

Telecom

SmartPlant Instrumentation provides the ability to efficiently define and manage most commonly used telecommunication equipment.

Here are a few examples of telecom entities that you can create and manage:

- Field equipment (speakers, intercoms, telephones, and so forth).
- Public announcement (PA) equipment and amplifiers.
- Switchboards.
- Network equipment (hubs, switches, routers, and so forth).
- Miscellaneous equipment (video and entertainment equipment)

The software provides the means to define all the connections and the internal equipment configuration. Furthermore, you can define and create the logical structures (for example, channels, port, and so forth) as well the physical entities, such as racks and cards.

You can generate appropriate reports, such as telecommunication field and network lists, communication line diagrams (telecom point-to-point diagrams), network class diagrams (network area maps), and so forth.



Note

- **Telecom** functionality is available only if it is included in the software license that you purchased from Intergraph.

Telecom Flow of Activities

The following is a suggested flow of activities that will help you design the telecommunication system in your <plant>.

The first step in your telecom design is to create the reference telecommunication equipment.

Then, in the [Instrument Index](#) module, you define telecommunication device types (similar to instrument types for non-telecommunication devices). You can also define telecom line numbers, field equipment, and signal levels. Now you can create your telecom tag numbers based on the telecom device type that you defined. At this stage, you can generate various [Instrument Index](#) reports as needed.

Once all the supporting table data is entered and all the telecom tags are created, you start creating your telecom panels and telecom equipment based on the reference equipment and reference panels you created previously. Make the required connections among the your telecom equipment. You can then generate telecom wiring reports as needed.

We recommend the following flow of activities:

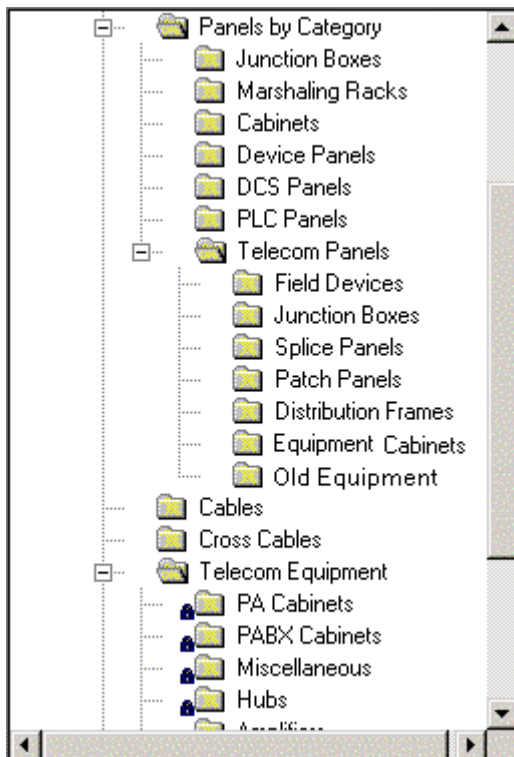
1. In the **Reference Explorer**, create the following reference equipment:
 - Telecom cables with appropriate configurations
 - Telecom device panels
 - Telecom equipment panels with or without their internal equipment
 - Telecom equipment entities such as amplifiers, switchboards, hubs, and so forth that serve as the internal equipment of telecom panels
2. Start the [Instrument Index](#) module and define the following:
 - A telecom device panel type and device type profile defaults for telecom tags
 - Communication line numbers
 - Field equipment
 - Signal levels
3. Generate [Instrument Index](#) telecom reports if needed (telecom devices and various telecom table reports).
4. In the **Domain Explorer**, do the following:
 - Create the telecom tag numbers that you require.
 - Create plant equipment panels with the necessary hardware shelves or racks.
 - Create the telecom equipment entities that you require by copying the reference entities.

- Define network classes.
 - Make all necessary connections.
5. Generate the [Telecom](#) reports in the [Wiring](#) module.

Arrangement of Telecom Entities in the Domain and Reference Explorers

SmartPlant Instrumentation utilizes the **Domain Explorer**, which allows you to access telecom panels and equipment. Typical telecom entities, that is, telecom reference entities are organized in the **Reference Explorer**.

Telecom entities are organized in several different folders in the **Domain Explorer** and **Reference Explorer**. In the **Domain Explorer**, the following folders hold telecom entities:



- **Telecom Panels** — contains telecom panels arranged according to their types:
 - **Field Devices** — holds plug-and-socket as well as conventional field device panels
 - **Junction Boxes**
 - **Splice Panels**
 - **Patch Panels**
 - **Distribution Frames**
 - **Equipment Cabinets** (PA cabinets, PABX cabinets, Hub cabinets, Intercom cabinets, and miscellaneous cabinets for video and entertainment systems)
 - **Old Equipment** — contains telecom panels created prior to Version 7. Note that you cannot create additional panels in this folder, but you can add new sub-entities, modify the properties of the existing entities, and delete the old equipment entities, as you require.
- **Telecom Equipment** — lists telecom panels and equipment classified according to their types. Note that the entities in this folder are for viewing only.

Working with Old Equipment

SmartPlant Instrumentation partially supports telecom panels created prior to Version 7. These panels and their sub-entities are organized in the **Old Equipment** folder.

Note that you cannot create additional panels in this folder, but you can add new sub-entities, modify the properties of the existing entities, and delete the old equipment entities, as you require.

Telecom Instruments and Field Devices


Setting Device Type Profile Defaults

You can set device type profile defaults for new telecom tag numbers. Therefore, SmartPlant Instrumentation will create your new tag numbers with certain predefined properties based on the telecom device type you select for the new tag number. You set profiles for every telecom device type that you use.

Setting Telecom Signal Levels

Use the following procedure to set telecom signal levels.

To open the **Telecom Signal Level** supporting table, do one of the following:

- In the **Instrument Index Module** window, on the **Tables** menu, click **Telecom Signal Level**.
- In the **Tag Number** dialog box, under **Telecom tag number properties**, click  next to the **Signal level** list arrow.

➤ To define a new telecom signal level

1. Click **New** to append a new data row.
2. Type the new telecom signal level name, description, and capacity in the appropriate fields.

➤ **To edit the properties of a telecom line number**

1. In the data window, select that value that you want to edit.



Tip

- If you have a long list of items in the data window, type a value in the **Find telecom signal level** box to quickly select the row you are looking for.

2. Modify the values as needed.

➤ **To delete a telecom signal level**

1. In the data window, select the row that you want to delete.
2. Click **Delete**.



Caution

- SmartPlant Instrumentation removes the item you delete from the **Signal level** lists.

Creating Telecom Field Tags


The following procedure explains how to create new telecom tag numbers. Note that the new tag numbers will be based on the telecom profile default that you defined.



Caution

- Telecom options are not available in projects.

➤ To create a new telecom tag number

1. Start the [Instrument Index](#) module.
2. Do one of the following:
 - On the **Edit** menu, point to **Tag Number** and click **New Tag Number**.
 - Click  on the toolbar.
3. In the **New Tag Number** dialog box, type the name of the new tag number.



Note

- If you are working with the **Free** naming conventions, select the **Select Telecom Type** check box to open a shortcut window that allows you to select the appropriate telecom type.
4. Select the **Telecom field device panel** check box to create a telecom tag number.
 5. Click **OK**.
 6. If more than one function identifiers exist for the current telecom type acronym, select an instrument type in the **Select Telecom Type** dialog box and click **OK**.
 7. In the **Tag Number** dialog box, enter the tag number attributes.
 8. Save the new tag number attributes then click **Close** in the **Tag Number** dialog box.

Creating Telecom Conventional Field Devices

This procedure explains how to create a conventional telecom field device. Conventional field devices are not plug-and-socket boxes. Conventional field devices are connected to regular terminals.


