

Oracle® Retail Macro Space Management
Product Studio User Guide
Release 13.3.2

E54492-01

May 2014

Copyright © 2013, Oracle and/or its affiliates. All rights reserved.

Primary Author: Phil Wells

This software and related documentation are provided under a license agreement containing restrictions on use and disclosure and are protected by intellectual property laws. Except as expressly permitted in your license agreement or allowed by law, you may not use, copy, reproduce, translate, broadcast, modify, license, transmit, distribute, exhibit, perform, publish, or display any part, in any form, or by any means. Reverse engineering, disassembly, or decompilation of this software, unless required by law for interoperability, is prohibited.

The information contained herein is subject to change without notice and is not warranted to be error-free. If you find any errors, please report them to us in writing.

If this software or related documentation is delivered to the U.S. Government or anyone licensing it on behalf of the U.S. Government, the following notice is applicable:

U.S. GOVERNMENT END USERS: Oracle programs, including any operating system, integrated software, any programs installed on the hardware, and/or documentation, delivered to U.S. Government end users are "commercial computer software" pursuant to the applicable Federal Acquisition Regulation and agency-specific supplemental regulations. As such, use, duplication, disclosure, modification, and adaptation of the programs, including any operating system, integrated software, any programs installed on the hardware, and/or documentation, shall be subject to license terms and license restrictions applicable to the programs. No other rights are granted to the U.S. Government.

This software or hardware is developed for general use in a variety of information management applications. It is not developed or intended for use in any inherently dangerous applications, including applications that may create a risk of personal injury. If you use this software or hardware in dangerous applications, then you shall be responsible to take all appropriate fail-safe, backup, redundancy, and other measures to ensure its safe use. Oracle Corporation and its affiliates disclaim any liability for any damages caused by use of this software or hardware in dangerous applications.

Oracle and Java are registered trademarks of Oracle and/or its affiliates. Other names may be trademarks of their respective owners.

Intel and Intel Xeon are trademarks or registered trademarks of Intel Corporation. All SPARC trademarks are used under license and are trademarks or registered trademarks of SPARC International, Inc. AMD, Opteron, the AMD logo, and the AMD Opteron logo are trademarks or registered trademarks of Advanced Micro Devices. UNIX is a registered trademark of The Open Group.

This software or hardware and documentation may provide access to or information on content, products, and services from third parties. Oracle Corporation and its affiliates are not responsible for and expressly disclaim all warranties of any kind with respect to third-party content, products, and services. Oracle Corporation and its affiliates will not be responsible for any loss, costs, or damages incurred due to your access to or use of third-party content, products, or services.

Value-Added Reseller (VAR) Language

Oracle Retail VAR Applications

The following restrictions and provisions only apply to the programs referred to in this section and licensed to you. You acknowledge that the programs may contain third party software (VAR applications) licensed to Oracle. Depending upon your product and its version number, the VAR applications may include:

(i) the **MicroStrategy** Components developed and licensed by MicroStrategy Services Corporation (MicroStrategy) of McLean, Virginia to Oracle and imbedded in the MicroStrategy for Oracle Retail Data Warehouse and MicroStrategy for Oracle Retail Planning & Optimization applications.

(ii) the **Wavelink** component developed and licensed by Wavelink Corporation (Wavelink) of Kirkland, Washington, to Oracle and imbedded in Oracle Retail Mobile Store Inventory Management.

(iii) the software component known as **Access Via**™ licensed by Access Via of Seattle, Washington, and imbedded in Oracle Retail Signs and Oracle Retail Labels and Tags.

(iv) the software component known as **Adobe Flex**™ licensed by Adobe Systems Incorporated of San Jose, California, and imbedded in Oracle Retail Promotion Planning & Optimization application.

You acknowledge and confirm that Oracle grants you use of only the object code of the VAR Applications. Oracle will not deliver source code to the VAR Applications to you. Notwithstanding any other term or condition of the agreement and this ordering document, you shall not cause or permit alteration of any VAR Applications. For purposes of this section, "alteration" refers to all alterations, translations, upgrades, enhancements, customizations or modifications of all or any portion of the VAR Applications including all reconfigurations, reassembly or reverse assembly, re-engineering or reverse engineering and recompilations or reverse compilations of the VAR Applications or any derivatives of the VAR Applications. You acknowledge that it shall be a breach of the agreement to utilize the relationship, and/or confidential information of the VAR Applications for purposes of competitive discovery.

The VAR Applications contain trade secrets of Oracle and Oracle's licensors and Customer shall not attempt, cause, or permit the alteration, decompilation, reverse engineering, disassembly or other reduction of the VAR Applications to a human perceivable form. Oracle reserves the right to replace, with functional equivalent software, any of the VAR Applications in future releases of the applicable program.

Contents

Send Us Your Comments	ix
Preface	xi
Documentation Accessibility.....	xi
Related Documents.....	xi
Customer Support.....	xii
Review Patch Documentation.....	xii
Oracle Retail Documentation on the Oracle Technology Network.....	xii
Conventions.....	xii
Logging in to Product Studio	1
Logging in to Macro Space Management Modules.....	1
Password Changes.....	1
How Passwords and Privileges are Configured.....	2
Security Server.....	3
Security Server and Application Errors.....	4
Overview of Macro Space Planning	5
Macro Space Planning.....	5
Macro Space Planning.....	6
Product Studio and Associated Business Processes.....	6
Relationship with third-party Databases.....	7
Product Studio and the Imported Data.....	8
Using Products and their Hierarchy in Macro Space Planning.....	8
Using Products within Planograms.....	8
Displaying the Product Hierarchy in Planner, Merchandiser and ISSC.....	8
Planner and Merchandiser.....	9
In-Store Space Collaboration.....	9
Overview of Product Studio	11
About Product Studio.....	11
Product Studio Menu Options.....	11
File Menu.....	11
Edit Menu.....	12
View Menu.....	12
Window Menu.....	13
Help Menu.....	13
Overview of Product Hierarchy.....	13
Hierarchy Information.....	15
Placeholders and Display Styles.....	16
Placeholders.....	16
Display Styles.....	17
Deciding On How to Identify the Product.....	18

Deciding on the structure of the hierarchy	18
General	18
Making the Hierarchy User Friendly	19
'Unknown' Levels in Hierarchy	20
Interactions between Product Studio and Other Modules	21
Product Studio and Other Modules	21
Administration Module	21
Configuration Module	22
Data Import.....	22
Planner	22
Merchandiser.....	22
In-Store Space Collaboration.....	22
Administration Module	22
Category Role	23
Manufacturers	23
Product Code Types	25
Ranges	26
Strategies	27
Styles.....	27
Tax Codes.....	29
Units.....	30
User Defined Attributes	31
Configuration Module.....	32
Image Capture.....	33
Image Root.....	33
Data Import.....	34
Planner and Merchandiser.....	35
Planner	35
Merchandiser.....	36
In-Store Space Collaboration	37
Importing the Product Hierarchy.....	39
Importing the Product Hierarchy	39
Planograms	39
Frequency of updates	39
Information updated	39
Importing Products with Planogram Import	40
Product Images	41
Importing Product Images.....	41
Overview of Importing Product Images.....	41
Product Image Configuration	42
Manually Importing Images.....	44
Semi-Automatically Importing Images	46

Automatically Importing Images	48
Using Transparency in Product Images.....	48
Overview of Transparency and Product Images.....	48
Setting the DEFAULT_TRANSPARENCY_COLOUR System Variable	49
Preparing the Image	51
Adding the Image to a Product.....	52
Displaying the Image in Merchandiser.....	54
Setting up and Maintaining the Product Hierarchy	57
Setting up the Basic Hierarchy	57
Setting up Company, Group, Division and Department Levels.....	57
Setting up Class and Sub-Class Levels	59
Setting up Style, Item and SKU Levels	60
Setting up Display Styles	63
SKU Level Information	64
Overview of SKU Information	64
Details Tab	64
Physical Tab.....	66
Financial Tab	68
Custom Tab.....	69
Display Style Information.....	70
Overview of Display Styles	70
General Information	71
Size and Shape Tab	73
Styles Tab	75
Images Tab.....	76
Peg Holes	78
Orientation Tab	79
Display Style Functionality	81
Other Product Studio Options	83
Find Option.....	83
Display Style Types	83
Newly Imported Products	85
Deleted Products.....	86
Purging Deleted Products.....	87
Materials.....	87

Send Us Your Comments

Oracle Retail Macro Space Management, Product Studio User Guide, Release 13.3.2

Oracle welcomes customers' comments and suggestions on the quality and usefulness of this document.

Your feedback is important, and helps us to best meet your needs as a user of our products. For example:

- Are the implementation steps correct and complete?
- Did you understand the context of the procedures?
- Did you find any errors in the information?
- Does the structure of the information help you with your tasks?
- Do you need different information or graphics? If so, where, and in what format?
- Are the examples correct? Do you need more examples?

If you find any errors or have any other suggestions for improvement, then please tell us your name, the name of the company who has licensed our products, the title and part number of the documentation and the chapter, section, and page number (if available).

Note: Before sending us your comments, you might like to check that you have the latest version of the document and if any concerns are already addressed. To do this, access the Online Documentation available on the Oracle Technology Network Web site. It contains the most current Documentation Library plus all documents revised or released recently.

Send your comments to us using the electronic mail address: retail-doc_us@oracle.com

Please give your name, address, electronic mail address, and telephone number (optional).

If you need assistance with Oracle software, then please contact your support representative or Oracle Support Services.

If you require training or instruction in using Oracle software, then please contact your Oracle local office and inquire about our Oracle University offerings. A list of Oracle offices is available on our Web site at www.oracle.com.

Preface

Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at

<http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc>.

Access to Oracle Support

Oracle customers have access to electronic support through My Oracle Support. For information, visit

<http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info> or visit

<http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs> if you are hearing impaired.

Related Documents

For more information, see the following documents in the Oracle Retail Macro Space Management Release 13.3.2 documentation set:

- *Oracle Retail Macro Space Management Administration User Guide*
- *Oracle Retail Macro Space Management Administration Module Online Help*
- *Oracle Retail Macro Space Management Configuration Module User Guide*
- *Oracle Retail Macro Space Management Configuration Module Online Help*
- *Oracle Retail Macro Space Management Data Importer User Guide*
- *Oracle Retail Macro space Management Data Importer Online Help*
- *Oracle Retail Macro Space Management Fixture Studio User Guide*
- *Oracle Retail Macro Space Management Fixture Studio Online Help*
- *Oracle Retail Macro Space Management Merchandiser User Guide*
- *Oracle Retail Macro Space Management Merchandiser Online Help*
- *Oracle Retail Macro Space Management Planner User Guide*
- *Oracle Retail Macro Space Management Planner OnlineGuide*
- *Oracle Retail Macro Space Management Product Studio Online Help*
- *Oracle Retail Macro Space Management Planner User Guide*
- *Oracle Retail Macro Space Management Report Designer User Guide*
- *Oracle Retail Macro Space Management Report Designer Online Help*
- *Oracle Retail Macro Space Management Release Notes*
- *Oracle Retail Macro Space Planning Install Guide*
- *Oracle Retail Macro Space Planning License Information*

For more information on In-Store Space Collaboration see the following documents in the Oracle Retail In-Store Space Collaboration Release 13.3.2 documentation set:

- *Oracle Retail In-Store Space Collaboration Release Notes*
- *Oracle Retail In-Store Space Collaboration User Guide*
- *Oracle Retail In-Store Space Collaboration Online Help*

Customer Support

To contact Oracle Customer Support, access My Oracle Support at the following URL:
<https://support.oracle.com>

When contacting Customer Support, please provide the following:

- Product version and program/module name
- Functional and technical description of the problem (include business impact)
- Detailed step-by-step instructions to re-create
- Exact error message received
- Screen shots of each step you take

Review Patch Documentation

When you install the application for the first time, you install either a base release (for example, 13.3) or a later patch release (for example, 13.3.2). If you are installing the base release or additional patch releases, read the documentation for all releases that have occurred since the base release before you begin installation. Documentation for patch releases can contain critical information related to the base release, as well as information about code changes since the base release.

Oracle Retail Documentation on the Oracle Technology Network

Documentation is packaged with each Oracle Retail product release. Oracle Retail product documentation is also available on the following Web site:

http://www.oracle.com/technology/documentation/oracle_retail.html

(Data Model documents are not available through Oracle Technology Network. These documents are packaged with released code, or you can obtain them through My Oracle Support.)

Documentation should be available on this Web site within a month after a product release.

Conventions

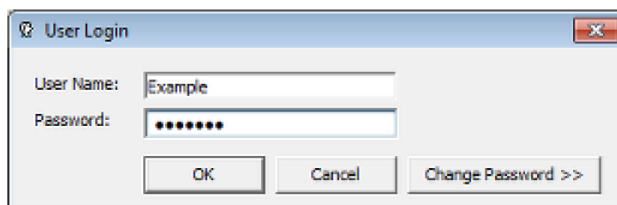
Navigate: This is a navigate statement. It tells you how to get to the start of the procedure and ends with a screen shot of the starting point and the statement “the Window Name window opens.”

This is a code sample
It is used to display examples of code

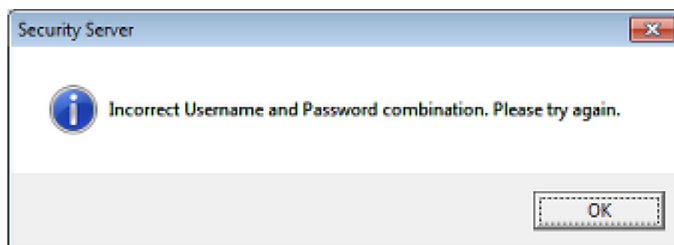
Logging in to Product Studio

Logging in to Macro Space Management Modules

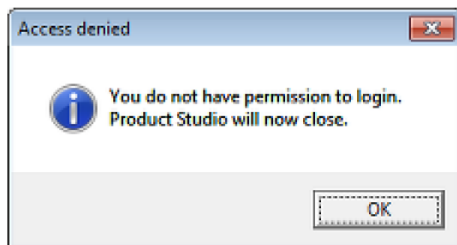
When a user first attempts to access a Macro Space Management module, the **Log In dialog box** will appear.



This requires the user to enter a User Name and Password. If these are correct, the user will be able to access the desired module. After the initial log in, information will be held in **Security Server**. Users will therefore be able to access all other Macro Space Management modules they have permissions for without the need to log in again. If the user enters an incorrect user name or password, a warning will result.



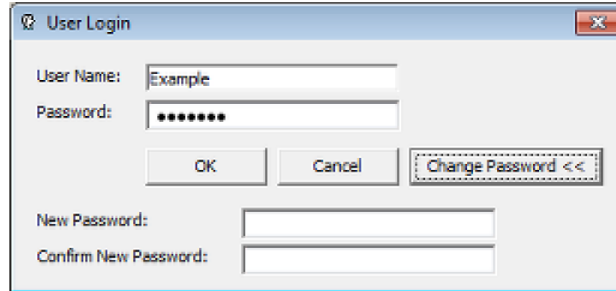
If the user attempts to log into a module for which they do not have permissions for, a warning will appear and the log in attempt will be terminated.



Note: The permissions for which modules can be accessed are configured in the Administration module.

Password Changes

Macro Space Management can be configured to require password changes at specified intervals. If one of these intervals has been exceeded, the user will be asked to change their password the next time they log in. This can be done by means of the **Change Password >>>** option on the **Log In dialog box**. This will reveal another part of the dialog box where the changed password can be entered and confirmed.

