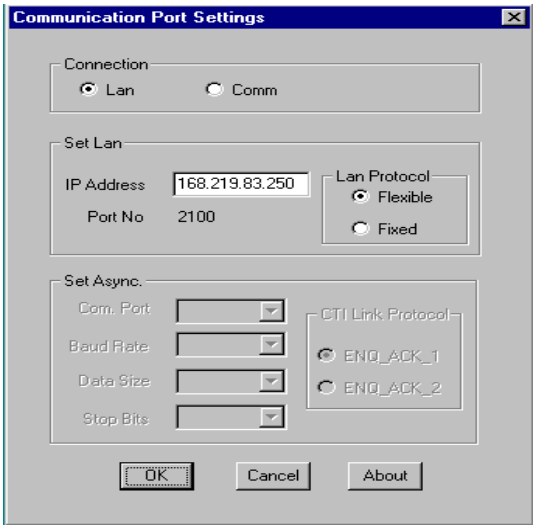
3. Specify the folder name of the program and press the [Next] button.



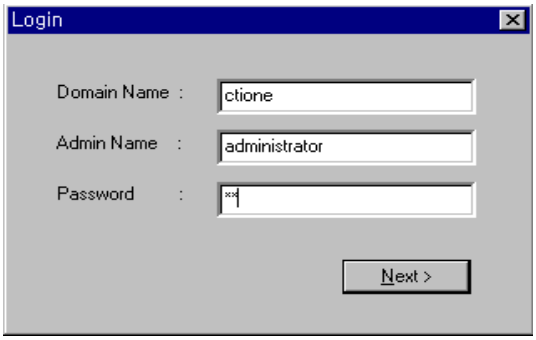
4. When the files necessary for installation are all copied, the following screen appears: If you press the [Next] button, the LAN or COM PORT forming operation is continued.



5. Set up the computer's COM PORT. Select LAN from the 'Connection' option and enter the DCS Gateway system's IP address. Select "Flexible" or "Fixed" for 'LAN Protocol.' (Default : "Flexible")



6. Enter the domain name, name of domain operator, and password if the computer is Primary Domain Controller. If not, enter the PC's computer name, name of domain operator, and password.

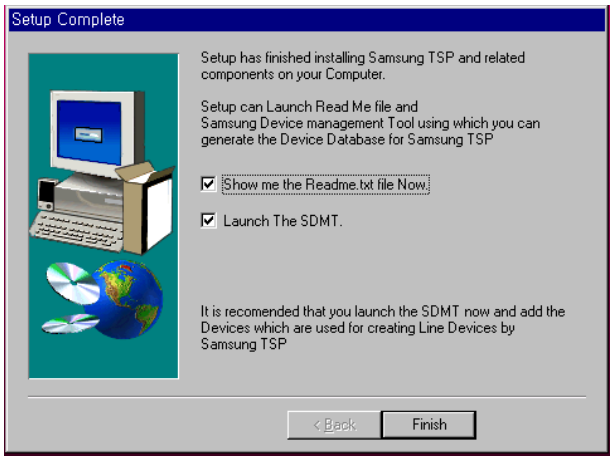


7. To start Samsung TSP when starting server operation, press the [Yes] button.

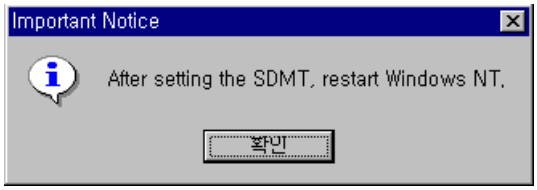
CAUTION

Before TSP is run, the dongle supplied with Smart Operator must be connected to the computer's parallel port. Confirm that the parallel port is usable. Samsung TSP inspects the port at start and inspects according to programmed time interval. If Samsung TSP does not detect the programmed validity inspection code of the dongle, repeat the DCS link reset function.

8. Select the appropriate option to see the Readme file.
SDMT (Samsung Device Management Tool) utility is used to set up the database of the DCS Gateway device includes extension and related information. Press the [Finish] button after selecting SDMT.



9. Windows NT is restarted when the [OK] button is pressed after setting up SDMT.



OPERATING PROCEDURE

This manual briefly introduces FEATURE DESCRIPTION of the Smart Operator. Please look at the '**Smart Operator User Manual**' supplied with the DCS Gateway system is you are going to operate the system.

Handling call using the Drag and Drop function

The operator can easily transfer calls by dragging and dropping the extension icon.

Expression of caller information

Activity List shows all calls of call, waiting, or recall status to the operator. All information on the caller including the caller ID is shown.

Expression of extension status

Operator can express the status of all system devices at once using Smart Operator. These devices help identify extensions according to department or branch because they are shown as independent BLF group or member of another group made by the user. BLF group is made by putting members of active group into the new group. These members are shown as icons showing the status of the extension.

The icon can show information related to the extension user as follows:

- 'Do Not Disturb' message.
- Call transfer status (Applicable only when all calls are in call transfer status).
- Number of calls connected to extension or waiting.
- Telephone number of other user.

Management of calls using keyboard/mouse

User can use the keyboard, mouse, or both to handle to call. Operator can change between Smart Operator and telephone if they answer to calls by lifting the handset.

Options in Handling of Calls.

Smart Operator provides the following call transfer options. Operator can handle the following operations using keyboard and mouse.

- Term transfer
- Transfer without term (call transmission)
- Transfer to voice mail
- Transfer to external telephone number
- Call waiting
- Reserve call answer
- Common call reserve on specific extension

Online Help

Info Banner provides useful information to the user and helps become proficient in Smart Operator application program.

Caution on Call Suspension Function

System operator and normal user must understand in depth how the call suspension function influences the call handling ability of the host telephone call system and application program.

Call suspension function stands for the ability to suspend all stages from the time the system first receives the call to the time the caller puts down the handset. In the past, call was carried out using a path set up beforehand, but by using the call suspension function, the call path can be reset based on real time events, ignoring or stopping algorithm programmed beforehand.

If the call suspension function is added to the telephone system, control of trunk line, extension, broadcasting, voice mail, and automatic receive device is possible. Therefore, all devices related to call handling are controlled.

Because of these control functions, Smart Operator must be operated carefully after installation so it is not put to use illegally. If not, control function on a specific device not intended can be supplied to the user.

RESTRICTIONS

Member of ACD group cannot be appointed an extension of Smart Operator.

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