You can create a new telecom field device panel in the **Domain Explorer** or the **Reference Explorer**. If the new device panel is going to have a frequently used configuration, we recommend that you create it in the **Reference Explorer** so that you can copy it to the **Domain Explorer** and then change its name. This way you can create numerous device panels on the fly (see [Copying Reference Wiring Entities](#) for details). If you do not intend to use the configuration of the new field device panel frequently, we recommend that you create it in the **Domain Explorer** and in the <unit> where it is to be physically located. This is helpful when you want to filter the panels in the current <unit>.

➤ To create a telecom conventional field device panel

1. Do one of the following:
 - Press F7 to open the **Domain Explorer**.
 - In the [Wiring](#) module, on the **View** menu, click **Wiring Explorer**.
2. Double-click the **Panels by Category** folder, and then expand the **Telecom Panels** folder.
3. Right-click the **Field Devices** folder and then on the shortcut menu point to **New** and click **Field Device (Conventional)**.
4. In the **Device Panel Properties** dialog box, on the **General** tab, do one of the following to define the name of the new panel:
 - Clear the **Apply naming convention** check box and under **Panel**, type the name of the new panel. Note that if you do not clear the **Apply naming convention** check box, the software will ignore the name that you type under **Panel**.
 - Keep the **Apply naming convention** check box selected if you want the software to name the new panel automatically according to the naming conventions that are set for this type of panel in the [Administration](#) module. For more information, see [SmartPlant Instrumentation Administration Help, Domain Administration > Naming Conventions](#).

5. In the **Address 1** and **Address 2** fields, type the required definitions.

**Tip**

- You can change the **Address 1** and **Address 2** field headers to reflect manufacturer-specific terminology.
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6. Select the required values from the **Type**, **Manufacturer**, **Model**, **Area classification**, and **Location** lists. If the required value is not available, click  next to the relevant list arrow to open the appropriate supporting table.
 7. Under **Mounting**, type a value if needed.
 8. Select the **Set as intrinsically safe** check box if this field device panel has intrinsic safety certification.
 9. Click the **Associate Symbols** tab to associate a symbol for this panel that the software will use in the Enhanced Report Utility. For details, see [Associating Symbols](#).
 10. Click **Revisions** to manage the revisions of the new panel if needed.
 11. Click **OK** to accept your definitions for the new field device panel and close this dialog box.

Creating Telecom Plug-and-Socket Field Devices

You use plug-and-socket boxes to connect telecom objects that have connectors. The **Plug-and-Socket Box Wizard** enables you to create plug-and-socket boxes or reconfigure the existing ones.


You can create a new telecom field device panel in the **Domain Explorer** or the **Reference Explorer**. If the new device panel is going to have a frequently used configuration, we recommend that you create it in the **Reference Explorer** so that you can copy it to the **Domain Explorer** and then change its name. This way you can create numerous device panels on the fly (see [Copying Reference Wiring Entities](#) for details). If you do not intend to use the configuration of the new field device panel frequently, we recommend that you create it in the **Domain Explorer** and in the <unit> where it is to be physically located. This is helpful when you want to filter the panels in the current <unit>.

➤ To create a telecom plug-and-socket field device panel

1. Do one of the following:
 - Press F7 to open the **Domain Explorer**.
 - In the [Wiring](#) module, on the **View** menu, click **Wiring Explorer**.
2. Double-click the **Panels by Category** folder, and then expand the **Telecom Panels** folder.
3. Right-click the **Field Devices** folder and then on the shortcut menu point to **New** and click **Field Device (Plug-and-Socket)**.
4. In the **Plug-and-Socket Box** wizard, follow all the instructions carefully and then click **Next** until you complete the wizard.




Tips

- You can click  next to a list arrow to access the appropriate supporting table. This allows you to add, edit, or delete drop-down list items.
- When defining the plug-and-socket box connectors, under **Connector type definition display**, SmartPlant Instrumentation displays the connector sequence, the appropriate pin number, and the pin polarities according to the configuration of the connector than you selected.

Duplicating Telecom Tag Numbers

This option enables you to create a new telecom tag number by duplicating the properties of an existing one and then editing the new telecom tag number properties as required. You can create the new duplicated telecom in any <unit> of the current domain.

➤ To duplicate a telecom tag number

1. Start the [Instrument Index](#) module.
2. Do one of the following:
 - On the **Edit** menu, point to **Tag Number** and select **Duplicate Tag Number**.
 - Click .
3. In the **Enter Tag Number** dialog box, do one of the following:
 - Type the tag number that you want to duplicate and click **OK**.
 - Click **Find**, and in the **Find Tag** dialog box, do the following:
 - a) Select the **Telecom** check box.
 - b) Find a telecom tag number.
4. In the **Duplicate Tag Number** dialog box, modify the name of the displayed tag number to avoid duplicate tag number names.
5. Select the **Telecom tag number** check box.
6. Do one of the following:
 - Do not select the **Copy to another <unit>** check box to create the new telecom tag number in the same <unit> as the source telecom tag number.
 - Select this check box if you want to create the new telecom tag number in another <unit> of the current domain, and do the following:
 - a) In the **Select Target <Unit>** dialog box, you select the target <unit> for the new telecom tag number.
 - b) Click **OK** to return to the **Duplicate Tag Number** dialog box.

7. Click **OK**.

**Caution**

- In SmartPlant Instrumentation, the device field segment of a telecom tag number, for example, **HO**, is associated with the existing device type acronym and description, for example, **HO HOODS,ACOUSTIC**. If you have changed the telecom device field segment in the telecom tag number and the system cannot recognize its association with the existing device field, you must select a telecom device field from the **Select Telecom Device** dialog box, and click **OK**.
8. In the **Tag Number Properties** dialog box, type in data or select the appropriate values from the lists.
 9. Click **Save**.
 10. Click **Close**.

Creating Telecom Cables

The following procedure deals with creating telecom cables. When creating a new cable, you select an existing cable configuration that includes a particular arrangement of cable sets (pairs, triads, and so forth within a cable) and wires to be built with the cable. You can then add additional cable sets and wires to that cable if required.

As a time saver, it is recommended that you create reference cable, cable set, and wire arrangements you intend to use frequently. You create these reference cables in the **Reference Explorer**. You can then drag a reference cable to the **Domain Explorer** and this way create numerous cables on the fly. For more details, see [Copying Reference Entities](#).



Caution

- When creating a cable by copying a reference cable, make sure that you create the plant cable in the <unit> where it is required, as you will not be able to move it to another <unit> later.

➤ To create a telecom cable

1. Do one of the following:
 - Press F7 to open the **Domain Explorer**.
 - In the [Wiring](#) module, on the **View** menu, click **Wiring Explorer**.
2. Right-click the **Cables** folder and then point to **New** and click **Cable**.
3. In the **Cable Configuration** dialog box, select an existing telecom cable configuration or create a new one.
4. Click **Create**.
5. In the **Cable Properties** dialog box, under **Cable**, type a unique cable name.
6. Complete the creation of the telecom cable using the general procedure for creating a new cable.

Connecting a Telecom Cable with Telecom Equipment

Once you have created an equipment card, set its internal cross wiring, and created cables with connectors, you can connect a cable to the equipment card.



Caution



- Remember that only cables with connectors can be connected with an equipment card.

➤ To connect a cable to an equipment card

1. In the **Panel Manager**, select an equipment panel or equipment card.



Tip

- If you select an equipment panel, the software lets you select any equipment card that exists in the current panel. Remember that you cannot select an equipment panel for connection if this panel contains both cards with plugs and conventional I/O cards.
2. Do one of the following to open the **Equipment Card Plug-and-Socket Connection** window:
 - On the **Actions** menu, click **Connection**.
 - Right-click the selected equipment card and click **Connection** on the shortcut menu.
 - Click  on the toolbar.
 3. From the **Equipment card** list, select the card that you want to connect.
 4. In the **Cable Manager** (click  if it's not displayed), select a cable and then drag it to one the ports in the **Equipment Card Plug-and-Socket Connection** window.