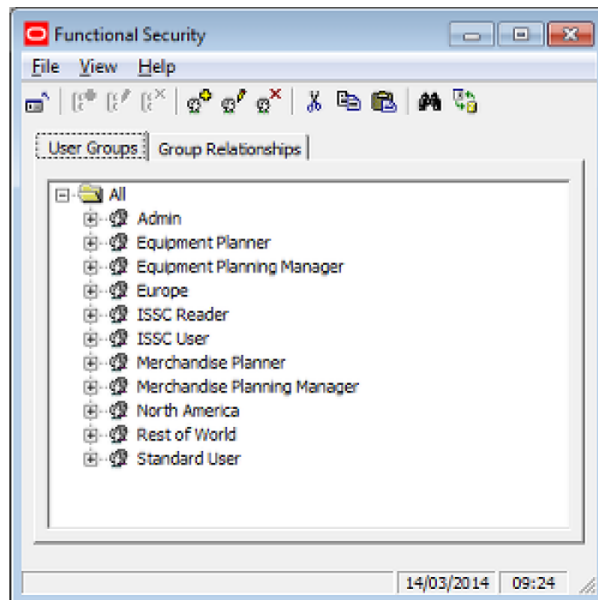


How Passwords and Privileges are Configured

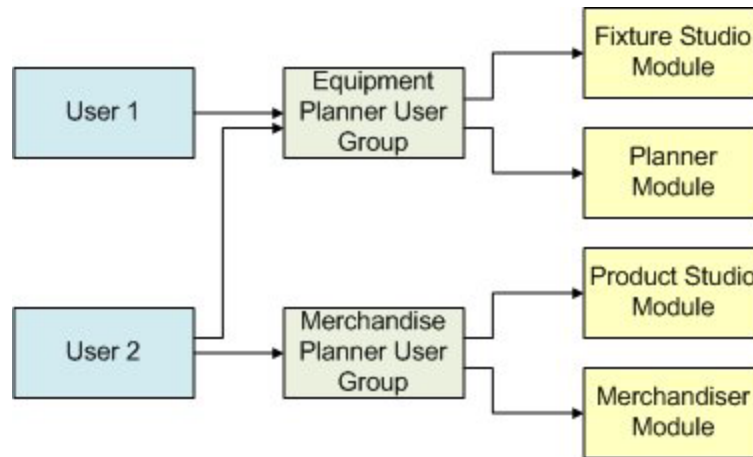
Passwords and privileges are configured in Macro Space Management's Administration module.

Note: Access to the Administration Module is normally restricted to a limited number of users. This is because the Administration Module can be used to set a wide variety of parameters affecting how Macro Space Planning operates.

Access rights to the Macro Space Management modules are set using the Functional Security option.



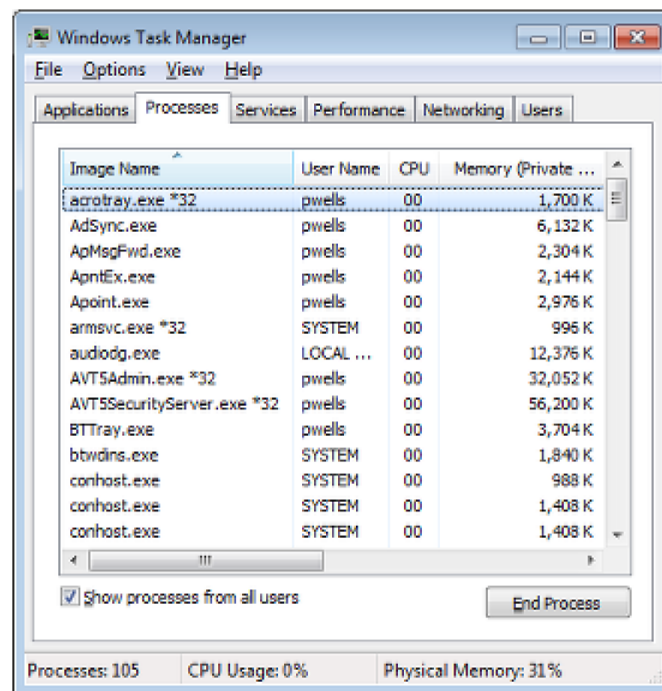
Users are assigned to User Groups in the User Groups Tab. Which modules a User Group can access is specified in the Group Relationships tab. A user's privileges thus depend on what user groups they are assigned to.



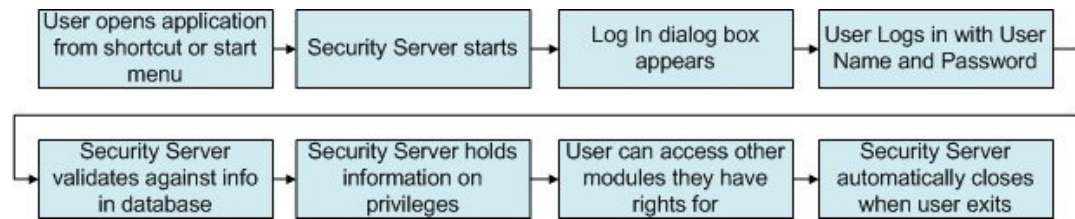
In the above example, User 1 is only a member of the Equipment Planner user group. Accordingly, their access is restricted to the Fixture Studio and Planner modules. User 2 is a member of the Equipment Planner and Merchandiser Planner user groups. They have wider access and can use the Fixture Studio, Planner, Product Studio and Merchandiser modules.

Security Server

Security Server is a Macro Space Management process that runs in the background and is normally not visible to users. When running, it can be seen in the Processes tab of Windows Task Manager as the **AVT5SecurityServer.exe *32** process.



How Security Server operates is shown in the following flowchart.



1. The user opens a Macro Space Management module from a shortcut or the Windows start menu.
2. Security server starts but remains in the background.
3. The Log In dialog box appears.
4. The user types their user name and password into the Log In dialog box.
5. Security Server validates the user name and password against the information held in the database. If they are correct and the user has sufficient privileges, the Macro Space Management module opens.
6. Security Server holds information on what other privileges the user has in Macro Space Management.
7. If the user attempts to access other modules, Security Server will check the information it holds and allow or deny access as required. This means that a user only has to log into Macro Space Management once per session.
8. When the user exits the last Macro Space Management module, Security Server also closes.

Security Server and Application Errors

On occasion a Macro Space Management module might encounter a significant error and automatically close. Because the closure was not user initiated, Security Server does not close but remains open in the background. If the module that unexpectedly closed is reopened, Security Server will contain information incompatible with the restart and further application errors will result.

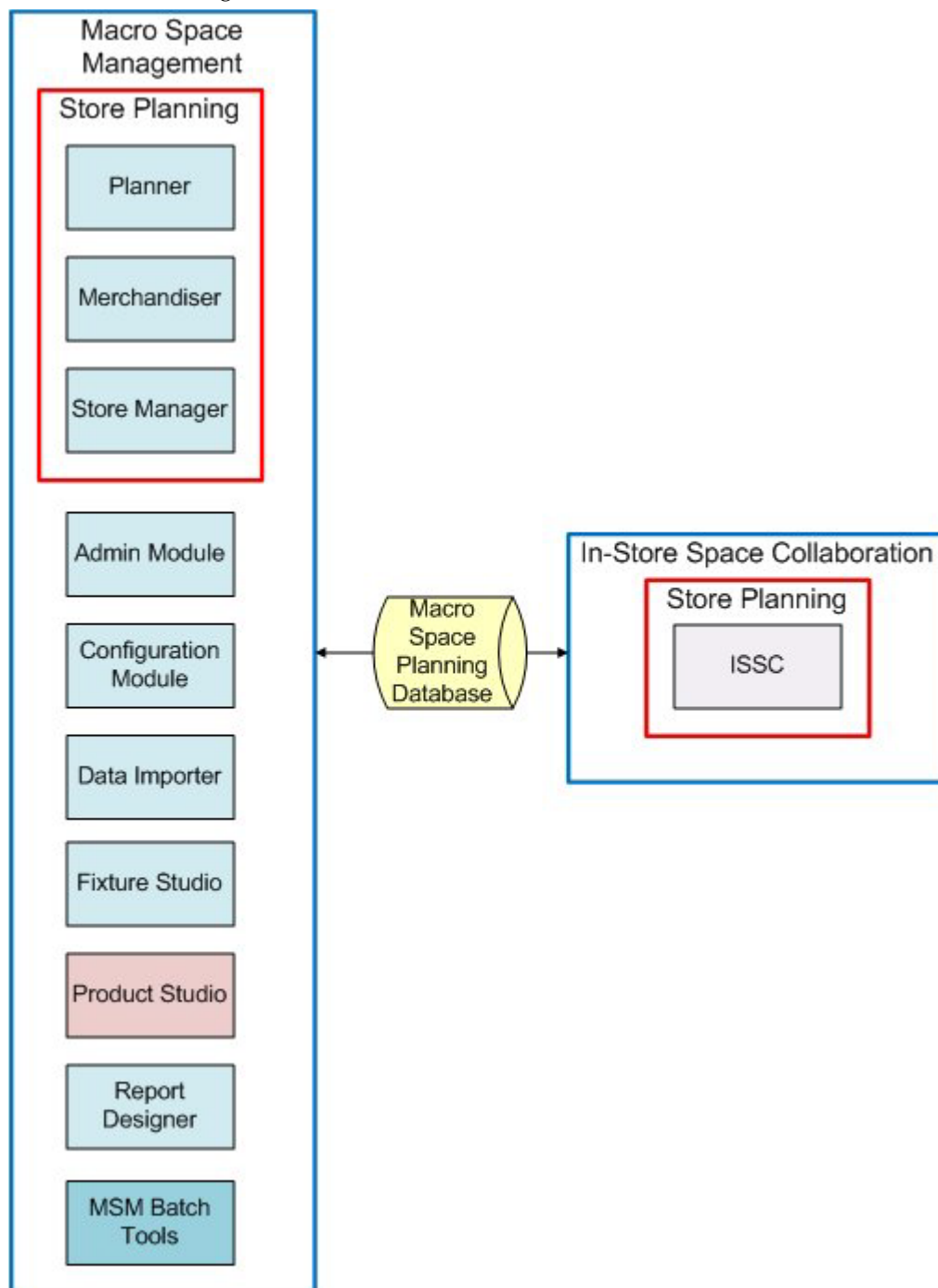
In the event of a Macro Space Management module failing unexpectedly, carry out the following actions:

1. Save the information in any other Macro Space Management modules that are open and close those modules.
2. Open Windows Task Manager, , select the Processes tab, highlight the AVT5SecurityServer.exe *32 process and click End Task.
3. When Security Server has closed, the required Macro Space Management modules can be restarted.

Overview of Macro Space Planning

Macro Space Planning

The Macro Space Planning Application (which includes the Product studio module) is described in the diagram below.



Macro Space Planning

Macro Space Planning consists of two applications sharing a common database: Macro Space Management and In-Store Space Collaboration. Macro Space Management is intended for use at headquarters and has functionality not replicated in In-Store Space Collaboration. In-Store Space Collaboration is designed to be portable and can be used (via the Internet) at stores within a retail organization.

Macro Space Management

Macro Space Management consists of two sorts of modules: store planning modules and support modules.

1. Store Planning Modules

Store Planning can be carried out in Planner (AutoCAD environment) or Merchandiser (Virtual Reality environment). Store Manager, used to administer the store hierarchy, can be accessed from either Planner or Merchandiser.

2. Support Modules

The support modules are used for three main purposes: to configure Macro Space Management, to configure the varying libraries of information and to operate batch processes.

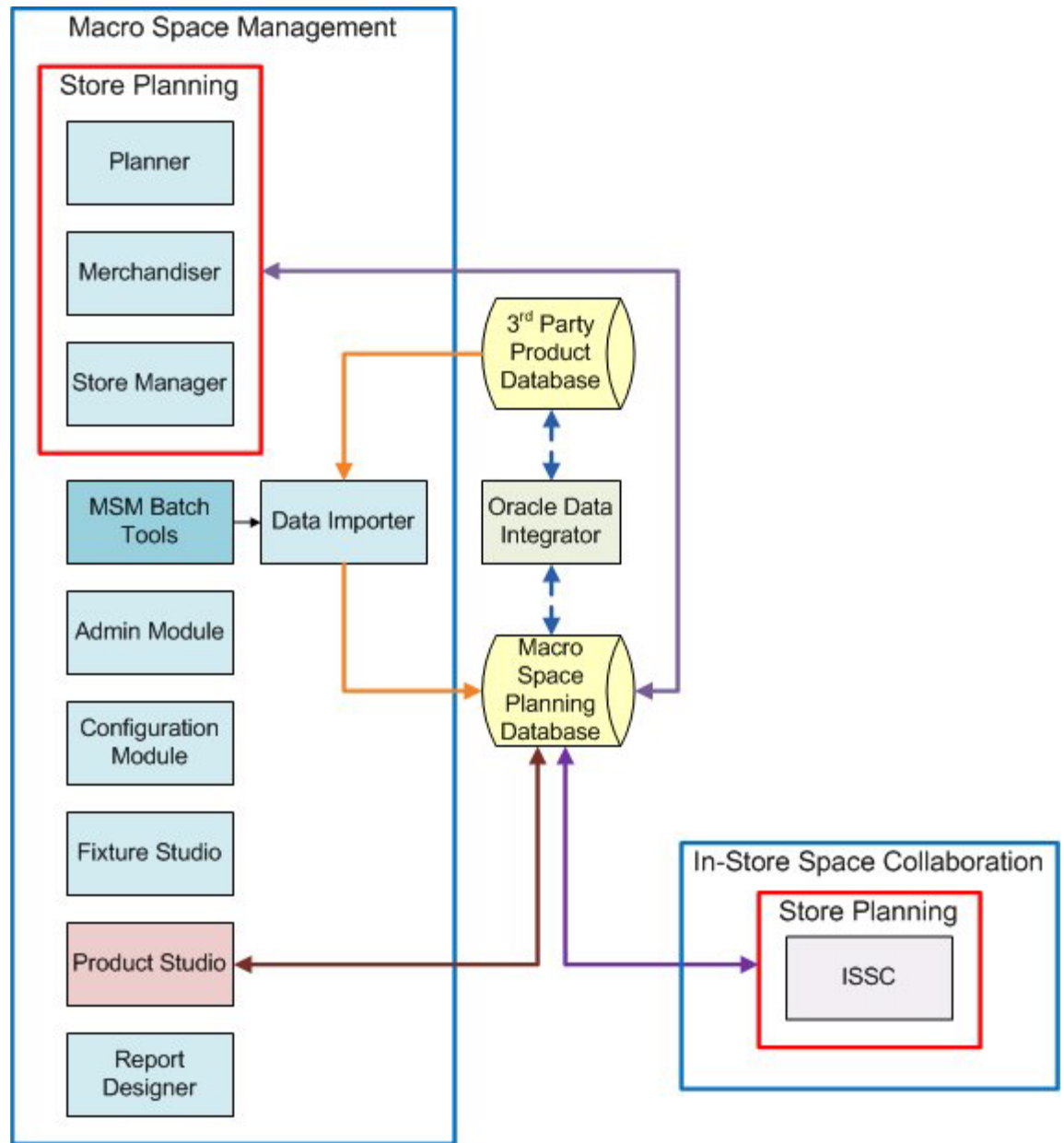
- Configuring Macro Space Management is carried out using the Administration module for global changes and the Configuration module for local, user specific changes.
- Libraries of information maintained include the fixture and gondola libraries (Fixture Studio), product library (Product Studio) and the planogram library (planogram design within the Merchandiser module).
- Batch tools include Data importer (for bulk import of data) and Report Designer (configuring planogram reports for bulk output)

In-Store Space Collaboration

In-Store Space Collaboration uses a common database with Macro Space Management. ISSC is more portable than MSM and is often deployed to stores to allow store managers to become involved in the store planning process. It can also be used to ensure compliance with store plans.

