SPATIAL*net*™ FM

Release 5.0

SPATIALnet FM RF Port Registration Manual

Issue History

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Preface

SPATIALnet FM RF Port Registration Manual

This document provides guidelines for use of the RF Port Registration functionality of SPATIAL*net* FM installations.

Scope

This document describes the use of RF Port Registration in SPATIAL*net* FM.

Who should use this manual?

This document is provided as a reference for all users of SPATIAL*net* FM who need to create or edit port information for RF equipment. It should also be of use to users who need to configure block libraries for RF equipment.

Prerequisite knowledge

A sound working knowledge of working with the SPATIAL*net* FM dictionaries.

Definitions and Acronyms

Definition	Meaning
Sub-block	A block references within a block definition

Related documentation

The following manuals in the SPATIAL*net* documentation series will be of interest to the SPATIAL*net* FM System Administrator:

Document name	Description
SPATIAL*net System Administrator's Manual*	This document provides details of job processing in SPATIAL*net*. Details of the use of batch queues for job processing are included.

The following manuals in the SPATIAL*net* FM documentation series will be of interest to the SPATIAL*net* FM System Administrator:

Document name	Description
SPATIAL*net FM User's Guide*	This document describes the use of SPATIAL*net* FM.

Conventions used in this manual

Below is a list of the typographical conventions used throughout the text.

Warnings and other important information are shown in a **bold** typeface. Keyboard entries, menu commands and the names of buttons also appear in this typeface.

Angled brackets shown inside a command or name indicate a full or partial path name that is to be supplied by the reader.

Comments and suggestions

We welcome all comments on the software and documentation, and are very interested in suggestions that would help us to enhance the SPATIAL*net* FM product and its usefulness to you. Please record your comments and send them to your distributor of SPATIAL*info* products.

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Chapter 1

Introduction

The Problem

Various pieces of equipment in SPATIAL*net* FM require configuration of their ports to facilitate connectivity. Port configuration involves capturing details about the graphical location of the port on the symbol for the equipment and also various connectivity related details such as the direction of signal flow through the port.

In the past, capturing the RF port information has required the user to manually type in the details for each port on every piece of equipment. This process is long and arduous with a high level of trial and error involved.

The Solution

To address this issue, we have implemented additional functionality which will allow the system to recognize certain block references inside block definitions (Sub-blocks) and use these to configure the port information.

This approach has several advantages:

- Port information can be graphically captured using existing AutoCAD tools that the user is familiar with including object and grid snapping. This allows much more precision when capturing ports.
- Port information is stored in the block definition which can then be used in other databases.
- Can see the location of the ports when looking at the symbol.

SPATIALnetFM now provides import and export tools for working with these sub-blocks.

Chapter 2

Working with Port Registration

Creating Sub-blocks

To create a symbol with the new port sub-blocks, first draft the block for the desired equipment or open an existing block drawing if you have one.

Next, insert one **_snet_rf_port** block reference for each port available on the equipment at the location and rotation you would like the port to appear on the equipment. The **_snet_rf_port** block is available from the **<install_path>\symbol\smt** directory in your SPATIALnetFM install (eg: **C:\SPATIALinfo\SPATIALnet\symbol\smt_snet_rf_port.dwg**). Each port has several attributes which should be populated as follows:

- PORT_SEQ – The sequence number for the port. This must be unique within the equipment symbol and is used to uniquely identify the port in various places in the system (such as when configuring Components). This should be a numeric value.
- PORT_NAME – The human-readable name of the port. This can be any value (except empty).
- PORT_DIRECTION – The direction of signal flow through the port. Must be either I (for IN) or O (for OUT). In the future P (for POWER) may also be allowed.
- INTERNAL ("Port is Bridge") – Whether or not the port can only be used once a component is installed in the device that uses it. This is only required for active devices. Internal/Bridge ports will only be available when a component that uses them is connected in the Active device. Value should either be Y (for YES/Port is for use by components) or N (for NO/Port is part of the Active).

Now save the drawing and you're done.

Importing Ports from blocks with sub-blocks:

Once you have drafted a block that has sub-blocks, you can then import the Port information from the block in one of three ways:

- **Open the block drawing and import from the current drawing**.
  Assuming you have the block drawing open in AutoCAD, you can import the Port details from the current drawing using the following steps:
    - In SPATIAL*net* FM, open the RF dictionary that contains the equipment for which you wish to configure the ports and select the desired equipment.
    - Push the **Symbol > Import From Current Drawing** button.

  - You will be asked to confirm the action. Click **Yes** if you're sure you wish to import the ports, otherwise click **No**.
  - If you clicked **Yes** then the ports will be imported.

- **Import the Ports from a drawing linked to from an RF Dictionary**.

  Assuming you have the block drawing saved to disk and the symbol name entered correctly on the dictionary row you wish to update the ports on then you can import the port details using the following steps:

  - In SPATIAL*net* FM, open the RF dictionary that contains the equipment for which you wish to configure the ports and select the desired equipment.
  - Push the **Symbol > Insert From File** button.
  - You will be asked to confirm the action. Click **Yes** if you're sure you wish to import the ports, otherwise click **No**.
  - If you clicked **Yes** then the ports will be imported.

- **Import the Ports for all equipment in a given RF Dictionary**.

  Assuming you have updated the Port Sub-blocks in the block drawings for all of a given class of RF Equipment, and that the symbol name for each dictionary row is entered correctly, you can import the port details for all entries in a given RF Dictionary using the following steps:

  - In SPATIAL*net* FM, open the RF dictionary that contains the equipment for which you wish to configure the ports.
  - Push the **Symbol > Import Symbols For All Active Types** button.
  - You will be asked to confirm the action. Click **Yes** if you're sure you wish to import the ports for all entries in the current dictionary, otherwise click No.
  - If you clicked **Yes** then the ports will be imported.

Exporting Ports from an RF Dictionary:

If you have already configured Ports for equipment in SPATIAL*net* FM using the old method of manual capture, then you can use the export functionality to update your existing symbol library with the ports from the dictionaries. Unfortunately, due to limitations in AutoCAD, you can only write sub-blocks into the current drawing. It is, therefore, a requirement that you open the block drawing you wish to update before running the tool. The steps are as follows:

- Open the drawing for the block you wish to create the **_snet_rf_port** block references in.
- Open the dictionary containing the equipment that uses the symbol and select the equipment.
- Press the **Symbol > Export To Current Drawing** button

- You will be asked to confirm the action. Click **Yes** if you're sure you wish to export the ports from the dictionary to the drawing, otherwise click **No**.
- If you clicked **Yes** then sub-blocks will be created in the current drawing for each Port associated with the dictionary entry you selected.