Caution

- Make sure that the cable connector matches the port type on the equipment card. Also, remember that the pins must be connected to the wires; otherwise you will not be able to connect the cable to the equipment card.

5. In the **Cable Connection Options** dialog box, select the cable end that you want to connect and click **OK**.
6. Repeat steps 2 and 3 to connect other cables as needed.

**Note**


- To disconnect the current equipment card from a cable, select the cable that you want to disconnect and click  or right-click the cable and click **Disconnect** on the shortcut menu.

Telecom Panels

Creating Patch Panels

The following procedure explains how to create a patch panel. You can create a new patch panel in the **Domain Explorer** or the **Reference Explorer**. If the new patch panel is going to have a frequently used configuration, we recommend that you create it in the **Reference Explorer** so that you can copy it to the **Domain Explorer** and then change its name. This way you can create numerous patch panels on the fly. If you do not intend to use the configuration of the new patch panel frequently, we recommend that you create it in the **Domain Explorer** and in the <unit> where it is to be physically located. This is helpful when you want to filter the panels in the current <unit>.

➤ To create a patch panel

1. Do one of the following:
 - Press F7 to open the **Domain Explorer**.
 - In the [Wiring](#) module, on the **View** menu, click **Wiring Explorer**.
2. Double-click the **Panels by Category** folder, and then expand the **Telecom Panels** folder.
3. Right-click the **Patch Panels** folder and then on the shortcut menu point to **New** and click **Patch Panel**.
4. In the **Patch Panel Properties** dialog box, on the **General** tab, do one of the following to define the name of the new panel:
 - Clear the **Apply naming convention** check box and under **Panel**, type the name of the new panel. Note that if you do not clear the **Apply naming convention** check box, the software will ignore the name that you type under **Panel**.
 - Keep the **Apply naming convention** check box selected if you want the software to name the new panel automatically according to the naming conventions that are set for this type of panel in the [Administration](#) module. For more information, see [SmartPlant Instrumentation Administration Help, Domain Administration > Naming Conventions](#).
5. Select the required values from the **Type**, **Manufacturer**, **Model**, **Area classification**, and **Location** lists. If the required value is not available, click  next to the relevant list arrow to open the appropriate supporting table.
6. Under **Dimensions**, type a value for the distribution frame dimensions if needed.
7. Under **Maximum number of racks**, type a value to set the maximum number of racks that can be created in this panel.
8. Under **Mounting**, type a value if needed.

9. Under **Backplane**, type a value if needed
10. Select the **Set as intrinsically safe** check box if this distribution frame has intrinsic safety certification.
11. Click the **Associate Symbols** tab to associate a symbol for this panel that the software will use in the Enhanced Report Utility. For details, see [Associating Symbols](#).
12. Click **Revisions** to manage the revisions of the new panel if needed.
13. Click **OK** to accept your definitions for the new panel and close this dialog box.

Creating Telecom Junction Boxes

The following procedure explains how to create a telecom junction box.


You can create a new telecom junction box in the **Domain Explorer** or the **Reference Explorer**. If the new junction box is going to have a frequently used configuration, we recommend that you create it in the **Reference Explorer** so that you can copy it to the **Domain Explorer** and then change its name. This way you can create numerous junction boxes on the fly (see [Copying Reference Wiring Entities](#) for details). If you do not intend to use the configuration of the new junction box frequently, we recommend that you create it in the **Domain Explorer** and in the <unit> where it is to be physically located. This is helpful when you want to filter the panels in the current <unit>.

➤ To create a telecom junction box

1. Do one of the following:
 - Press F7 to open the **Domain Explorer**.
 - In the [Wiring](#) module, on the **View** menu, click **Wiring Explorer**.
2. Double-click the **Panels by Category** folder, and then expand the **Telecom Panels** folder.
3. Right-click the **Junction Boxes** folder and then on the shortcut menu point to **New** and click **Telecom Junction Box**.
4. In the **Telecom Junction Box Properties** dialog box, on the **General** tab, do one of the following to define the name of the new panel:
 - Clear the **Apply naming convention** check box and under **Panel**, type the name of the new panel. Note that if you do not clear the **Apply naming convention** check box, the software will ignore the name that you type under **Panel**.
 - Keep the **Apply naming convention** check box selected if you want the software to name the new panel automatically according to the naming conventions that are set for this type of panel in the [Administration](#) module. For more information, see [SmartPlant Instrumentation Administration Help, Domain Administration > Naming Conventions](#).

5. In the **Address 1** and **Address 2** fields, type the required definitions.

**Tip**


- You can change the **Address 1** and **Address 2** field headers to reflect manufacturer-specific terminology.
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6. Select the required values from the **Type**, **Manufacturer**, **Model**, **Area classification**, and **Location** lists. If the required value is not available, click  next to the relevant list arrow to open the appropriate supporting table.
 7. Under **Mounting**, type a value if needed.
 8. Under **Backplane**, type a value if needed
 9. Select the **Set as intrinsically safe** check box if this junction box has intrinsic safety certification.
 10. Click the **Associate Symbols** tab to associate a symbol for this panel that the software will use in the Enhanced Report Utility. For details, see [Associating Symbols](#).
 11. Click **Revisions** to manage the revisions of the new panel if needed.
 12. Click **OK** to accept your definitions for the junction box and close this dialog box.

Creating Distribution Frames

The following procedure explains how to create a distribution frame.

You can create a new distribution frame in the **Domain Explorer** or the **Reference Explorer**. If the new distribution frame is going to have a frequently used configuration, we recommend that you create it in the **Reference Explorer** so that you can copy it to the **Domain Explorer** and then change its name. This way you can create numerous distribution frames on the fly (see [Copying Reference Wiring Entities](#) for details). If you do not intend to use the configuration of the new distribution frame frequently, we recommend that you create it in the **Domain Explorer** and in the <unit> where it is to be physically located. This is helpful when you want to filter the panels in the current <unit>.

➤ To create a distribution frame

1. Do one of the following:
 - Press F7 to open the **Domain Explorer**.
 - In the [Wiring](#) module, on the **View** menu, click **Wiring Explorer**.
2. Double-click the **Panels by Category** folder, and then expand the **Telecom Panels** folder.
3. Right-click the **Distribution Frames** folder and then on the shortcut menu point to **New** and click **Distribution Frame**.
4. In the **Distribution Frame Properties** dialog box, on the **General** tab, do one of the following to define the name of the new panel:
 - Clear the **Apply naming convention** check box and under **Panel**, type the name of the new panel. Note that if you do not clear the **Apply naming convention** check box, the software will ignore the name that you type under **Panel**.
 - Keep the **Apply naming convention** check box selected if you want the software to name the new panel automatically according to the naming conventions that are set for this type of panel in the [Administration](#) module. For more information, see [SmartPlant Instrumentation Administration Help, Domain Administration > Naming Conventions](#).
5. Select the required values from the **Type**, **Manufacturer**, **Model**, **Area classification**, and **Location** lists. If the required value is not available, click  next to the relevant list arrow to open the appropriate supporting table.
6. Under **Dimensions**, type a value for the distribution frame dimensions if needed.
7. Under **Maximum number of racks**, type a value to set the maximum number of racks that can be created in this panel.
8. Under **Mounting**, type a value if needed.

9. Under **Backplane**, type a value if needed
10. Select the **Set as intrinsically safe** check box if this distribution frame has intrinsic safety certification.
11. Click the **Associate Symbols** tab to associate a symbol for this panel that the software will use in the Enhanced Report Utility. For details, see [Associating Symbols](#).
12. Click **Revisions** to manage the revisions of the new panel if needed.
13. Click **OK** to accept your definitions for the new distribution frame and close this dialog box.

Telecom Equipment Cabinets

SmartPlant Instrumentation allows you to create a number of equipment cabinets that you can use for various purposes. Once you have created the cabinets you require, you can create the appropriate equipment for each cabinet.