Product Studio and Associated Business Processes

Product Studio is integrated into the Macro Space Planning business processes. This is shown on overview in the diagram below.



Relationship with third-party Databases

Data on products is often held in a third-party database. This data needs to be brought into the Macro Space Planning database so that it can be used within Macro Space Management and In-Store Space Collaboration.

This can be accomplished by means of Macro Space Management's Data Importer module. Because data is generally brought into the application at regular intervals, Data Importer is normally run automatically by a batch process.

Alternatively product data can be brought in as part of the planogram import process. This is done via ODI (Oracle data Integrator). ODI is normally run automatically by a batch process.

Note: It is possible to return data from the Macro Space Planning database to the 3rd Party Product database via a tool like Oracle Data Integrator. One example of this might be returning product adjacencies, so that the performance of a product can be analyzed while taking into account the effect of other products that were close to it.

Product Studio and the Imported Data

Although it is possible to manually set up a product hierarchy, the majority of retail organizations import product information from a third party database. Product Studio thus serves two functions:

1. It allows users within Macro Space Management to see full information on the imported products and their hierarchy.
2. It enables Macro Space Management users to add supplementary information to that imported from the third-party database.

Using Products and their Hierarchy in Macro Space Planning

The product hierarchy is used in three places within the Macro Space Planning suite;

1. In the MSM Planner Module where products can be placed down to SKU level as placeholders: this specifies that a product is on a particular fixture, but gives no information as to position or quantity.
2. In the MSM Merchandiser module where products can be placed down to Display Style level: this specifies the position and quantity of that product on a specific fixture.
3. In In-Store Space Collaboration. Products can be placed down to Sub-class level as placeholders in Top Graphical View and down to Display Style level in Front Graphical View.

Using Products within Planograms

Although it is possible to place products as individual items within a floor plan, it is more usual to place them within planograms. Planograms enable a precise arrangement of shelving and merchandise to be placed in exactly the same format within multiple stores. This has the following benefits:

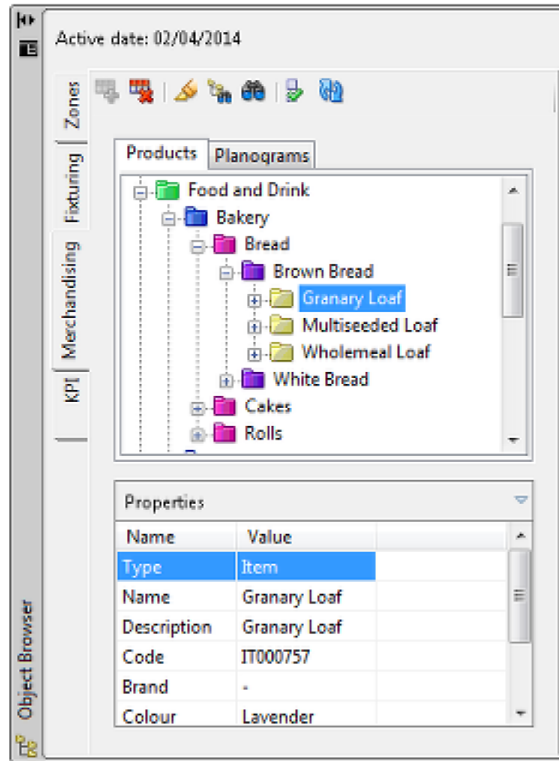
1. Product arrangements can be standardized across a retail organization
2. Placement of planograms is far quicker than placement of the individual equipment and products
3. Specialist planogram designers can seek to maximize profitability by designing planograms that are as attractive as possible to customers - this is not possible if a store is merchandised by placing individual products.

Displaying the Product Hierarchy in Planner, Merchandiser and ISSC

The product hierarchy imported into and configured in Product Studio can be used to place products in the Planner and merchandiser Modules and in In-Store Space Collaboration.

Planner and Merchandiser

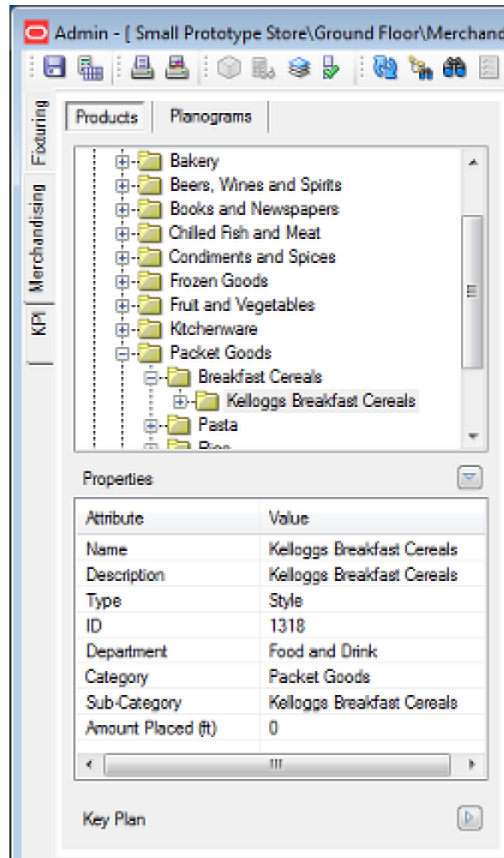
The Product Hierarchy can be seen in the Object Browsers in both the Planner and Merchandiser modules. All levels of the hierarchy are available, although products can only be placed down to SKU level in the Planner module. The example below shows the Object Browser in the Planner module.



The properties displayed are dependent on the Custom SQL in the Macro Space Planning Database (AVTTB_CUSTOM_SQL table). This can only be modified by an Administrator with database privileges.

In-Store Space Collaboration

The Product Hierarchy can be seen in the In-Store Space Collaboration object browser. The hierarchy is only displayed down to Item level in Top Graphical view, so the lowest levels of the hierarchy are not available for selection in that view. The full Product Hierarchy can be seen in Front Graphical View and Shelf Graphical View.



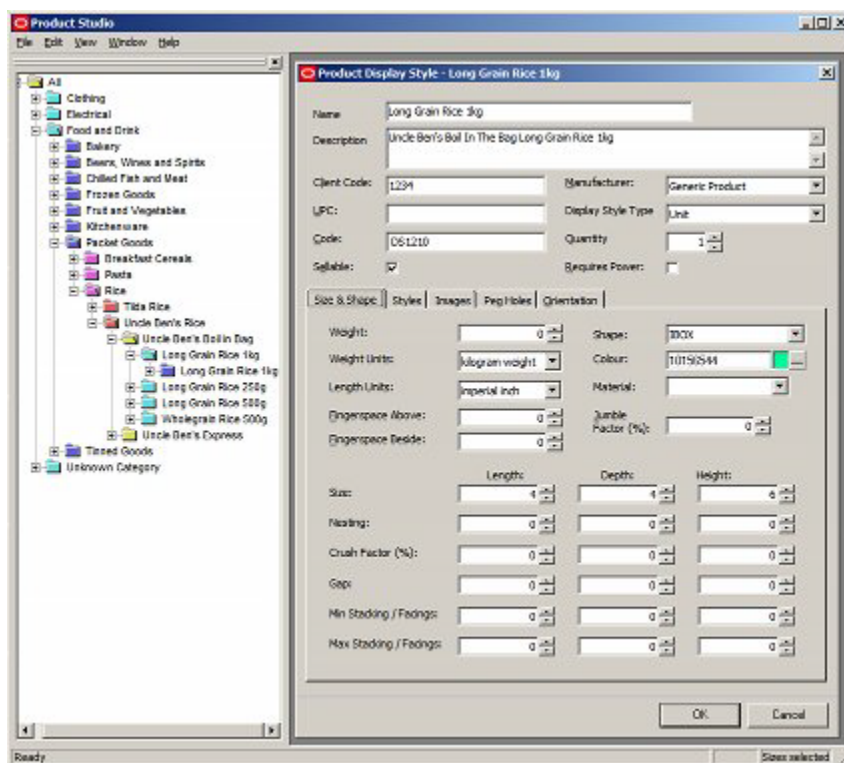
The properties displayed are dependent on the Custom SQL in the Macro Space Planning Database (AVTTB_CUSTOM_SQL table). This can only be modified by an Administrator with database privileges.

Overview of Product Studio

About Product Studio

Product Studio allows users to create and maintain a hierarchy of products. This hierarchy is then used in the Planner and Merchandiser modules and in In-Store Space Collaboration.

Data can be imported from third-party software, data can be manually entered, or some combination of the two can be used.

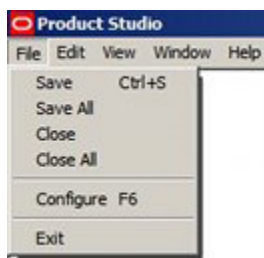


Product Studio Menu Options

The Menu Bar has the following options.

File Menu

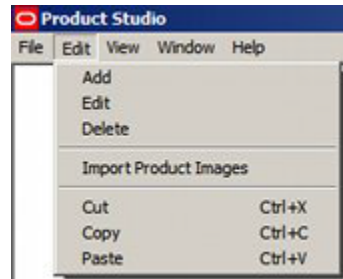
The **File Menu** gives the user access to various saving and exit options.



- Save - saves the currently active product definition.
- Save All - saves all currently open product definitions.
- Close - closes the currently active product definition.
- Close All - closes all currently open product definitions.
- Configure (F6) - opens the Configuration Module.
- Exit - closes Product Studio.

Edit Menu

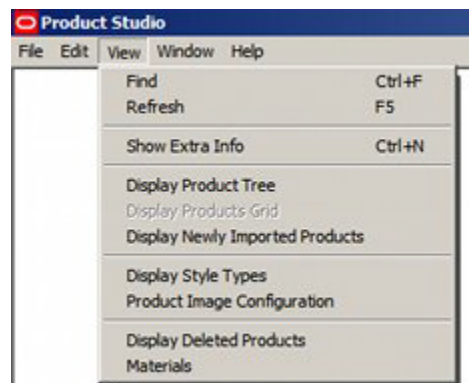
The **Edit menu** allows the user to modify the hierarchy.



- Add - adds another level to the hierarchy, adding a child object to the currently selected node.
- Edit - opens the currently selected node in the hierarchy for editing.
- Delete - deletes the currently selected node in the hierarchy.
- Import Product Images allows the user to bulk import product images. (This is discussed in more detail in the section in importing product images).
- Cut (<Ctrl + X>) - removes the selected item from the hierarchy and puts it on the clipboard.
- Copy (<Ctrl + C>) - copies the selected item in the hierarchy and puts it on the clipboard.
- Paste (<Ctrl + V>) - takes the current item on the clipboard and pastes it as a child object to the currently selected node.

View Menu

The **View Menu** gives users access to varying information.

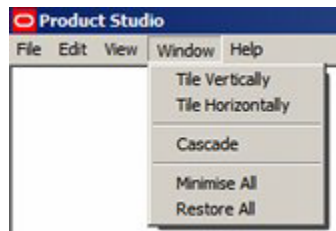


- Find - calls the Find dialogue box.
- Refresh - refreshes the hierarchy with the latest information from the database.

- Show Extra Info - toggles the Product Description into view as well as the Product Name.
- Display Product Tree - toggles the Product Tree on or off.
- Display Newly Imported Products - display a list of recently imported products.
- Display Style Types enables a user to configure the list of Display Style Types.
- Product Image Configuration enables a user to configure how the application stores the product images used for Display Style level merchandise.
- Display Deleted Products - displays a list of products that have been deleted from the Product Tree.
- Materials - allows users to configure the way products display in Box or Textured Box form in Merchandiser.

Window Menu

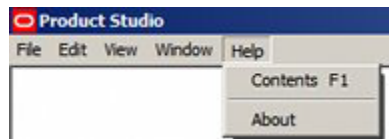
The **Window Menu** allows the user to arrange any dialogue boxes open in Product Studio.



1. Tile Vertically aligns all open product dialogue boxes vertically.
2. Tile Horizontally aligns all open product dialogue boxes horizontally.
3. Cascade aligns all open product dialogue boxes diagonally.
4. Minimize All minimizes all open product dialogue boxes.
5. Restore All maximizes all open product dialogue boxes.

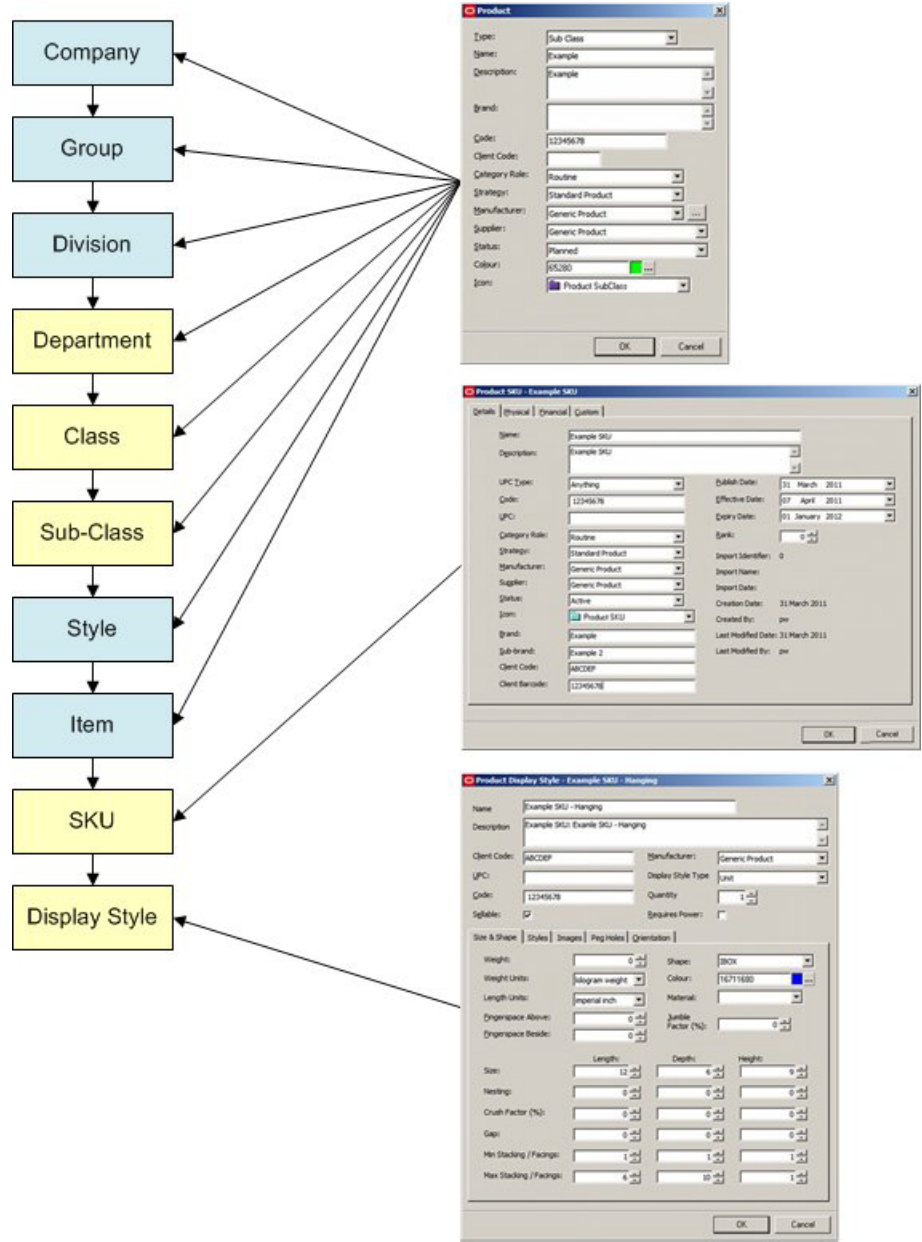
Help Menu

The **Help Menu** calls help and allows the user to verify the version of the software in use.