You can create the following equipment cabinets:


- PA Cabinets
- PABX cabinets
- Miscellaneous cabinets (cabinets for video and entertainment systems)
- Hub cabinets
- Intercom cabinets

Creating PA Cabinets

The following procedure explains how to create a PA cabinet. Then, you can add amplifiers and terminal strips to the new PA cabinet.

➤ To create a PA cabinet

1. Do one of the following:
 - Press F7 to open the **Domain Explorer**.
 - In the [Wiring](#) module, on the **View** menu, click **Wiring Explorer**.
2. Double-click the **Panels by Category** folder, and then expand the **Telecom Panels** folder.
3. Right-click the **Equipment Cabinets** folder, and then on the shortcut menu point to **New** and click **PA Cabinet**.
4. In the **PA Cabinet Properties** dialog box, on the **General** tab, do one of the following to define the name of the new panel:
 - Clear the **Apply naming convention** check box and under **Panel**, type the name of the new panel. Note that if you do not clear the **Apply naming convention** check box, the software will ignore the name that you type under **Panel**.
 - Keep the **Apply naming convention** check box selected if you want the software to name the new panel automatically according to the naming conventions that are set for this type of panel in the [Administration](#) module. For more information, see [SmartPlant Instrumentation Administration Help, Domain Administration > Naming Conventions](#).


5. Select the required values from the **Type**, **Manufacturer**, **Model**, **Area classification**, and **Location** lists. If the required value is not available, click  next to the relevant list arrow to open the appropriate supporting table.
6. Under **Dimensions**, type a value for the distribution frame dimensions if needed.
7. Under **Maximum number of racks**, type a value to set the maximum number of racks that can be created in this panel.
8. Under **Mounting**, type a value if needed.
9. Under **Backplane**, type a value if needed
10. Select the **Set as intrinsically safe** check box if this distribution frame has intrinsic safety certification.
11. Click the **Associate Symbols** tab to associate a symbol for this panel that the software will use in the Enhanced Report Utility. For details, see [Associating Symbols](#).
12. Click **Revisions** to manage the revisions of the new panel if needed.
13. Click **OK** to accept your definitions for the new device panel and close this dialog box

Creating Amplifiers

The software allows you to create amplifiers to an existing PA cabinet. Once you have created an amplifier, you can create PA strips and connectors under this amplifier.

The following procedure deals with the creation of amplifiers.

➤ To create an amplifier

1. In the **Domain Explorer**, expand the **Telecom Panels** folder, which is located within the **Panels by Category** folder.
2. Expand the **Equipment Cabinets** folder and then right-click a PA cabinet to which you want to add a new amplifier.
3. On the shortcut menu, point to **New** and then click **Amplifier**.
4. In the **New Wiring Equipment** dialog box, type a name for the new amplifier and click **OK**.
5. In the **Wiring Equipment Properties - Amplifier** dialog box, on the **General** tab, do one of the following to define the name of the new equipment:
 - Select the **Apply naming convention** check box selected if you want the software to name the new amplifier automatically according to the naming conventions that are set for this type of equipment in the [Administration](#) module. For more information, see [SmartPlant Instrumentation Administration Help, Domain Administration > Naming Conventions](#).
 - Clear the **Apply naming convention** check box and under **Name**, type the name of the new amplifier. Note that if you do not clear the **Apply naming convention** check box, the software will ignore the name that you type under **Name**.
6. Select the **Double width** check box if the amplifier occupies a double width slot or position.
7. In the **Details** group box do the following as you require:
 - a) Type a description.
 - b) Select an amplifier type, model, and manufacturer. If the required value is not available on the list, click  to define a new one.
 - c) Enter a sequence if you need to define the amplifier sequence.

8. Click the **Category Properties** tab.
9. Revise and modify category property values as you require. Click the value for each property and modify it as needed.


**Tip**

- A category property is a wiring equipment category property that you can define yourself. For details, see [Customizing and Using Wiring Equipment Categories](#).
10. Click the **Associated Symbols** tab to associate a symbol for this amplifier. The software will use this symbol in the Enhanced Report Utility. For details, see [Associating Symbols](#).
 11. Click **OK** to accept your settings and close the dialog box.

Adding Connectors to Amplifiers

Connectors are amplifier sub-entities. The following procedure explains how to add a connector to an amplifier.


➤ To add a connector to an amplifier

1. In the **Domain Explorer**, right-click an amplifier to which you want to add a connector.
2. On the shortcut menu, point to **New** and then click **Connector**.
3. In the **Connector Properties** dialog box, type a connector name.
4. Select a connector type. Click  to add new connector types to this list.
5. Set whether the connector is male or female.
6. Select a panel side for the connector.
7. Click **OK**.

Creating PABX Cabinets

The following procedure explains how to create a private automatic branch exchange (PABX) cabinet. Then, you can add PABX racks and terminal strips to the new PABX cabinet.

➤ To create a PABX cabinet

1. Do one of the following:
 - Press F7 to open the **Domain Explorer**.
 - In the [Wiring](#) module, on the **View** menu, click **Wiring Explorer**.
2. Double-click the **Panels by Category** folder, and then expand the **Telecom Panels** folder.
3. Right-click the **Equipment Cabinets** folder, and then on the shortcut menu point to **New** and click **PABX Cabinet**.
4. In the **PABX Cabinet Properties** dialog box, on the **General** tab, do one of the following to define the name of the new panel:
 - Clear the **Apply naming convention** check box and under **Panel**, type the name of the new panel. Note that if you do not clear the **Apply naming convention** check box, the software will ignore the name that you type under **Panel**.
 - Keep the **Apply naming convention** check box selected if you want the software to name the new panel automatically according to the naming conventions that are set for this type of panel in the [Administration](#) module. For more information, see [SmartPlant Instrumentation Administration Help, Domain Administration > Naming Conventions](#).
5. Select the required values from the **Type**, **Manufacturer**, **Model**, **Area classification**, and **Location** lists. If the required value is not available, click  next to the relevant list arrow to open the appropriate supporting table.
6. Under **Dimensions**, type a value for the distribution frame dimensions if needed.
7. Under **Maximum number of racks**, type a value to set the maximum number of racks that can be created in this panel.
8. Under **Mounting**, type a value if needed.
9. Under **Backplane**, type a value if needed.
10. Select the **Set as intrinsically safe** check box if this distribution frame has intrinsic safety certification.

11. Click the **Associate Symbols** tab to associate a symbol for this panel that the software will use in the Enhanced Report Utility. For details, see [Associating Symbols](#).
12. Click **Revisions** to manage the revisions of the new panel if needed.
13. Click **OK** to accept your definitions for the new device panel and close this dialog box

Creating PABX Racks

The following procedure deals with the creation of PABX racks in a PABX cabinet.

➤ To create a PABX rack

1. In the **Domain Explorer**, expand the **Telecom Panels** folder, which is located within the **Panels by Category** folder.
2. Expand the **Equipment Cabinets** folder and then right-click a PABX cabinet to which you want to add a new rack.
3. On the shortcut menu, point to **New** and then click **PABX Rack**.
4. In the **Rack Properties** dialog box, on the **General** tab, do one of the following to define the name of the new rack:
 - Clear the **Apply naming convention** check box and under **Rack**, type the name of the new junction box. Note that if you do not clear the **Apply naming convention** check box, the software will ignore the name that you type under **Rack**.
 - Keep the **Apply naming convention** check box selected if you want the software to name the new rack automatically according to the naming conventions that are set for racks in the [Administration](#) module. For more information, see [SmartPlant Instrumentation Administration Help, Domain Administration > Naming Conventions](#).
5. Type a brief description for the new rack if needed.
6. Enter the rack sequence in its PABX cabinet.
7. Click **Slots** to add some slots for the current rack.
8. In the **Batch Slot Creation** dialog box, type the number of new slots that you want to add in the new rack.

9. Do the following to define the slot numbering:
 - a) Type a prefix for the slot name.
 - b) Enter a value in the **Start from number** and **Increment by** fields.
10. Click **OK** and to add the new slots and to return to the **Rack Properties** dialog box.

**Tip**


- In the **Rack Properties** dialog box, the software now displays the number of slots that you added.
11. Click the **Associate Symbols** tab to associate a symbol for this rack that the software will use in the Enhanced Report Utility. For details, see [Associating Symbols](#).
 12. Click **OK** to accept your definitions for the new junction box and close this dialog box

Creating Switches

The software allows you to create switches after adding a rack to a PABX cabinet. Once you have created a switch, you can add a switch port and a connector.

➤ To create a switch

1. In the **Domain Explorer**, expand the **Telecom Panels** folder, which is located within the **Panels by Category** folder.
2. Expand the **Equipment Cabinets** folder to display the existing PABX cabinets.
3. Double-click a PABX cabinet to display the existing PABX racks.
4. Right-click a PABX rack to which you want to add a new switch and then on the shortcut menu, point to **New** and click **Switch**.
5. In the **New Wiring Equipment** dialog box, type a name for the new amplifier and click **OK**.
6. In the **Wiring Equipment Properties - Amplifier** dialog box, on the **General** tab, do one of the following to define the name of the new equipment:
 - Select the **Apply naming convention** check box selected if you want the software to name the new switch automatically according to the naming conventions that are set for this type of equipment in the [Administration](#) module. For more information, see [SmartPlant Instrumentation Administration Help, Domain Administration > Naming Conventions](#).
 - Clear the **Apply naming convention** check box and under **Name**, type the name of the new switch. Note that if you do not clear the **Apply naming convention** check box, the software will ignore the name that you type under **Name**.
7. Select the **Double width** check box if the switch occupies a double width slot or position.

8. In the **Details** group box do the following as you require:
 - a) Type a description.
 - b) Select a switch type, model, and manufacturer. If the required value is not available on the list, click  to define a new one.
 - c) Enter a sequence if you need to define the switch sequence.
9. Click the **Category Properties** tab.
10. Revise and modify category property values as you require. Click the value for each property and modify it as needed.

**Tip**

- A category property is a wiring equipment category property that you can define yourself. For details, see [Customizing and Using Wiring Equipment Categories](#).
11. Click the **Associated Symbols** tab to associate a symbol for this amplifier. The software will use this symbol in the Enhanced Report Utility. For details, see [Associating Symbols](#).
 12. Click **OK** to accept your settings and close the dialog box.

Adding Switch Ports

Once you have created a switch, you can add a switch port to a switch.

➤ To add a switch port

1. In the **Domain Explorer**, expand the **Telecom Panels** folder, which is located within the **Panels by Category** folder.
2. Expand the **Equipment Cabinets** folder to display the existing PABX cabinets.
3. Double-click a PABX cabinet and then a PABX rack to display the existing switches.
4. Right-click a switch to which you want to add a new port and then on the shortcut menu, point to **New** and click **Switch Port**.
5. In the **General** tab of the **Switch Port Properties** dialog box, type a name for the new amplifier and click **OK**.

Creating Switch Channels

The software allows you to create switch channels after creating a switch port.

➤ To add a switch channel

1. In the **Domain Explorer**, expand the **Telecom Panels** folder, which is located within the **Panels by Category** folder.
2. Expand the **Equipment Cabinets** folder to display the existing PABX cabinets.
3. Expand the hierarchy of a PABX cabinet and then double-click a PABX rack, a switch, and then a switch port.
4. Right-click a switch port to which you want to add a new channel and then on the shortcut menu, point to **New** and click **Switch Channels**.
5. On the **General** tab of the **Switch Port Properties** dialog box, type a name for the new switch port and click **OK**.

Creating Telephones

This option allows you to create a telephone in a PABX cabinet. You can add a telephone after adding a terminal to a switch channel.

➤ To create a telephone

1. In the **Domain Explorer**, expand the **Telecom Panels** folder, which is located within the **Panels by Category** folder.
2. Expand the **Equipment Cabinets** folder to display the existing PABX cabinets.
3. Expand the hierarchy of a PABX cabinet and then double-click a PABX rack, a switch, a switch port, and then a switch channel.
4. Create a terminal under a switch channel if there aren't any terminals yet. Right-click a switch channel and then on the shortcut menu, point to **New** and click **Terminal**.
5. Right-click the **Telephone** folder, and then on the shortcut menu, point to **New** and click **Telephone**.
6. In the **Telephone Properties** dialog box, type the telephone number and description.
7. Select an appropriate telephone state and usage. If the values that you need do not exist on the **Telephone state** and **Telephone usage** lists, you can add them in the Telecom supporting tables in the [Wiring](#) module. To do this, in the [Wiring](#) module, click **Tables -> Telecom -> Telephone State** or **Telephone Usage**.
8. Click **OK**.

Associating a Telephone with a Channel

The software allows you associate a telephone with a channel. Note that a channel can be associated with many telephone numbers.

➤ To associate a channel with a telephone number

1. In the **Domain Explorer**, expand the hierarchy of a PABX panel to display the existing racks, switches, switch ports, and terminals.
2. Right-click a channel, then on the shortcut menu, point to **Actions** and click **Associate Telephone Numbers**.
3. On the **Associate Telephone Numbers** dialog box, select an available telephone number and click **Associate**.
4. Click **Close** when done.


Creating Miscellaneous Cabinets

Miscellaneous cabinets are intended for video equipment, entertainment systems, and so forth. After creating a miscellaneous cabinet, you can add a rack and a terminal strip.

The following procedure explains how to create a miscellaneous cabinet.

➤ To create a miscellaneous cabinet

1. Do one of the following:
 - Press F7 to open the **Domain Explorer**.
 - In the **Wiring** module, on the **View** menu, click **Wiring Explorer**.
2. Double-click the **Panels by Category** folder, and then expand the **Telecom Panels** folder.
3. Right-click the **Equipment Cabinets** folder, and then on the shortcut menu point to **New** and click **Miscellaneous Cabinet**.


4. In the **Miscellaneous Cabinet Properties** dialog box, on the **General** tab, do one of the following to define the name of the new panel:
 - Clear the **Apply naming convention** check box and under **Panel**, type the name of the new panel. Note that if you do not clear the **Apply naming convention** check box, the software will ignore the name that you type under **Panel**.
 - Keep the **Apply naming convention** check box selected if you want the software to name the new panel automatically according to the naming conventions that are set for this type of panel in the [Administration](#) module. For more information, see [SmartPlant Instrumentation Administration Help, Domain Administration > Naming Conventions](#).
5. Select the required values from the **Type**, **Manufacturer**, **Model**, **Area classification**, and **Location** lists. If the required value is not available, click  next to the relevant list arrow to open the appropriate supporting table.
6. Under **Dimensions**, type a value for the cabinet dimensions if needed.
7. Under **Maximum number of racks**, type a value to set the maximum number of racks that can be created in this cabinet.
8. Under **Mounting**, type a value if needed.
9. Under **Backplane**, type a value if needed.
10. Select the **Set as intrinsically safe** check box if this cabinet has intrinsic safety certification.
11. Click the **Associate Symbols** tab to associate a symbol for this panel that the software will use in the Enhanced Report Utility. For details, see [Associating Symbols](#).
12. Click **Revisions** to manage the revisions of the new cabinet if needed.
13. Click **OK** to accept your definitions for the new cabinet and close this dialog box.

Creating Hub Cabinets

The following procedure explains how to create a hub cabinet. After creating a hub cabinet, you can add hub equipment.