Overview of Product Hierarchy

The **Product hierarchy** can be built up using a series of levels. Some levels are mandatory (yellow) and some are optional (blue).



When constructing the hierarchy, there are just three dialogue boxes involved.

Dialog box	Associated Levels
Product	Company, Group, Division, Department, Class, Sub-Class, Style and Item
SKU	SKU
Display Style	Display Style

The hierarchy is set up relative to the Product Root. It is set up in stages:

Stage	Action
1	Set up Company, Group, Division and Department Levels

Stage	Action
2	Set up Class
3	Set up Sub-Class
4	Set up Style, Item and SKU Levels
5	Set up Display Styles

Each child is added by clicking on the parent level and selecting 'Add Product' from the right click menu.

Hierarchy Information

Hierarchy Information can be added at the Company, Group, Division, Department, Class, Sub-Class, Style and Item levels.

Parameter	Comment
Type	Can select Company, Group, Division, Department, Class, Sub-Class, Style and Item levels.
Name	Enterable by user.
Description	Enterable by user.
Brand	Enterable by user.
Code	Enterable by user.
Client code	Enterable by user.
Category Role	Selectable from a drop down list. The list can be configured using the Category Role option in the Administration Module.

Parameter	Comment
Strategy	Selectable from a drop down list. The list can be configured using the Strategy option in the Administration Module.
Manufacturer	Selectable from a drop down list. The list can be configured using the Manufacturers option in the Administration Module.
Supplier	Selectable from a drop down list. The list can be configured using the Manufacturers option in the Administration Module.
Status	Selectable from a drop down list. The available statuses are configured using the Status option in the Administration Module.
Color	Selectable from a standard color pallet.
Icon	Selectable from a drop down list. The icon will default to a color specific to each level, but can be manually overridden.

Placeholders and Display Styles

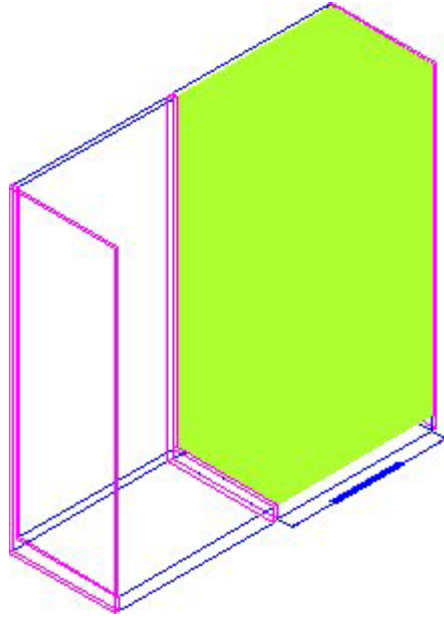
Products can be placed with varying levels of detail.

Placeholders

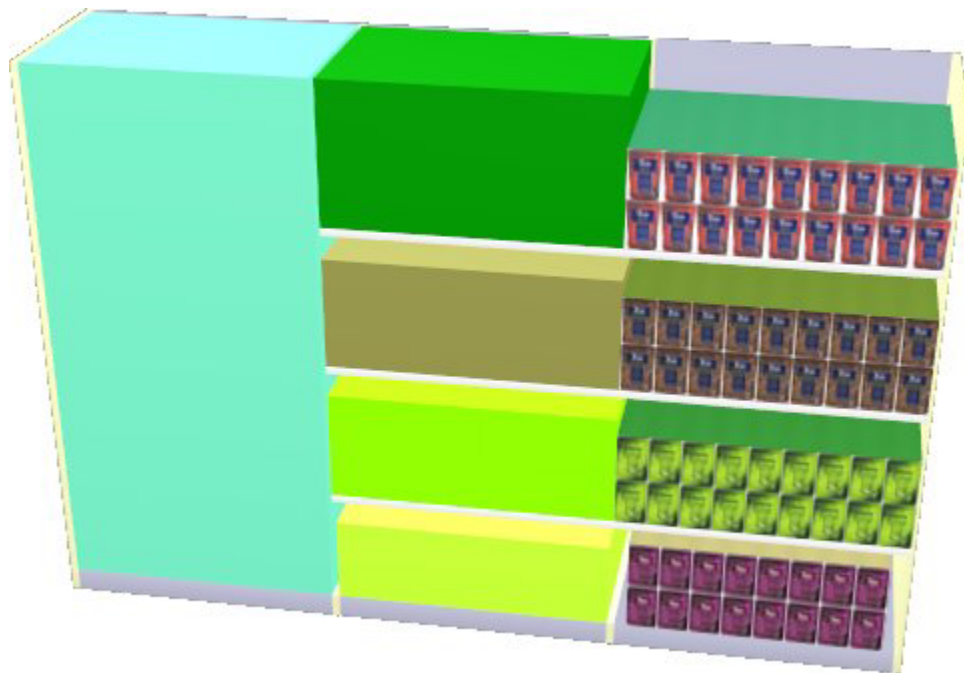
Placeholders are used at all levels in the hierarchy above Display Style level. They are used to show the presence of merchandise without giving any information as to its quantity, orientation, etc. Placeholders can be used to show represent any level from the product hierarchy. For example, when first planning a store, they could be used to represent the departments whose merchandise will be placed on specific fixtures. Similarly, when planning progresses to another level of detail, placeholders could be used to represent the sub-classes of product that will go onto specific fixtures.

For example a placeholder could be placed at Department level to indicate that a specific section of equipment has been allocated for the sale of clothing. Later, this placeholder could be replaced by one at Class level to indicate a specific section of equipment has been allocated for the sale of men's shirts.

In the Planner module placeholders can only occupy the full fixture.



In the Merchandiser module, placeholders can be used to represent the product types that will occupy a fixture (left hand fixture in the diagram below). Alternatively, they can be used to represent the product types that will occupy specific shelves (middle fixture).



Display Styles

Display styles describe the physical form of a SKU being placed. They can only be placed in the merchandiser module (right hand fixture in the diagram above). If a display style is placed, it gives full information on the position, number, physical form and orientation of the product being placed.

Note: If Display Style level products are placed in Merchandiser, they will not appear in Planner.

Deciding On How to Identify the Product

When setting up the Product hierarchy, it is important to have a single, unique way of identifying the product. This is generally determined by how the product is indexed in other software used by a retailer. For example, stock control and/or re-ordering systems might refer to the product by its UPC or by its SKU Code.

It is important that Macro Space Management use the same method of identification. If data is imported into the product hierarchy, this information will be included automatically. For manual entry, this is set by the UPC Type drop down list in the SKU dialog box. The mask for these is set in the Administration Module.

The screenshot shows a software dialog box titled "Product SKU - Example SKU". It has several tabs: "Details", "Physical", "Financial", and "Custom". The "Details" tab is active. The dialog contains various input fields and dropdown menus. A red rectangular box highlights the "UPC Type" dropdown menu, which is currently set to "Anything". Below it, the "Code" field contains the text "12345678". Other fields include "Name" (Example SKU), "Description" (Example SKU), "Publish Date" (31 March 2011), "Effective Date" (07 April 2011), "Expiry Date" (01 January 2012), "Category Role" (Routine), "Strategy" (Standard Product), "Manufacturer" (Generic Product), "Supplier" (Generic Product), "Status" (Active), "Icon" (Product SKU), "Brand" (Example), "Sub-brand" (Example 2), "Client Code" (ABCDEF), and "Client Barcode" (12345678). At the bottom right, there are "OK" and "Cancel" buttons.

Deciding on the structure of the hierarchy

General

The generic hierarchy can have up to 10 levels, 5 of them mandatory:

Level	Comment
Company	Optional
Group	Optional
Division	Optional
Department	Mandatory

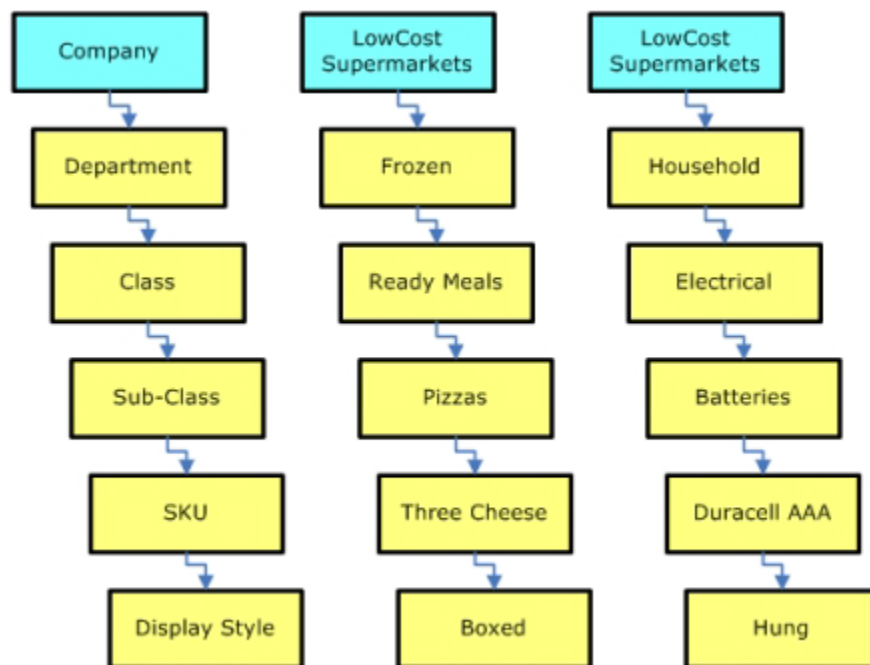
Level	Comment
Class	Mandatory
Sub-Class	Mandatory
Style	Optional
Item	Optional
SKU	Mandatory
Display Style	Mandatory

As product data will be generally imported from third-party software, the required Macro Space Management hierarchy should be planned before the first import so that data is imported into a standardized hierarchy.

Note: There will be problems with the Macro Space Management Data Import module if the hierarchy does not conform to a standard architecture.

Making the Hierarchy User Friendly

The Product Hierarchy consists of a series of levels which should be laid out in a way convenient for and familiar to store planners.

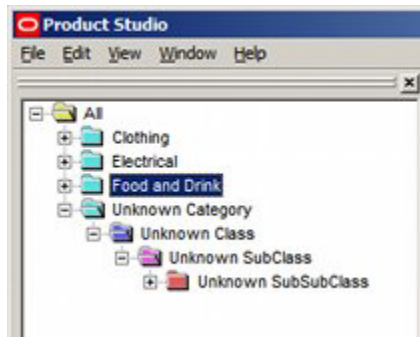


Configuring the hierarchy in the optimum manner can save considerable time and effort when products are being placed in Macro Space Management store plans.

Note: Any level in the hierarchy can be renamed to customer requirements by Oracle.

'Unknown' Levels in Hierarchy

The Product hierarchy contains nodes called Unknown Category, Unknown class, Unknown Sub-Class, and Unknown Sub-Sub-Class.

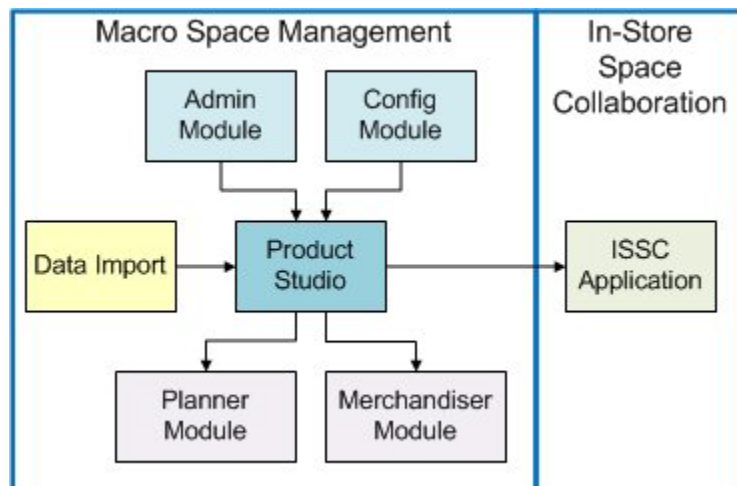


These nodes in the hierarchy are used for when products are imported prior to importing new planogram designs. It may be that some of the products being imported do not map to existing nodes in the product hierarchy.

Interactions between Product Studio and Other Modules

Product Studio and Other Modules

Product Studio interacts with other Modules and with In-Store Space Collaboration.



Administration Module

A number of lists of data used in Product Studio are configured in the Administration Module.

Option	Comment
Category Role	Allows the user to configure the list of Category Roles that can be assigned to a product.
Manufacturers	Allows the user to configure the list of manufacturers (and suppliers) used to specify products.
Product Code Types	Allows the user to specify the masks for UPC's.
Ranges	Allows the user to configure the ranges for temperature scales and weights that can be allocated to a product.
Strategy	Allows the user to configure the list of Category Roles that can be assigned to a product.
Tax Codes	Allows the user to configure the list of available Tax Codes that can be allocated to a product.
Styles	Allows the user to add, edit or delete styles for products.
Units	Allows users to configure the units used for defining products.
User Defined Attributes	Allows users to specify the User Defined Attributes required for products.

In addition, Products marked for deletion can only be permanently purged using the Purge option in the Administration Module.

Configuration Module

The locations of the directories for Image Capture and Image Root are specified in the Directories tab in the Configuration Module.

Data Import

Data can be imported from third-party software by with the Data Importer module, or by using Oracle data Integrator (ODI). If necessary, it can then be configured with additional information required by Macro Space Management.

Planner

The Product Hierarchy appears in the Object Browser and can be searched/selected from using the Object Grid.

Products can be placed down to SKU level as placeholders.

Merchandiser

The Product Hierarchy appears in the Object Browser and can be searched/selected from using the Object Grid.

Products can be placed down to SKU level as placeholders or as Display styles.

In-Store Space Collaboration

The Product Hierarchy appears in the Object Browser.

Products can be placed down to Item level as placeholders

Administration Module

A number of lists, etc, used in Product Studio are configured in the Administration Module. In addition, Products marked for deletion can only be permanently purged using the Purge option in the Administration Module.

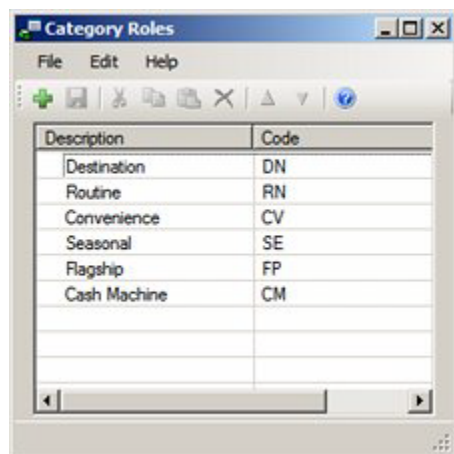
Note: Only users with the appropriate privileges may directly access the Administration module. However, the lists of Manufacturers and Styles can be configured by users with access rights to Product Studio.