➤ To create a hub cabinet


1. Do one of the following:
 - Press F7 to open the **Domain Explorer**.
 - In the [Wiring](#) module, on the **View** menu, click **Wiring Explorer**.
2. Double-click the **Panels by Category** folder, and then expand the **Telecom Panels** folder.
3. Right-click the **Equipment Cabinets** folder, and then on the shortcut menu point to **New** and click **Hub Cabinet**.
4. In the **Hub Cabinet Properties** dialog box, on the **General** tab, do one of the following to define the name of the new panel:
 - Clear the **Apply naming convention** check box and under **Panel**, type the name of the new panel. Note that if you do not clear the **Apply naming convention** check box, the software will ignore the name that you type under **Panel**.
 - Keep the **Apply naming convention** check box selected if you want the software to name the new panel automatically according to the naming conventions that are set for this type of panel in the [Administration](#) module. For more information, see [SmartPlant Instrumentation Administration Help, Domain Administration > Naming Conventions](#).

5. Select the required values from the **Type**, **Manufacturer**, **Model**, **Area classification**, and **Location** lists. If the required value is not available, click  next to the relevant list arrow to open the appropriate supporting table.
6. Under **Dimensions**, type a value for the cabinet dimensions if needed.
7. Under **Maximum number of racks**, type a value to set the maximum number of racks that can be created in this cabinet.
8. Under **Mounting**, type a value if needed.
9. Under **Backplane**, type a value if needed
10. Select the **Set as intrinsically safe** check box if this cabinet has intrinsic safety certification.
11. Click the **Associate Symbols** tab to associate a symbol for this panel that the software will use in the Enhanced Report Utility. For details, see [Associating Symbols](#).
12. Click **Revisions** to manage the revisions of the new cabinet if needed.
13. Click **OK** to accept your definitions for the new cabinet and close this dialog box.

Creating Hub Equipment

You can add hub equipment to a hub cabinet. Hub equipment is a type of wiring equipment. After creating hub equipment, you can add a port and a hub connector.

➤ To create hub equipment

1. In the **Reference Explorer** or the **Domain Explorer**, expand the **Telecom Panels** folder.
2. Expand the **Equipment Cabinets** folder to display the existing hub cabinets.
3. Right-click a hub cabinet and then on the shortcut menu, point to **New** and click **Hub Equipment**.
4. In the **New Wiring Equipment** dialog box, type a name for the new hub equipment and click **OK**.
5. In the **Wiring Equipment Properties - Hub** dialog box, on the **General** tab, do one of the following to define the name of the new equipment:
 - Select the **Apply naming convention** check box selected if you want the software to name the new switch automatically according to the naming conventions that are set for this type of equipment in the [Administration](#) module. For more information, see [SmartPlant Instrumentation Administration Help, Domain Administration > Naming Conventions](#).
 - Clear the **Apply naming convention** check box and under **Name**, type the name of the new switch. Note that if you do not clear the **Apply naming convention** check box, the software will ignore the name that you type under **Name**.
6. Select the **Double width** check box if the hub occupies a double width slot or position.
7. In the **Details** group box do the following as you require:
 - a) Type a description.
 - b) Select a hub type, model, and manufacturer. If the required value is not available on the list, click  to define a new one.
 - c) Enter a sequence if you need to define the hub sequence.
8. Click the **Category Properties** tab.

9. Revise and modify category property values as you require. Click the value for each property and modify it as needed.


**Tip**

- A category property is a wiring equipment category property that you can define yourself. For details, see [Customizing and Using Wiring Equipment Categories](#).
10. Click the **Associated Symbols** tab to associate a symbol for this hub. The software will use this symbol in the Enhanced Report Utility. For details, see [Associating Symbols](#).
 11. Click **OK** to accept your settings and close the dialog box.

Creating Hub Connectors

The following topic explains how to add a hub connector to a hub.

➤ To add a hub connector

1. In the **Domain Explorer** or the **Reference Explorer**, expand a hub cabinet hierarchy to display the existing hub equipment and hub ports.
2. Do one of the following:
 - Right-click a port to which you want to add a hub connector.
 - Right-click the **Hub Connectors** folder.
3. On the shortcut menu, point to **New** and click **Hub Connector**.
4. In the **Connector Properties** dialog box, type a connector name.
5. Select a connector type. Click  to add new connector types to this list.
6. Set whether the connector is male or female.
7. Select a panel side for the connector.
8. Click **OK**.

Adding a Port to a Hub

The software allows you to add a port to an existing hub.

➤ To add a port to a hub


1. In the **Reference Explorer** or **Domain Explorer**, navigate to a hub cabinet.
2. Double-click a hub cabinet to display the existing hub equipment.
3. Right-click a hub equipment entity and then on the shortcut menu, point to **New** and click **Port**.
4. On the **General** tab of the **Port Properties** dialog box, type a name for the new port.
5. Type a brief description if necessary.
6. Enter the port sequence in the hub if needed.
7. Click the **Associated Symbols** tab to associate a symbol for this port. The software will use this symbol in the Enhanced Report Utility. For details, see [Associating Symbols](#).
8. Click **OK**.

Creating Intercom Cabinets

The following procedure explains how to create an intercom cabinet. After creating an intercom cabinet, you can add intercom equipment and a terminal strip.

➤ To create an intercom cabinet


1. Do one of the following:
 - Press F7 to open the **Domain Explorer** or F8 to open the **Reference Explorer**.
 - In the [Wiring](#) module, on the **View** menu, click **Wiring Explorer**.
2. In the **Domain Explorer**, double-click the **Panels by Category** folder, and then expand the **Telecom Panels** folder.
3. Right-click the **Equipment Cabinets** folder, and then on the shortcut menu point to **New** and click **Intercom Cabinet**.

4. In the **Intercom Cabinet Properties** dialog box, on the **General** tab, do one of the following to define the name of the new panel:
 - Clear the **Apply naming convention** check box and under **Panel**, type the name of the new panel. Note that if you do not clear the **Apply naming convention** check box, the software will ignore the name that you type under **Panel**.
 - Keep the **Apply naming convention** check box selected if you want the software to name the new panel automatically according to the naming conventions that are set for this type of panel in the [Administration](#) module. For more information, see [SmartPlant Instrumentation Administration Help, Domain Administration > Naming Conventions](#).
5. Select the required values from the **Type**, **Manufacturer**, **Model**, **Area classification**, and **Location** lists. If the required value is not available, click  next to the relevant list arrow to open the appropriate supporting table.
6. Under **Dimensions**, type a value for the cabinet dimensions if needed.
7. Under **Maximum number of racks**, type a value to set the maximum number of racks that can be created in this cabinet.
8. Under **Mounting**, type a value if needed.
9. Under **Backplane**, type a value if needed.
10. Select the **Set as intrinsically safe** check box if this cabinet has intrinsic safety certification.
11. Click the **Associate Symbols** tab to associate a symbol for this cabinet that the software will use in the Enhanced Report Utility. For details, see [Associating Symbols](#).
12. Click **Revisions** to manage the revisions of the new cabinet if needed.
13. Click **OK** to accept your definitions for the new cabinet and close this dialog box.

Adding Intercom Equipment

The following procedure explains how to add intercom equipment to an intercom cabinet.

➤ To add intercom equipment to an intercom cabinet

1. In the **Reference Explorer** or the **Domain Explorer**, expand the **Telecom Panels** folder.
2. Expand the **Equipment Cabinets** folder to display the existing intercom cabinets.
3. Right-click an intercom cabinet and then on the shortcut menu, point to **New** and click **Intercom Equipment**.
4. In the **New Wiring Equipment** dialog box, type a name for the new intercom equipment and click **OK**.
5. In the **Wiring Equipment Properties - Intercom** dialog box, on the **General** tab, do one of the following to define the name of the new equipment:
 - Select the **Apply naming convention** check box selected if you want the software to name the new switch automatically according to the naming conventions that are set for this type of equipment in the [Administration](#) module. For more information, see [SmartPlant Instrumentation Administration Help, Domain Administration > Naming Conventions](#).
 - Clear the **Apply naming convention** check box and under **Name**, type the name of the new switch. Note that if you do not clear the **Apply naming convention** check box, the software will ignore the name that you type under **Name**.
6. Select the **Double width** check box if the intercom occupies a double width slot or position.
7. In the **Details** group box do the following as you require:
 - a) Type a description.
 - b) Select a hub type, model, and manufacturer. If the required value is not available on the list, click  to define a new one.
 - c) Enter a sequence if you need to define the intercom sequence.

8. Click the **Category Properties** tab.
9. Revise and modify category property values as you require. Click the value for each property and modify it as needed.


**Tip**

- A category property is a wiring equipment category property that you can define yourself. For details, see [Customizing and Using Wiring Equipment Categories](#).
10. Click the **Associated Symbols** tab to associate a symbol for this hub. The software will use this symbol in the Enhanced Report Utility. For details, see [Associating Symbols](#).
 11. Click **OK** to accept your settings and close the dialog box.

Adding an Intercom Connector

The following topic explains how to add a connector to an intercom.

➤ To add an intercom connector

1. In the **Domain Explorer** or the **Reference Explorer**, expand an intercom cabinet hierarchy to display the existing intercom equipment.
2. Right-click an intercom equipment entity to which you want to add a connector.
3. On the shortcut menu, point to **New** and click **Connector**.
4. In the **Connector Properties** dialog box, type a connector name.
5. Select a connector type. Click  to add new connector types to this list.
6. Set whether the connector is male or female.
7. Select a panel side for the connector.
8. Click **OK**.

Managing Supporting Tables

Defining Shelf Location

This supporting table holds the shelf location data that you enter when defining equipment panel shelves. The values that you define here then become available from the **Location** list in the **Shelves** dialog box.

➤ To set a shelf location

1. In the **Wiring Module** window, on the **Tables** menu, click **Shelf Locations**.
2. Do the following to enter new shelf location:
 - a) Click **New** to append a new data row.
 - b) Type the new shelf location and description in the appropriate fields.
3. Do the following to edit an existing shelf location:
 - a) In the data window, click the value that you want to edit.



Tip

- If you have a long list of items in the data window, type a value in the **Find** box to quickly select the row you are looking for.
- b) Modify the values as needed.
 4. Do the following to delete a value:
 - a) In the data window, select the row that you want to delete.
 - b) Click **Delete**.



Caution

- Note that the item you delete will not be available in the **Location** list in the **Shelves** dialog box.

Defining Shelf Height

This supporting table holds the shelf height data that you enter when defining equipment panel shelves. The values that you define here then become available from the **Shelf Height** list in the **Shelves** dialog box.

➤ To define a shelf height

1. In the **Wiring Module** window, on the **Tables** menu, click **Shelf Heights**.
2. Do the following to enter new shelf height:
 - a) Click **New** to append a new data row.
 - b) Type a new value and description in the appropriate fields.
3. Do the following to edit an existing value:
 - a) In the data window, select that value that you want to edit.



Tip

- If you have a long list of items in the data window, type a value in the **Find** box to quickly select the row you are looking for.
- b) Modify the values as needed.
 4. Do the following to delete a value:
 - a) In the data window, select the row that you want to delete.
 - b) Click **Delete**.




Caution

- Note that the item you delete will not be available in the **Shelf Height** list in the **Shelves** dialog box.

Defining Telecom Line Numbers

This procedure explains how to define telecom line numbers.

To open the **Telecom Line Number** supporting table, do one of the following:

- In the **Instrument Index Module** window, on the **Tables** menu, click **Telecom Line Number**.
- In the **Tag Number** dialog box, under **Telecom tag number properties**, click  next to the **Line number** list arrow.

➤ To define a new telecom line number

1. Click **New** to append a new data row.
2. Type the new telecom line number and description in the appropriate fields.

➤ To edit the properties of a telecom line number

1. In the data window, select that value that you want to edit.



Tip

- If you have a long list of items in the data window, type a value in the **Find telecom line number** box to quickly select the row you are looking for.

2. Modify the values as needed.

➤ To delete a telecom line number

1. In the data window, select the row that you want to delete.
2. Click **Delete**.



Caution

- SmartPlant Instrumentation removes the item you delete from the **Line number** lists.


Defining Telecom Device Types

You define a telecom device type profile for your telecom devices so that new telecom tag numbers that you create will acquire the necessary properties. SmartPlant Instrumentation provides a number of predefined telecom device types, such as AL (alarm), CAM (camera), and so forth. You can add new telecom device types and modify the shipped ones as required. You can also delete a telecom device type that is not in use, but SmartPlant Instrumentation does not let you delete a telecom device type that you already used to create a tag number.

SmartPlant Instrumentation uses standard function identifier acronyms to identify telecom device types. If some acronyms are not unique and are used for more than one device type, the **Select Telecom Type** dialog box opens where you select the appropriate device type.

When defining a device type, you can also set a number of device type profile defaults that let you create new tag numbers with predefined properties based on the telecom device type that you select. For details, [see Setting Device Type Profile Defaults](#).

To open the **Telecom Device Type** supporting table, do one of the following:

- In the **Instrument Index Module** window, on the **Tables** menu, click **Telecom Device Type**.
- In the **Tag Number** dialog box, under **Telecom tag number properties**, click  next to the **Comm.type** list arrow.

➤ To define a new telecom device type

1. Click **New** to append a new data row.
2. Type the device type values in the appropriate fields as follows:
 - **Device Type** – type the device type acronym and press **Tab**. You can have duplicate acronyms if needed.
 - **Description** – type a brief description and press **Tab**. This can be very useful if you have duplicate device type acronyms.
 - **CS Tag Device Type Alias** – type an alias for a control system tag device type if needed. Do this only if you want to create control system tags that will have an alias device type associated with the current device type. Leave this field blank if you are not going to create CS tags based on the current device type or if you want the CS tags to have the same device type as the tag number.
3. Click **Profile** and set the profile defaults as needed.

➤ **To edit the properties of a telecom device type**

1. In the data window, select that value that you want to edit.



Tip

- If you have a long list of items in the data window, type a value in the **Find device type** box to quickly select the row you are looking for.

2. Modify the values as needed.
3. Click **Profile** and set the profile defaults as needed.

➤ **To delete a telecom device type**

1. In the data window, select the row that you want to delete.
2. Click **Delete**.




Caution

- SmartPlant Instrumentation removes the item you delete from the **Comm. type** lists.

Defining Equipment Cabinet Network Classes

This procedure allows you to maintain the contents of the **Network class** list in the **I/O Card Properties** dialog box.

➤ To define a network class

1. Do one of the following to open the **Panel Network Classes** dialog box:
 - In the **Wiring** module, on the **Tables** menu, point to **Tables**, and click **Network Classes**.
 - On the **General** tab of the **Wiring Equipment Properties - I/O Card** dialog box, click  next to the **Network class** list.
2. To add a new network class, do the following:
 - a) Click **New** to append a new data row.
 - b) Type the network class name and description in the appropriate fields.
3. To edit an existing network class, do the following:
 - a) In the data window, click the field that you want to edit.



Tip

- If you have a long list of items in the data window, type a value in the **Find** box to quickly select the row you are looking for.
- b) Modify the values as needed.
 4. To delete a value, do the following:
 - a) In the data window, select the row that you want to delete.
 - b) Click **Delete**.




Caution

- The item you delete will not be available in the **Network class** list in the **I/O Card Properties** dialog box

Entering and Editing Field Equipment Data

The following procedure explains how enter and edit field equipment data.

To open the **Telecom Field Equipment Data** supporting table, do one of the following:

- In the **Instrument Index Module** window, on the **Tables** menu, click **Telecom Field Equipment**.
- In the **Tag Number** dialog box, under **Telecom tag number properties**, click  next to the **Field equip.** list arrow.

➤ To define a new telecom field equipment data item

1. Click **New** to append a new data row.
2. Type the new Ex-Code, IS Code, Gas Group, Temp Class, Frequency Code, Effect, and Tele ID number in the appropriate fields.