Option	Comment
Category Role	Allows the user to configure the list of Category Roles that can be assigned to a product.
Manufacturers	Allows the user to configure the list of manufacturers (and suppliers) used to specify products.
Product Code Types	Allows the user to specify the masks for UPC's.
Ranges	Allows the user to configure the ranges for temperature scales and weights that can be allocated to a product.
Strategy	Allows the user to configure the list of Category Roles that can be assigned to a product.

Option	Comment
Tax Codes	Allows the user to configure the list of available Tax Codes that can be allocated to a product.
Styles	Allows the user to add, edit or delete styles for products.
Units	Allows users to configure the units used for defining products.
User Defined Attributes	Allows users to specify the User Defined Attributes required for products.

Category Role

The list of Category Roles is configurable from the Merchandising menu in the Administration module. This will bring up the Category Role dialog box, allowing users to add, edit or delete from the list of Category Roles.



Manufacturers

The list of manufacturers is configurable from the General Menu in the Administration module. The option may also be accessed from the Product Studio module by clicking the button to the right of the Manufacturers drop down list in the product hierarchy at any level from Company to Style.

The screenshot shows a 'Product' dialog box with the following fields:

- Type: Sub Class
- Name: Example
- Description: Example
- Brand:
- Code: 12345678
- Client Code:
- Category Role: Routine
- Strategy: Standard Product
- Manufacturer: Generic Product (highlighted with a red box, with an ellipsis button next to it)
- Supplier: Generic Product
- Status: Planned
- Colour: 65280
- Icon: Product SubClass

Buttons: OK, Cancel

This will bring up the Manufacturers dialog box from the Admin module, allowing users to add, edit or delete from the list of manufacturers.

The screenshot shows a 'Manufacturers' dialog box with a table of manufacturers. The table has columns for Name, Code, and Type. The status bar at the bottom indicates 'Showing 6 manufacturers' and the date/time is '01/05/2011 21:38'.

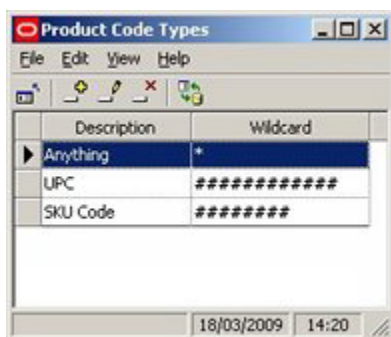
Name	Code	Type
Asda	ASD	Products
Generic Equipment	002	Fixtures
Generic Product	004	Products
Kelloggs	KEL	Products
Own Manufacture - Equipment	001	Fixtures
Own Manufacture - Products	003	Products

Option	Comment
Name	Name of the manufacturer
Code	Code for the manufacturer - often used as a look up during data import
Type	Type is set to either Fixtures or Products using the drop down list

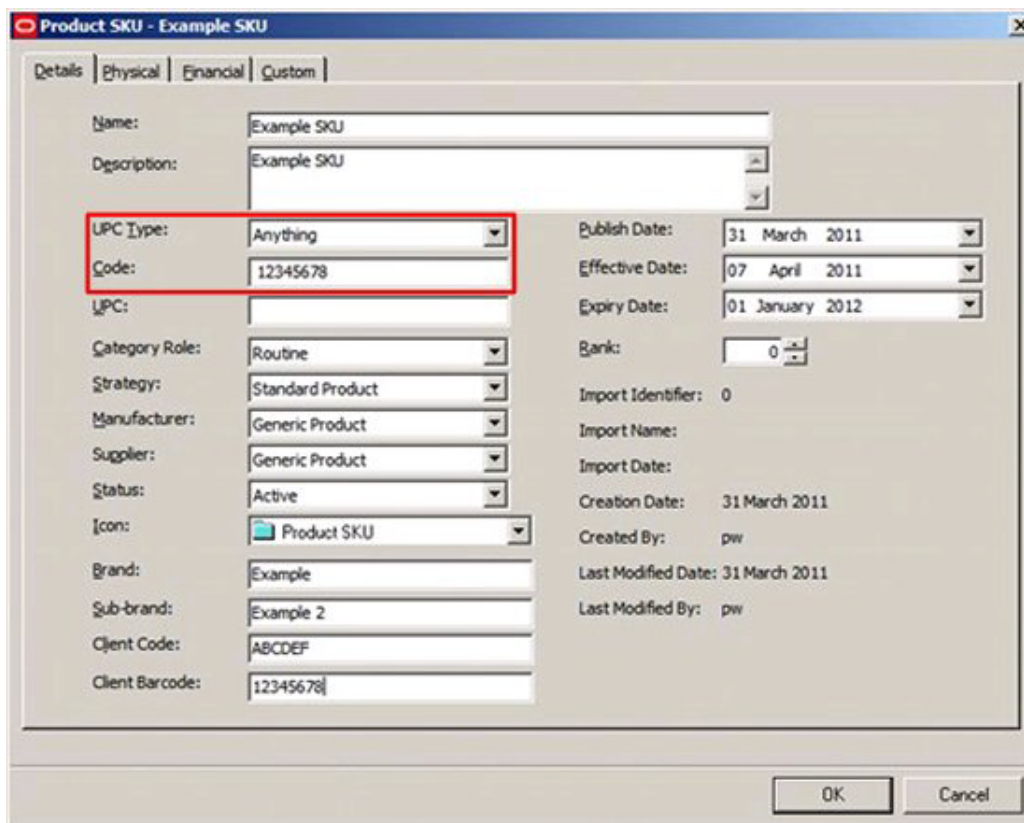
Note: It is recommended that changes are only made to the list of manufacturers after consultation with an Administrator. This is because such changes could affect the import of data from a third-party database.

Product Code Types

Product Code Types are only configurable within the Admin Module. The Product Code Types dialog box is accessed from the Merchandising Menu in the Admin Module.



It enables the masks restricting entry of SKU codes at SKU level in the product hierarchy to be configured. This mask then applies to all manually entered SKU information in the SKU dialog box.



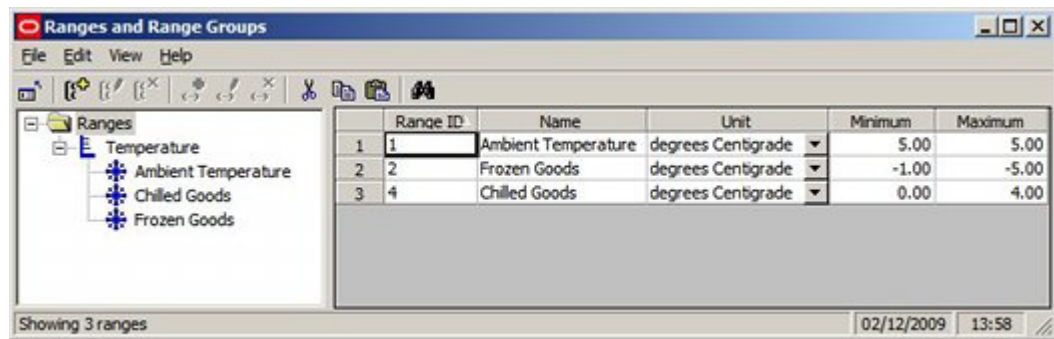
1. The UPC type can be set from the drop down list.
2. All manually entered codes must then conform to the mask specified in the Admin module.

Note: the UPC mask will not be applied to data imported into the product hierarchy.

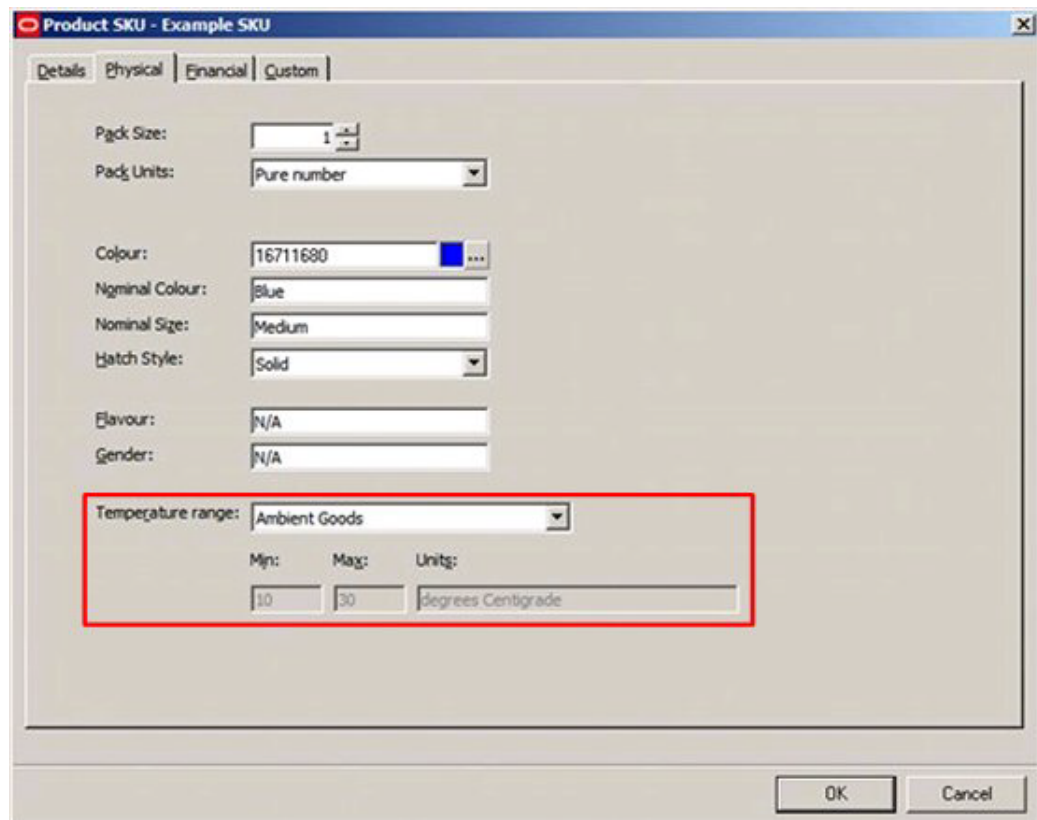
Ranges

Ranges can be assigned to equipment (fixtures and shelf objects) and to merchandise (products at SKU level). When merchandise at SKU or Display Style level is added to a fixtures or shelf object in the Merchandiser module, the assigned temperature ranges are compared. If they differ, the merchandiser cannot be placed and a warning will be generated.

Ranges are configured using the Range option from the Merchandising Menu in the Admin Module.



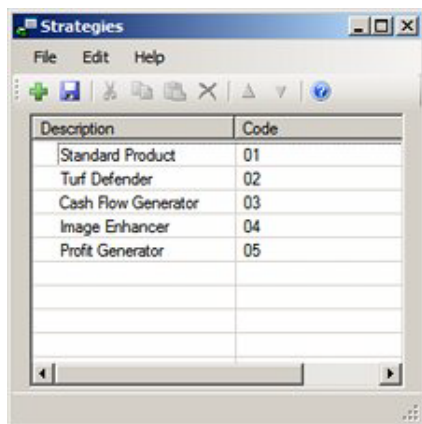
Once configured, Ranges can be assigned to products in Product Studio in the Physical Tab of the SKU dialog box.



Ranges assigned at SKU level also apply to any associated Display Style products.

Strategies

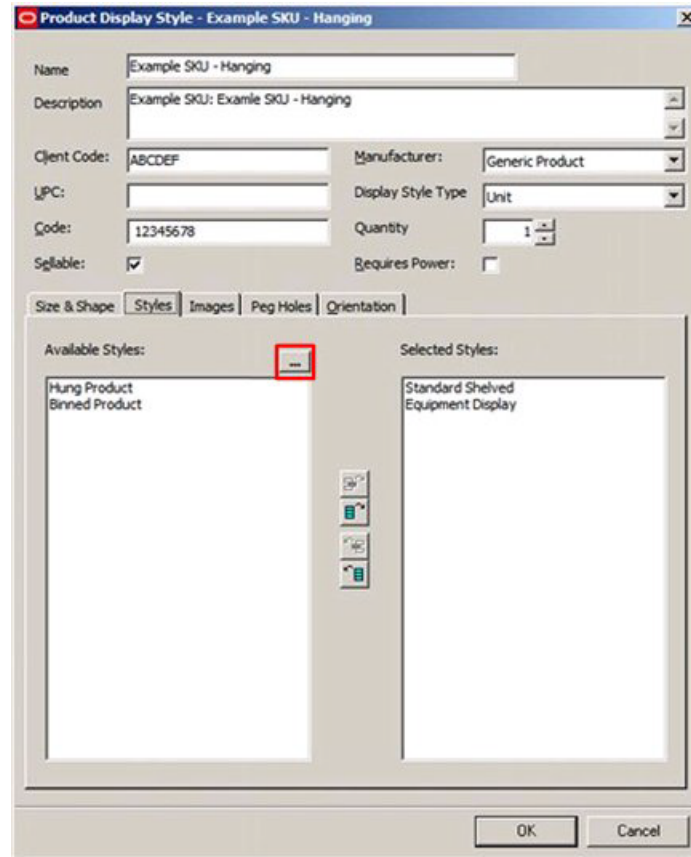
The list of Strategies is configurable from the Merchandising menu in the Administration module. This will bring up the Strategy dialog box, allowing users to add, edit or delete from the list of Strategies.



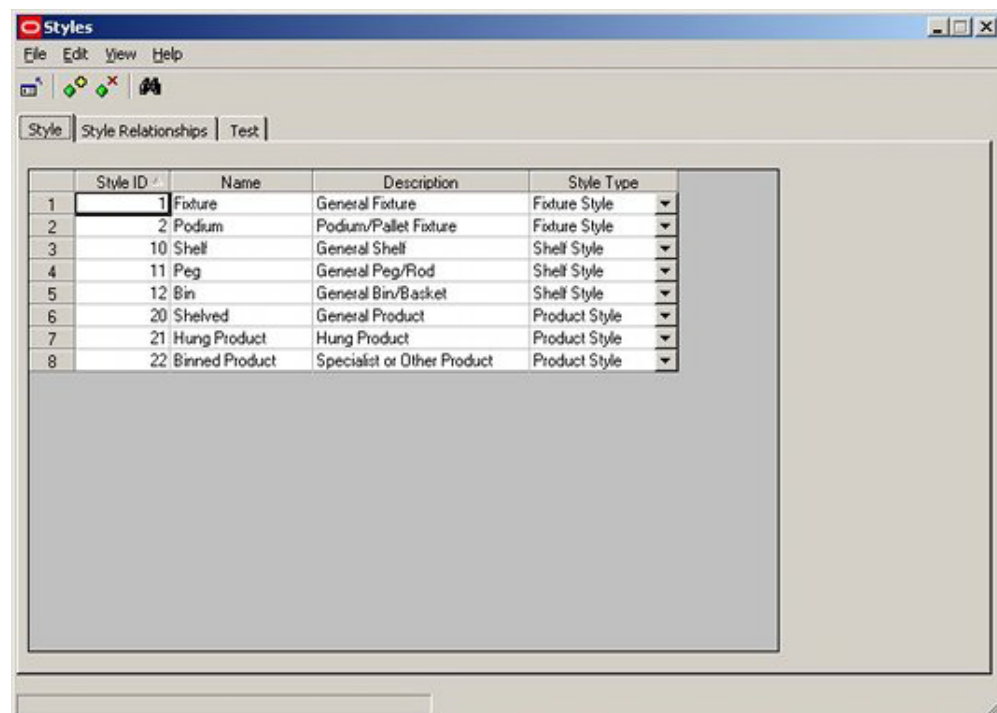
Styles

Styles are used when placing products at Display Style level in the Merchandiser module. They serve as filters to ensure that products are placed on the appropriate items of equipment. For example, Ice Cream should only be placed in Freezer units, and not on open shelving.

The list of Styles is configurable in the Administration Module. The option may also be accessed from the Product Studio module by clicking the button above the Available styles pane in the Styles tab of the Display Style dialog box.



This will bring up the Styles dialog box.



This dialog box has three tabs:

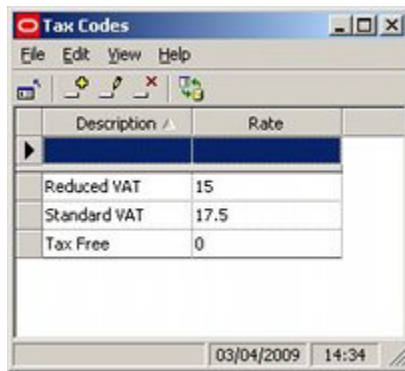
1. Style Tab - where the names and types of styles are configured

2. Style Relationships Tab - where the relationships between styles are determined: in turn specifying what merchandise can go on what item of equipment
3. Test Tab - this tab allows users to determine what product styles can be placed on an item of equipment. It also allows a user to determine what equipment an item of merchandise can be placed on.

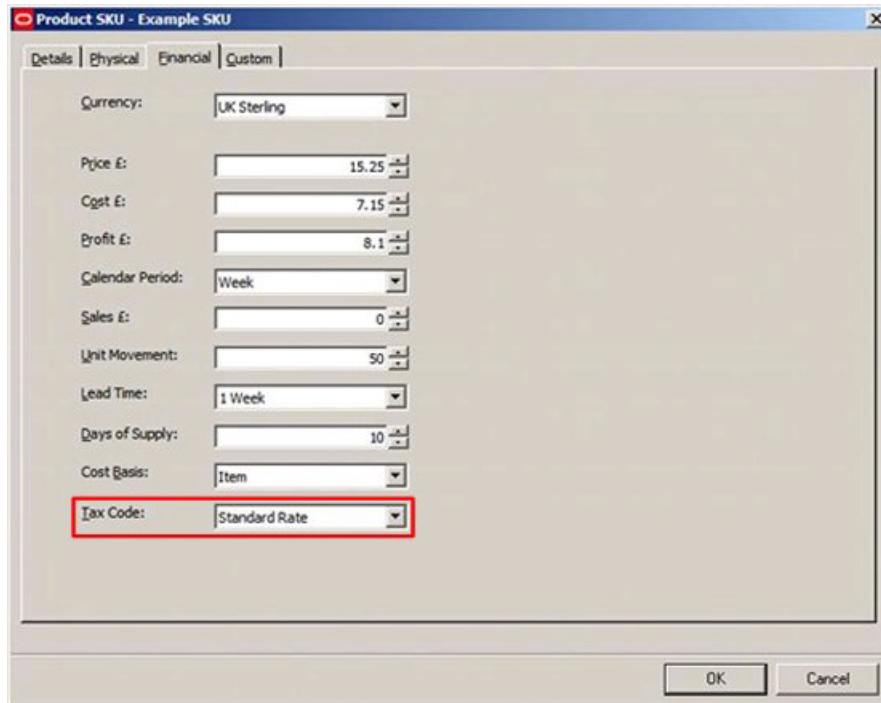
Note: It is recommended that changes are only made to the list of styles and style relationships after consultation with an Administrator. This is because such changes could significantly affect how products at Display Style level place in the Merchandiser Module.

Tax Codes

Tax Codes can be assigned to products at SKU level. They are configured using the Tax Codes option from the General menu in the Admin module.



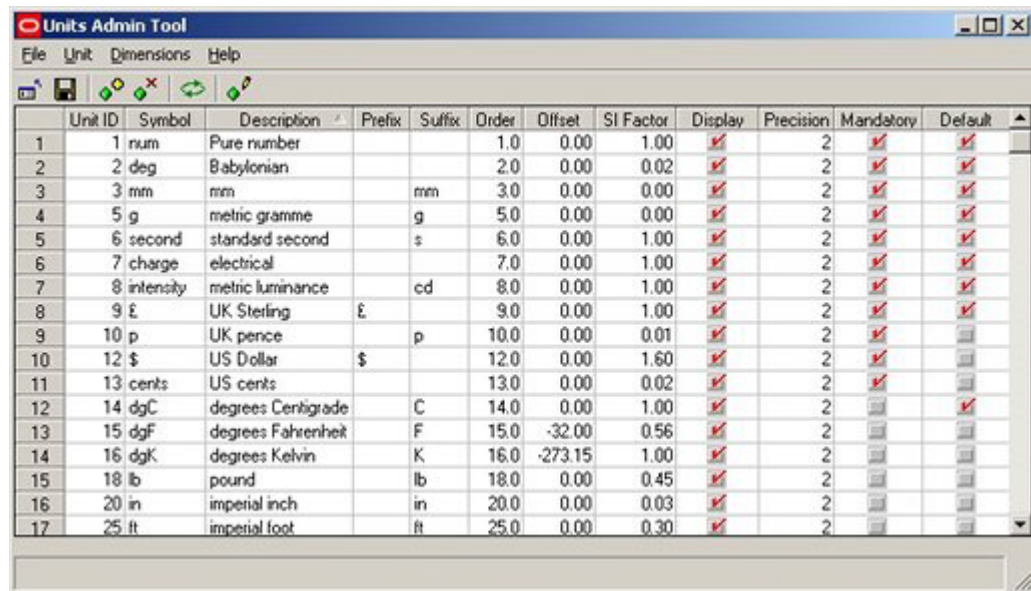
Once configured, Tax Codes can be assigned to products in Product Studio in the Financial Tab of the SKU dialog box.



The Tax Code can then be used for calculation or reporting purposes.

Units

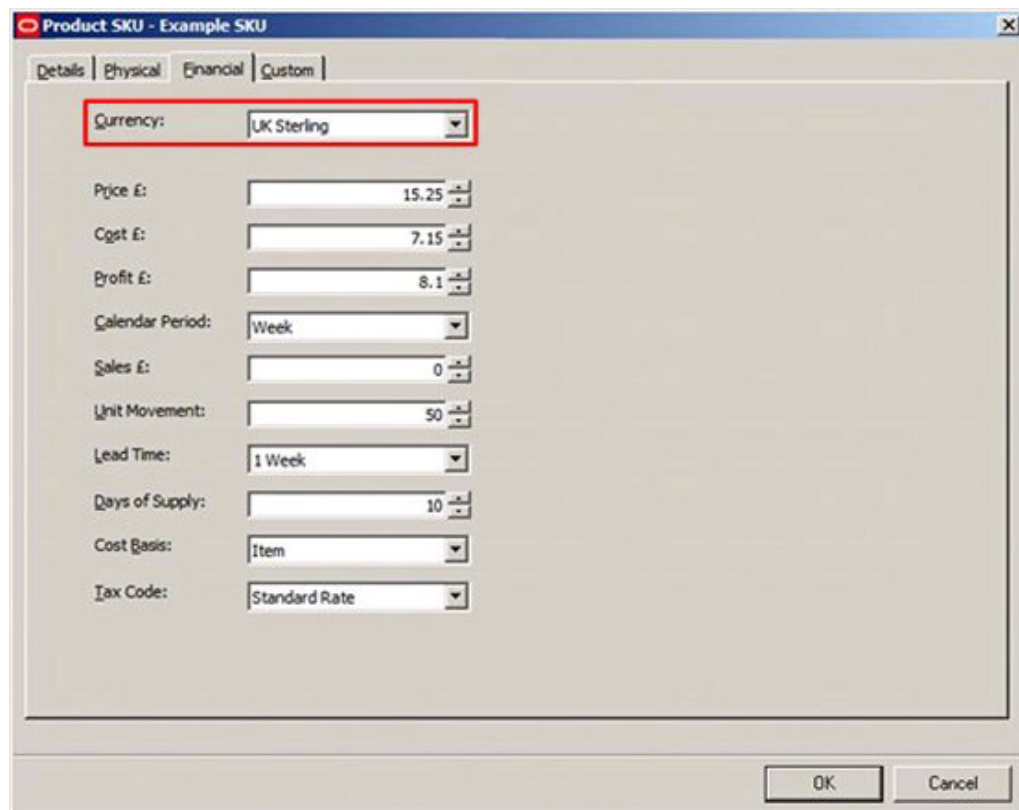
The Units dialog box is accessed from the General menu of the Administration Module.



Unit ID	Symbol	Description	Prefix	Suffix	Order	Offset	SI Factor	Display	Precision	Mandatory	Default
1	num	Pure number			1.0	0.00	1.00	<input checked="" type="checkbox"/>	2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2	deg	Babylonian			2.0	0.00	0.02	<input checked="" type="checkbox"/>	2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
3	mm	metric millimetre		mm	3.0	0.00	0.00	<input checked="" type="checkbox"/>	2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
4	g	metric gramme		g	5.0	0.00	0.00	<input checked="" type="checkbox"/>	2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
5	second	standard second		s	6.0	0.00	1.00	<input checked="" type="checkbox"/>	2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
6	charge	electrical			7.0	0.00	1.00	<input checked="" type="checkbox"/>	2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
7	intensity	metric luminance		cd	8.0	0.00	1.00	<input checked="" type="checkbox"/>	2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
8	£	UK Sterling	£		9.0	0.00	1.00	<input checked="" type="checkbox"/>	2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
9	p	UK pence		p	10.0	0.00	0.01	<input checked="" type="checkbox"/>	2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
10	\$	US Dollar	\$		12.0	0.00	1.60	<input checked="" type="checkbox"/>	2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
11	cents	US cents			13.0	0.00	0.02	<input checked="" type="checkbox"/>	2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
12	dgC	degrees Centigrade		C	14.0	0.00	1.00	<input checked="" type="checkbox"/>	2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
13	dgF	degrees Fahrenheit		F	15.0	-32.00	0.56	<input checked="" type="checkbox"/>	2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
14	dgK	degrees Kelvin		K	16.0	-273.15	1.00	<input checked="" type="checkbox"/>	2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
15	lb	pound		lb	18.0	0.00	0.45	<input checked="" type="checkbox"/>	2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
16	in	imperial inch		in	20.0	0.00	0.03	<input checked="" type="checkbox"/>	2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
17	ft	imperial foot		ft	25.0	0.00	0.30	<input checked="" type="checkbox"/>	2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

It can be used to configure the varying units used in Macro Space Planning. Within Product Studio, these are directly used in two places:

1. The Currency set in the Financial tab of the SKU dialog box.



Product SKU - Example SKU

Details | Physical | Financial | Custom

Currency:

Price £:

Cost £:

Profit £:

Calendar Period:

Sales £:

Unit Movement:

Lead Time:

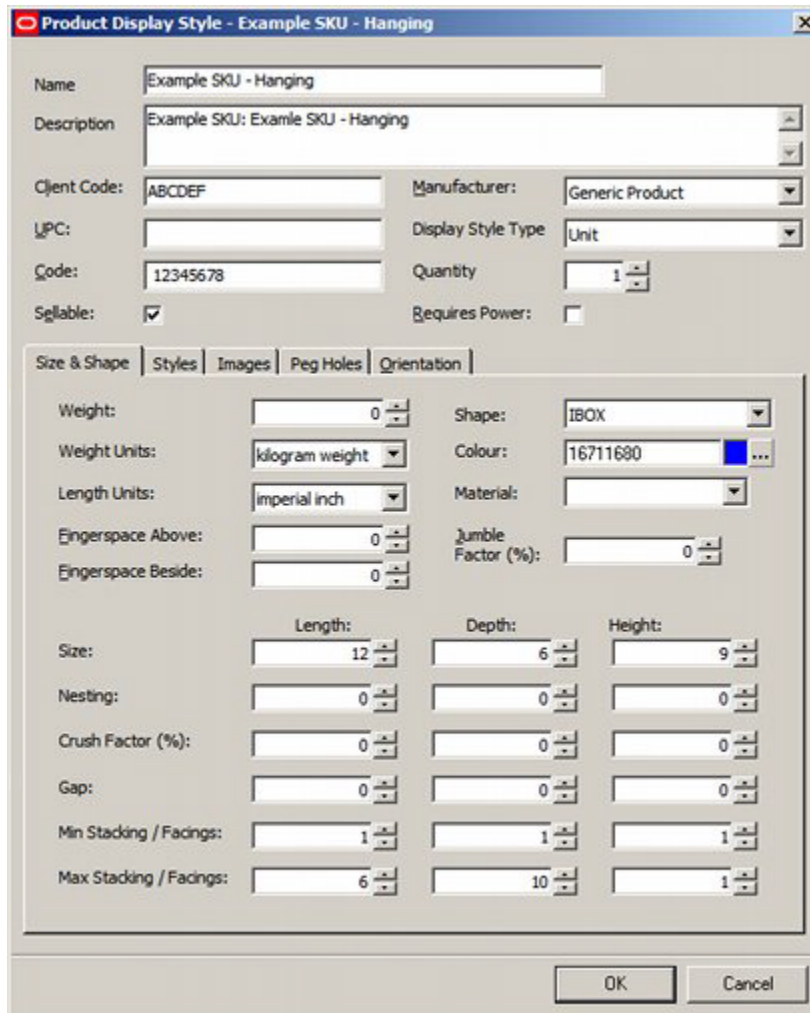
Days of Supply:

Cost Basis:

Tax Code:

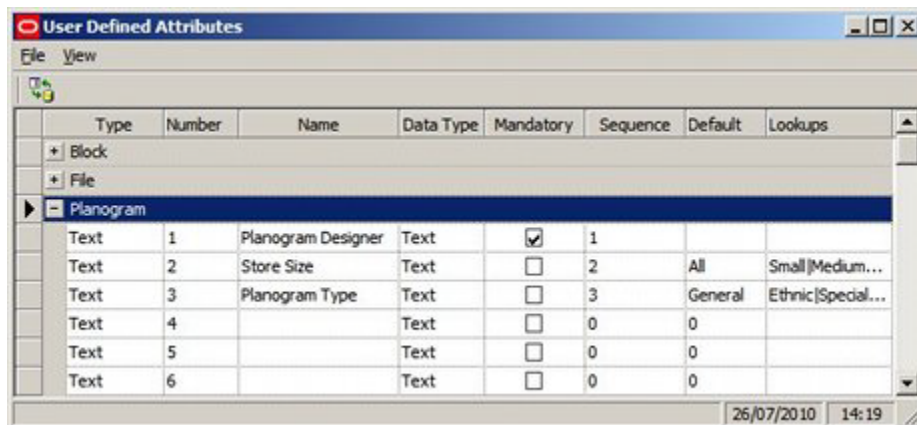
OK Cancel

- The weights and dimensions set in the Size and Shape tab of the Display Style dialog box.