➤ To edit the properties of a telecom field equipment data item

1. In the data window, select that value that you want to edit.



Tip

- If you have a long list of items in the data window, type a value in the **Find ex-code** box to quickly select the row you are looking for.

2. Modify the values as needed.

➤ To delete a telecom field equipment data item

1. In the data window, select the row that you want to delete.
2. Click **Delete**.



Caution

- SmartPlant Instrumentation removes the item you delete from the **Field equip.** lists.

Reports

Generating an Internal Cross-Wiring Report

After defining the internal connection of an equipment card, you can generate an internal cross-wiring report that displays all the internal connections of the selected equipment card.



Note

- You must install the Enhanced Report Utility on your local machine to be able to generate the internal cross-wiring report. For details, see [Enhanced Report Utility Installation Guide](#).

➤ To generate an internal cross wiring report

1. In the **Wiring Explorer**, expand an equipment panel and select the equipment card that you need.
2. Right-click the card, and on the shortcut menu, point to **Actions** and click **Connection** to open the **Equipment Card Plug-and-Socket Connection** window.
3. Define the internal cross wiring as needed.
4. Right-click somewhere in the equipment card and on the shortcut menu, click **Internal Cross Wiring Diagram**.
5. At the print preview prompt, do one of the following:
 - Click **Yes** to open the print preview of the generated report. Choose this option if you want to modify or annotate the report.
 - Click **No** to start printing the report without displaying its print preview.



Notes

- In the **General** tab folder of the **Preferences** dialog box, you can set the software to display a print preview always, never or with your approval.
- If you select not to preview a report, and you are using Acrobat Distiller as your default printer, make sure that Distiller is configured enable report generation without prompting for the output file location. To do this, open the Distiller **Preferences** dialog box and under **Output Options**, clear the check boxes **Ask for PDF file destination** and **Ask to replace existing PDF file**.
- In the Enhanced Report Utility, all the editing options such as macros, SmartText, and so forth, are disabled.

Generating a Network Class Report

You can generate a report that displays all the equipment cards and channel connections of all field device panels for a selected network class.



Note

- You must install the Enhanced Report Utility on your local machine to be able to generate the communication line report. For details, see [Enhanced Report Utility Installation Guide](#).

➤ To generate a network class report

1. In the **Wiring Module** window, on the **Reports** menu, point to **Reports > Telecom**, and then click **Network Class Report**.
2. In the **Network Class Selection** dialog box, select a network class and click **OK**.
3. At the print preview prompt, do one of the following:
 - Click **Yes** to open the print preview of the generated report. Choose this option if you want to modify or annotate the report.
 - Click **No** to start printing the report without displaying its print preview.



Notes

- In the **General** tab folder of the **Preferences** dialog box, you can set SmartPlant Instrumentation to display a print preview always, never or with your approval.
- If you select not to preview a report, and you are using Acrobat Distiller as your default printer, make sure that Distiller is configured enable report generation without prompting for the output file location. To do this, open the Distiller **Preferences** dialog box and under **Output Options**, clear the check boxes **Ask for PDF file destination** and **Ask to replace existing PDF file**.

Generating Telecommunication Device Lists

This option enables you to generate a report that lists all the existing telecommunication devices in the current <unit> or all the <units> in the current domain. The report lists all tag numbers (telecom devices), their service, device type and line number, location layout, field equipment and signal level, manufacturer and model, as well as the fire area and load data. You generate this report in the [Instrument Index](#) module.

➤ To generate a telecommunication device list

1. Switch to the [Instrument Index](#) module.
2. In the **Instrument Index** window, on the **Reports** menu, click **Telecom Devices**.
3. In the **Report Print Request**, select one of the following and click **OK**:
 - **Current <Unit>** —include the telecom devices belonging to the current <unit> only.
 - **All <Units>** — include the telecom devices belonging to all the <units> in the current domain.
4. When prompted to preview the new report, click **Yes**. Click **No** to print out the report without opening its print preview.

Generating a Communication Line Report

You can generate a report that displays the connection path of all field device panels on a selected communication line. The connection path includes all the connected panels, their terminals and ports.



Note

- You must install the Enhanced Report Utility on your local machine to be able to generate the communication line report. For details, see [Enhanced Report Utility Installation Guide](#).

➤ To generate a communication line report

1. In the **Wiring Module** window, on the **Reports** menu, point to **Reports > Telecom**, and then click **Communication Line Report**.
2. In the **Communication Line Selection** dialog box, select a communication line and click **OK**.
3. At the print preview prompt, do one of the following:
 - Click **Yes** to open the print preview of the generated report. Choose this option if you want to modify or annotate the report.
 - Click **No** to start printing the report without displaying its print preview.



Notes

- In the **General** tab folder of the **Preferences** dialog box, you can set SmartPlant Instrumentation to display a print preview always, never or with your approval.
- If you select not to preview a report, and you are using Acrobat Distiller as your default printer, make sure that Distiller is configured enable report generation without prompting for the output file location. To do this, open the Distiller **Preferences** dialog box and under **Output Options**, clear the check boxes **Ask for PDF file destination** and **Ask to replace existing PDF file**.

Generating a Speaker Load Report

This option allows you to generate a report that displays all the field device panels connected to a specific channel in a selected equipment card.

➤ To generate a speaker load report

1. In the **Wiring Module** window, on the **Reports** menu, point to **Telecom Report** and then click **Speaker Load Report**.
2. In the **Panel – Strip Selection** dialog box, click **Find**.
3. Select a card and click **Print**.
4. In the **Print Preview Request**, click **Yes** to display the report before printing it or click **No** to print out the report without displaying it first.

Generating a Telecom Device Type Report

This option allows you to generate a report that lists the existing telecom device types. You can generate a standard list report or a detailed list report depending on your needs. The standard report lists all the existing telecom device type acronyms and their definitions. The detailed report provides additional information for every telecom device type such as specification form number, default panel and cable, connection type, and so forth.

➤ To generate a telecom device type report

1. Switch to the [Instrument Index](#) module.
2. In the **Instrument Index** window, on the **Reports** menu, click **Standard Telecom Type List** or **Detailed Telecom Type List**.
3. When prompted to preview the new report, click **Yes**. Click **No** to print out the report without opening its print preview.

Generating a Telecom Line Number Report

Telecom Line Numbers report lists all the existing line numbers, their descriptions, origins and destinations, their types, and so forth.

➤ To generate a telecom line number report

1. Switch to the [Instrument Index](#) module.
2. In the **Instrument Index** window, on the **Reports** menu, click **Telecom Line Numbers**.
3. When prompted to preview the new report, click **Yes**. Click **No** to print out the report without opening its print preview.

Generating a Telecom Field Equipment Report

This option enables you to generate a list of all the existing telecom field equipment. The report lists the equipment ex-code, IS code gas group, temp. class, frequency code, effect, and the telecom ID number.

➤ To generate a field equipment report

1. Switch to the [Instrument Index](#) module.
2. In the **Instrument Index** window, on the **Reports** menu, click **Telecom Field Equipment**.
3. When prompted to preview the new report, click **Yes**. Click **No** to print out the report without opening its print preview.

Generating a Signal Level Report

Signal level report lists all the existing telecom signals, their descriptions, and capacity.

➤ To generate a signal level report

1. Switch to the [Instrument Index](#) module.
2. In the **Instrument Index** window, on the **Reports** menu, click **Telecom Signal Level**.
3. When prompted to preview the new report, click **Yes**. Click **No** to print out the report without opening its print preview.

Generating an Actual Load Report

This option enables you to generate an actual load report per channel for a selected equipment card. This report includes the sum of all field device panels connected to a specific channel.

➤ To generate an actual load report

1. In the **Wiring Module** window, on the **Reports** menu, point to **Telecom Report** and then click **Actual Load Report**.
2. In the **Panel – Strip Selection** dialog box, click **Find**.
3. Select a card and click **Print**.
4. In the **Print Preview Request**, click **Yes** to display the report before printing it or click **No** to print out the report without displaying it first.