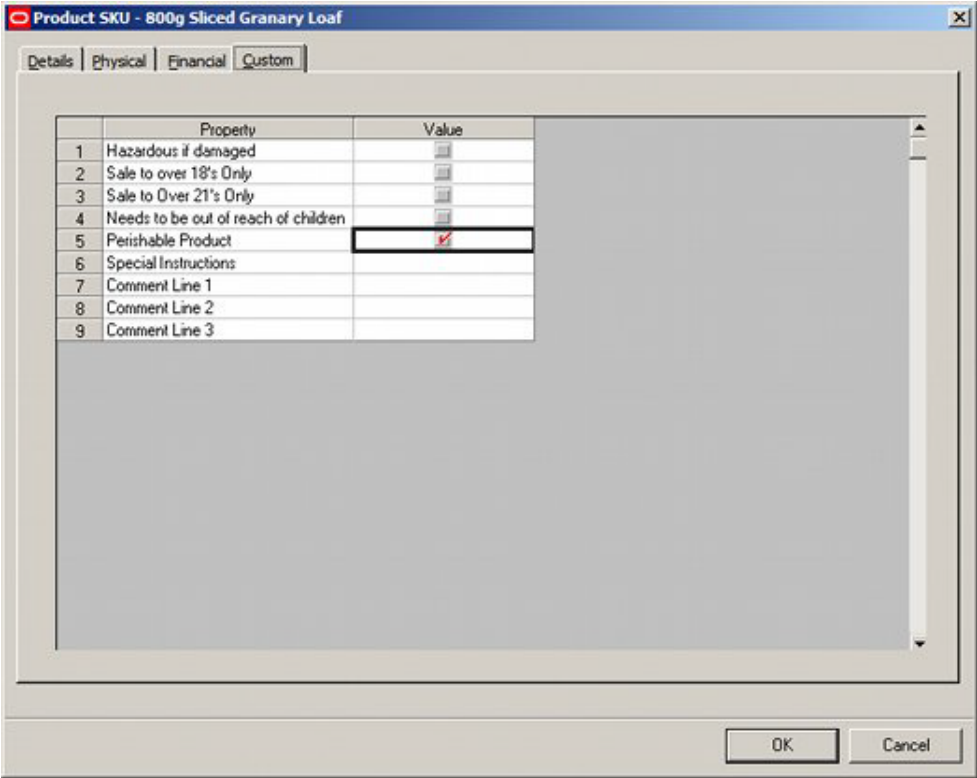


User Defined Attributes

User Defined Attributes are configured in the UDA (User Defined Attributes) dialog box accessed from the General menu in the Admin Module.

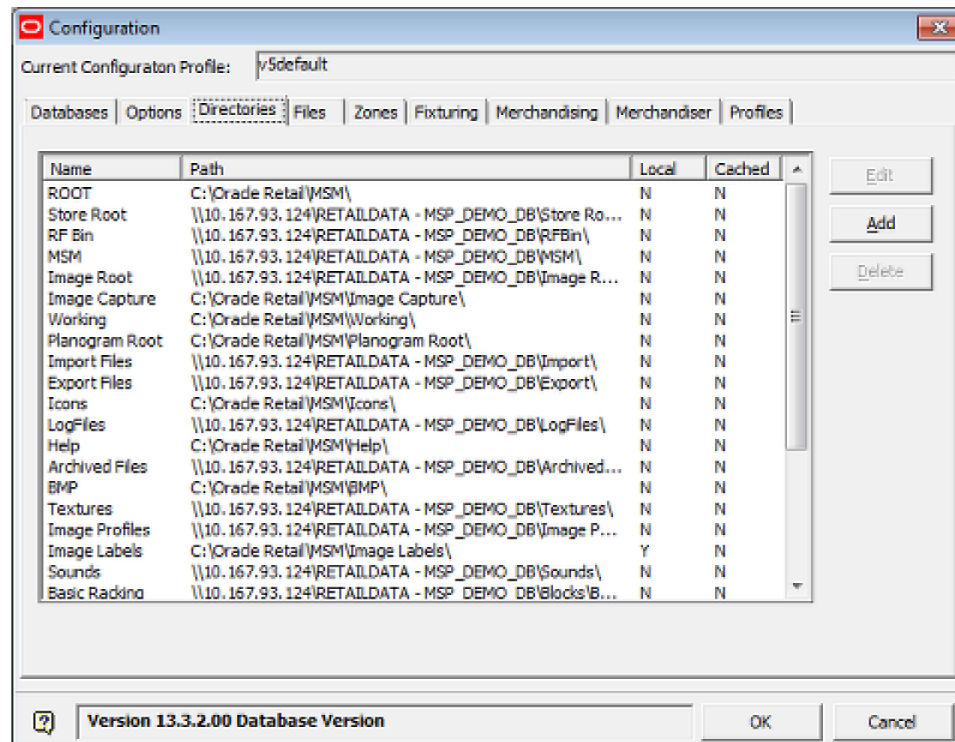


Once configured for products, UDA's can be assigned in the Custom Tab of the SKU dialog box.



Configuration Module

The locations of the directories for Image Capture and Image Root are specified in the Directories tab in the Configuration Module.



1. Image Capture is where images are stored after being captured by a camera.
2. Image Root is the starting point for storage of images after they have been assigned to a product.

Image Capture

Image Capture is where images that have been taken with a digital camera or scanned are stored prior to being imported into Macro Space Planning. The image capture directory may be either local or on a server. If on a server, images have to be uploaded to the server before they can be imported into Macro Space Planning

Image Root

The Image Root is always a folder on a server. It serves as the starting point or the directories that hold the images associated with Display Styles.

Importing Images

Images may be imported either manually or automatically.

Manual image import is done via the Images tab on the Display Style dialog box.

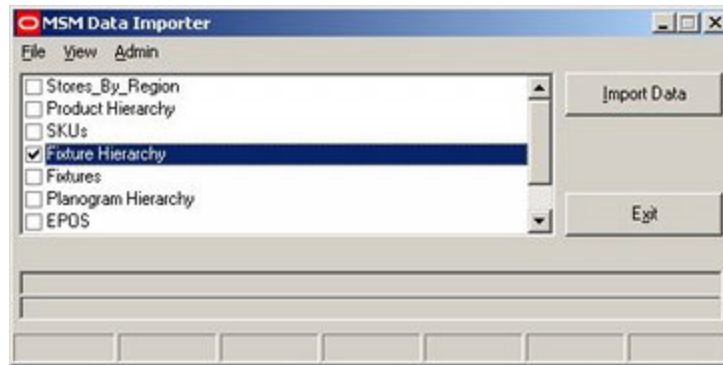
On clicking the **Import** button, any images that are in the **Image Capture** directory with a name matching that specified in the **Product Image Configuration** dialog box will be moved to the appropriate sub-directory under the Image Root.

Alternatively, on clicking the **Browse for Image** button, users will be taken to the **Image Capture** directory. After selecting an image it can be 'dragged and dropped' into one of the six boxes on the right. After being dragged and dropped, the image will be converted to jpg format and stored in a directory originating from the Image Root.

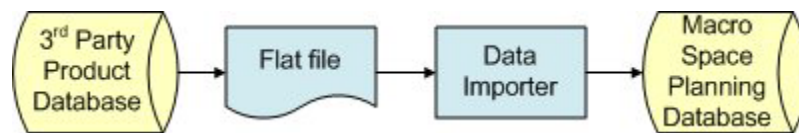
Note: See the *Configuration Module Help File* for more information on how Directories and their paths are configured.

Data Import

Macro Space Management provides a specialized Data Import module. This allows product details to be imported from third-party software.



The way this is done is as follows:



1. Data from a third-party database containing product information is written to a flat file (XML file, CSV file or fixed Width File).
2. This flat file is read by Data Importer and the information written to tables in the Macro Space Planning database.
3. The information in the Macro Space Planning database is displayed in the product hierarchy.

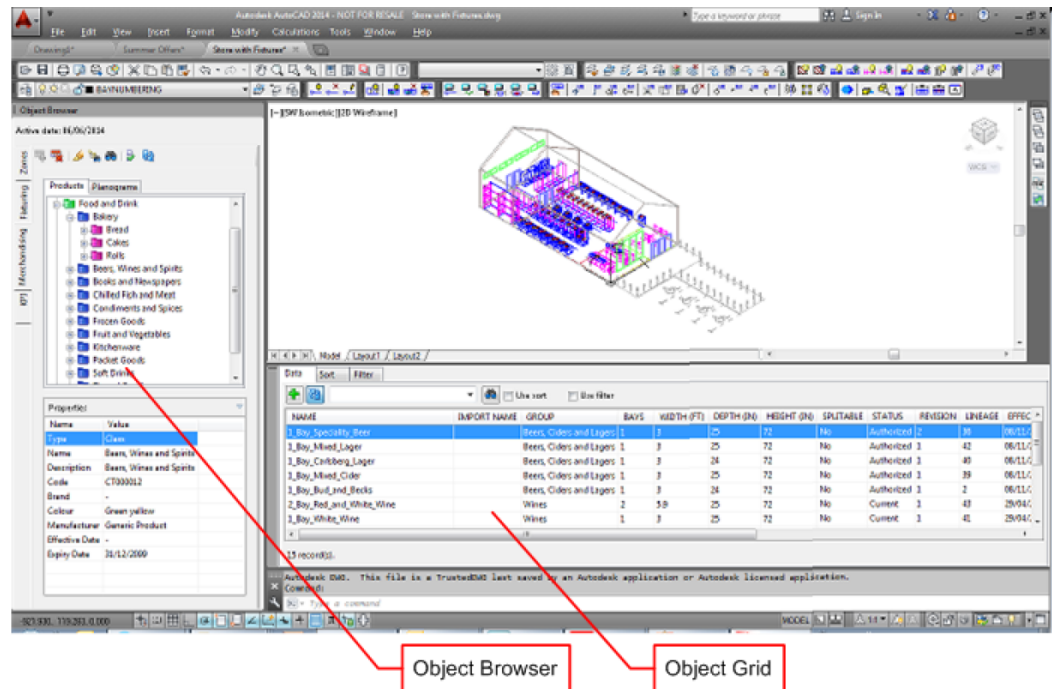
It may be necessary to add other information to the imported data. This could include information such as dimensions, style relationships or images for 3D Virtual Reality representation in Merchandiser.

Note: Product information can also be imported as a separate process (independent of Data Importer) during the Planogram Import process using Oracle Data Integrator (ODI)

Planner and Merchandiser

Planner

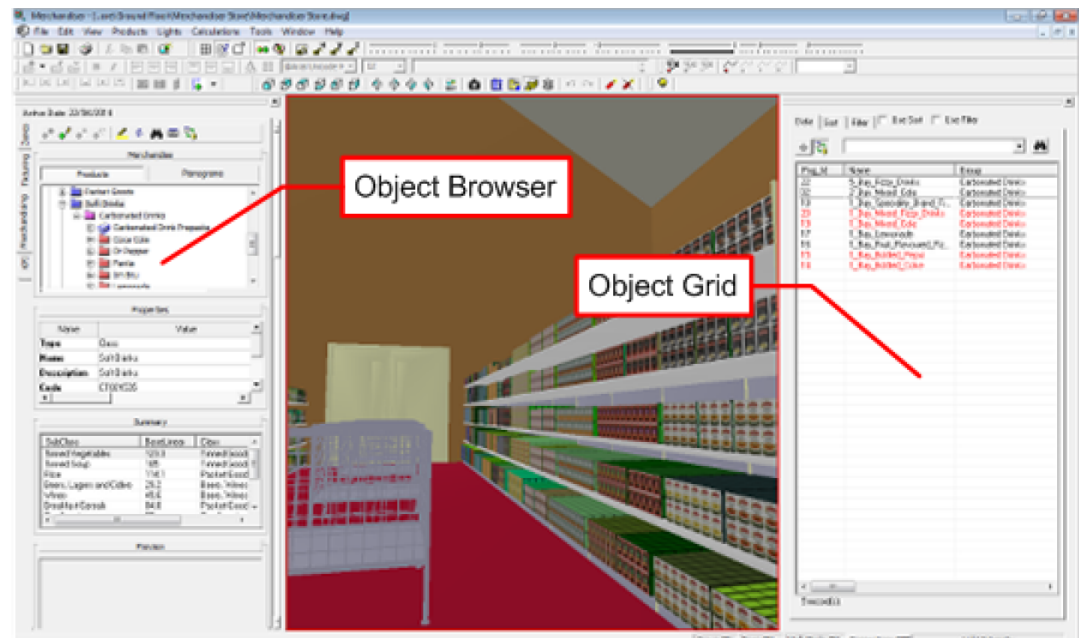
The Product hierarchy appears in the Object Browser in Planner. It can also be searched using the Object Grid.



Products can then be placed down to SKU level as placeholders.

Merchandiser

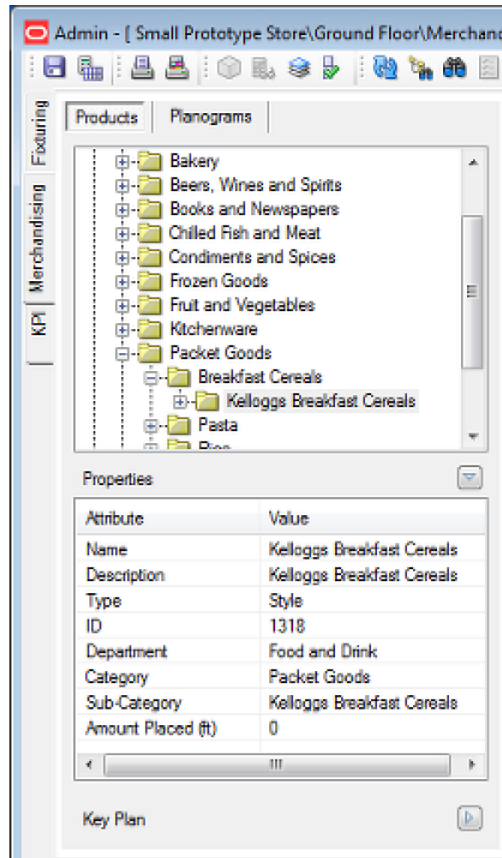
Like Planner, the Product hierarchy appears in the Object Browser in Merchandiser. It can also be searched using the Object Grid.



The Product hierarchy can either be placed as placeholders down to SKU level, or as 3D Virtual Reality objects at the Display Style level.

In-Store Space Collaboration

The product hierarchy is also shown in the Browser in the In-store Space Collaboration application.



The hierarchy is only displayed down to Item level.

Importing the Product Hierarchy

Importing the Product Hierarchy

Although it is possible to manually create a product hierarchy, it is more normal to import that product hierarchy. This is generally done by using the Data Importer module to import information from a third-party database containing product information. This import operation can be invoked manually, but it is more normal for it to be run automatically using a batch scheduling tool.

Planograms

Before planogram designs involving new products are imported into Macro Space Planning, any new products required for those planograms must first be imported into the product hierarchy. This is done separately from a pure product import as it is done as part of the planogram import process as one of the stages of bringing in planogram designs using ODI (Oracle Data Integrator).

Frequency of updates

The frequency of updates will determine how current the information is in Product Studio compared to the third-party database the information is being imported from. The frequency of imports is in its turn determined by the available time to carry out that import. If the time is available, product data might be imported on a nightly basis. If time overnight is restricted by the need to carry out other batch tasks, then it might only be possible to import updated product information at the weekends.

Note: As the frequency of updates will vary from retail organization to retail organization, import frequency should be checked with an administrator if required.

Information updated

Information on products held in the Macro Space Planning (MSP) database can be updated in varying ways. These include:

1. New Products

Entirely new products can be imported into the MSP database. Examples of this might include new products from existing suppliers, or existing products being sourced from different suppliers.

2. Updated Products

Product information on existing products can be updated. Examples of this might include changes to financial information or to UDAs (User Defined Attributes).

3. Expired Products

Products can be expired (removed from the list of those available). This is done by setting an expiry date for the product. When placing products in a floor plan, the expiry date is compared with the Active Date for the floor plan. (This Active Date can be set at the top of the Object Browser if the floor plan is open - alternatively, it can be set in the File Properties dialog box for the floor plan in store Manager).

If the Expiry Date for the Product is before the Active Date for the floor plan, the product cannot be placed as it will be obsolete before the floor plan comes into service.

Expired products can be purged using the Purge option on the Tools menu in the Admin Module. Products will only be purged (deleted from the database) if there are no instances of that product in any floor plans (including those at historical status).

Importing Products with Planogram Import

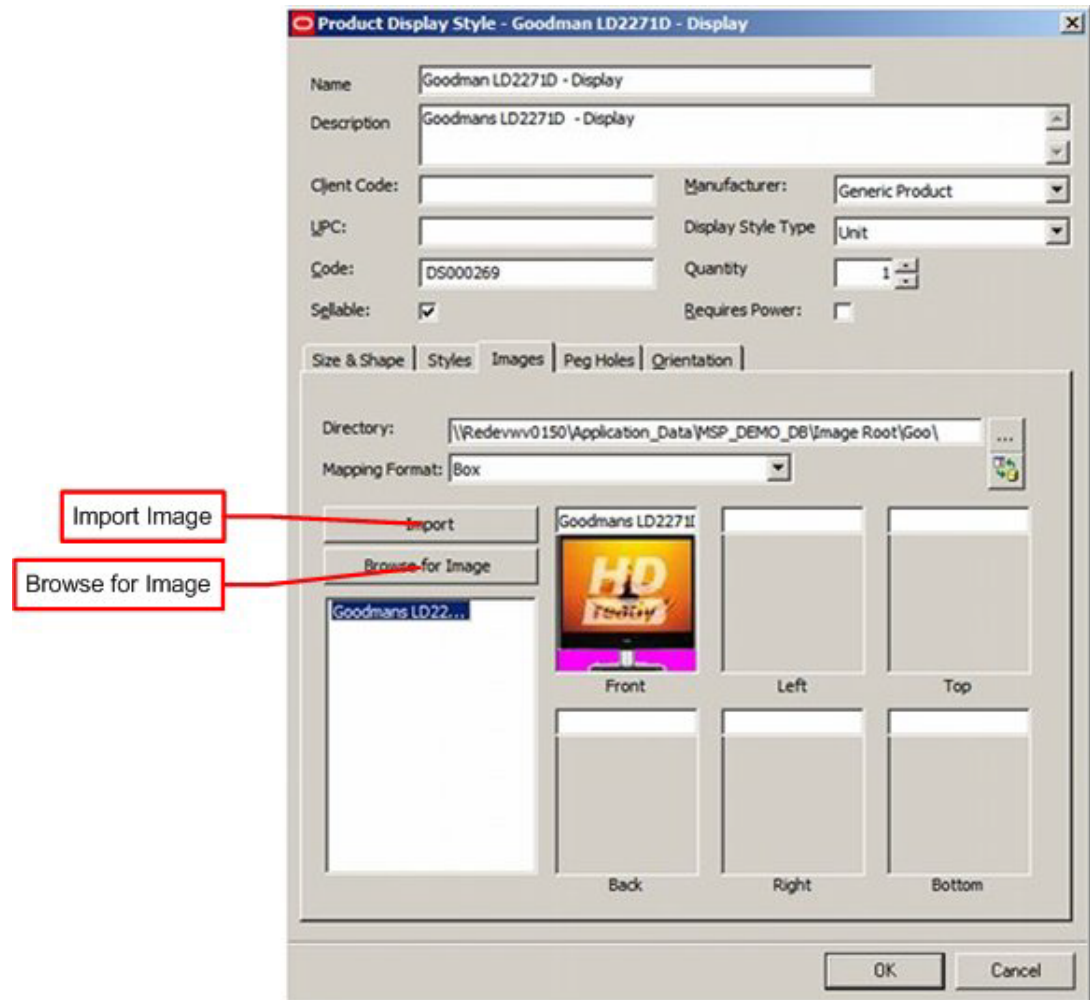
Before planogram designs involving new products are imported into Macro Space Planning, any new products required for those planograms must first be imported into the product hierarchy. This is done separately from a pure product import as it is done as part of the planogram import process as one of the stages of bringing in planogram designs using ODI (Oracle Data Integrator).

Product Images

Importing Product Images

Overview of Importing Product Images

There are two ways of importing product images.



Import Image

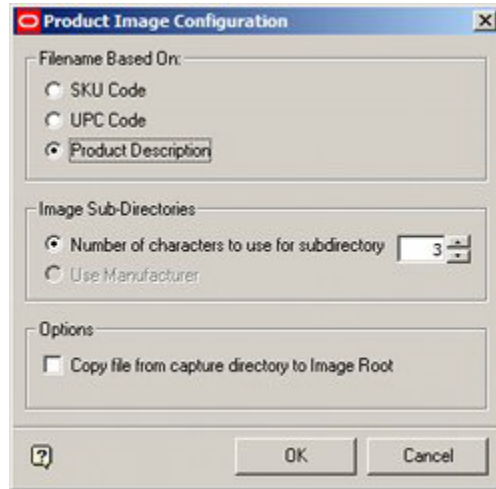
This option is semi automatic. If an image of the correct name exists in the Image Root specified in the directory tab of the Configuration module, clicking the Import button will result in the image being moved or copied to the folder under the Image Root specified by the setting in the Configuration Module.

Browse for Image

This option allows the user to manually browse for an image to associate for the product. The initial directory opened will default to that specified for **Image Capture** in the **Directories Tab** of the Configuration Module.

Product Image Configuration

The names the product images are stored under are determined in the Product Image Configuration dialog box accessed from the View menu.



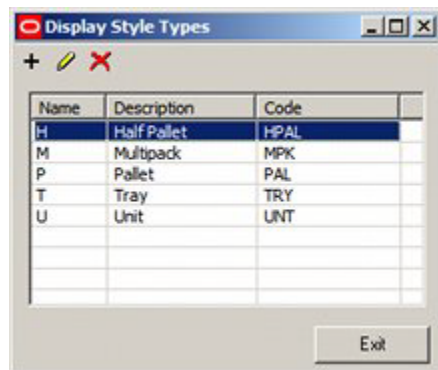
Filename Based On

This radio button determines the name that will be assigned to the image after it has been imported.

1. SKU Code

The image will be named after a combination of the Display Style type, the SKU code and the direction the image will be facing.

- The first character in the image name indicates the Display Style Type. This information is read from the information specified in the Display Style Type dialog box accessed from the View menu and will be the single letter in the Name Field.



- The next characters in the image name will be the SKU code.
- The final two characters in the image name denote the direction the image will be viewed from when placed on a display style.

Character	View Direction
_1	Front
_2	Left
_3	Top
_4	Back
_5	Right
_6	Bottom

M12345678__3 is therefore the image name for a multi-pack display style that will be displayed on top of the display style when it is represented in the Merchandiser module.

Note: The SKU Code is stored in the Client Code field in the SKU and display Style dialog boxes.

2. UPC Code

The image will be named after a combination of the Display Style type, the UPC Code and the direction the image will be facing.

- The first character in the image name indicates the Display Style Type. This information is read from the information specified in the Display Style Type dialog box accessed from the View menu and will be the single letter in the Name Field.
- The next characters in the image name will be the UPC code. (This could be in a number of formats: for example EAN or GTIN).
- The final two characters in the image name denote the direction the image will be viewed from when placed on a display style.

3. Product Description

The image will be named after the Product Description in the Display Style dialog box.

H5000237091807_1 is therefore the image name for a multi-pack display style that will be displayed on the front of the display style when it is represented in the Merchandiser module.

Note: These options will be configured when Macro Space Planning is implemented. If the settings are changed after images have been imported, the application will look for images corresponding to the changed settings and all association with images associated with the old settings will be lost.

Image Sub-Directories

Image sub-directories will be located under the Image Root specified in the Directories tab of the configuration module.

1. SKU Code

If SKU Code is selected, the image sub directories will be named after the first 1 - 3 characters of the SKU code depending on the setting on the spin control.

2. UPC Code

If UPC Code is selected, there are two options that can be used.

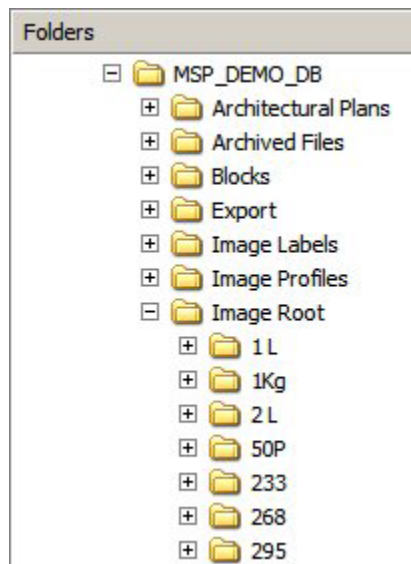
- If Number of Characters is selected, the image sub directories will be named after the first 1 - 3 characters of the UPC code depending on the setting on the spin control.
- If Manufacturer is selected, the image sub-directory will be named after the digits within the UPC code that represent the manufacturer.

3. Product Description

If SKU Code is selected, the image sub directories will be named after the first 1 - 3 characters of the product description at display style level depending on the setting on the spin control.

Note: These options will be configured when Macro Space Planning is implemented. If the settings are changed after images have been imported, the application will look for images corresponding to the changed settings and all association with images associated with the old settings will be lost.

In the example below, image folders based on the Product Description have been created below the Image Root.



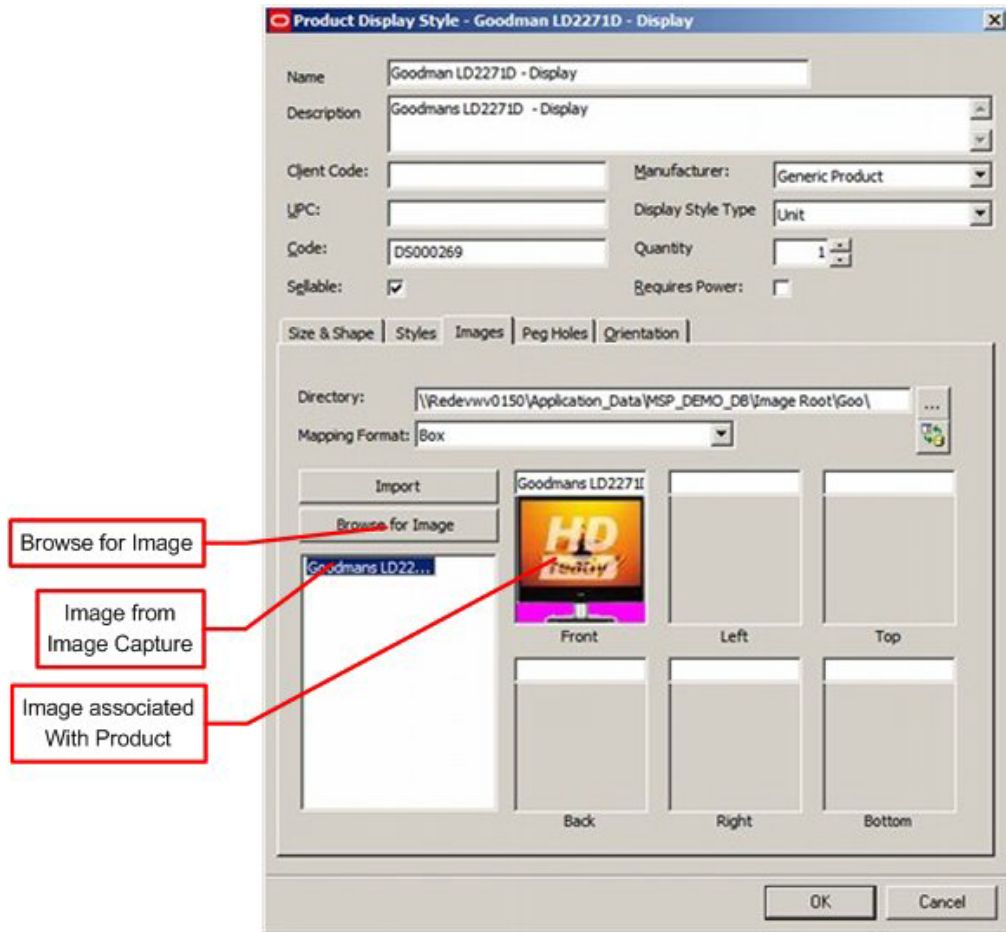
Options

If the Copy Files from capture directory to Image Root option is checked, a copy of the image file will be placed in the image sub-directory below the Image Root. If unchecked, the image file will be moved from the Image Capture directory to the specified image sub-directory.

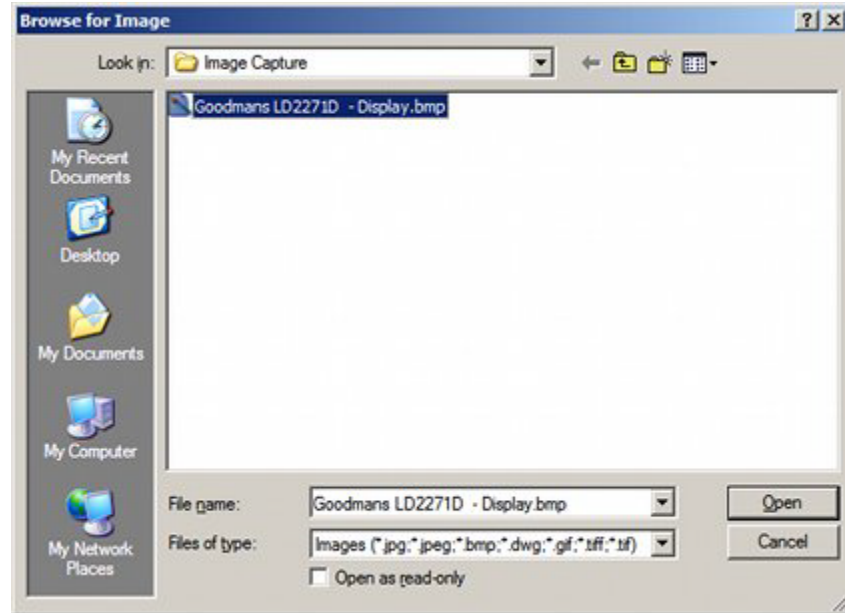
Manually Importing Images

Images can now be added to a Display Style level product. This is done via the Browse for Image option on the Images tab of the Display Style dialog box. Images can be of the jpg, jpeg, bmp, gif, tif and tiff formats.

Note: Images are used in an 'associative' fashion in the Merchandiser module - no record is stored in the database, but the application looks for images for specific name stored in a specific directory when representing the display style in a floor plan. The Image Name and directory are based in settings in the Product Image Configuration dialog box accessed from the View menu.



The required image should be in the Image Capture directory specified in the Configuration module. On clicking **Browse for Image** the Browse for Image dialog box will open. The required image can then be selected.



When the **Open** button is clicked, the image will appear in the left pane in the Display Style dialog box. It can then be 'dragged and dropped' to where it is needed on the product sides.

Note: The number of images required for each product will depend on settings in the Product Image Configuration dialog box. If the SKU or UPC options are chosen, up to six images can be associated, each associated with one side of a cube. If the Description option is chosen, only one image can be associated - associated with the front of the Display style.

As the image is 'dragged and dropped' it will be moved to the required folder under the specified Image Root. The name of the image will be changed to the format specified in the settings in the Product Image Configuration dialog box (View menu) and the format of the image will also be converted to jpg.

Note: The options will be configured Product Image Configuration dialog box when Macro Space Planning is implemented. If the settings are changed after images have been imported, the application will look for images corresponding to the changed settings and all association with images associated with the old settings will be lost.

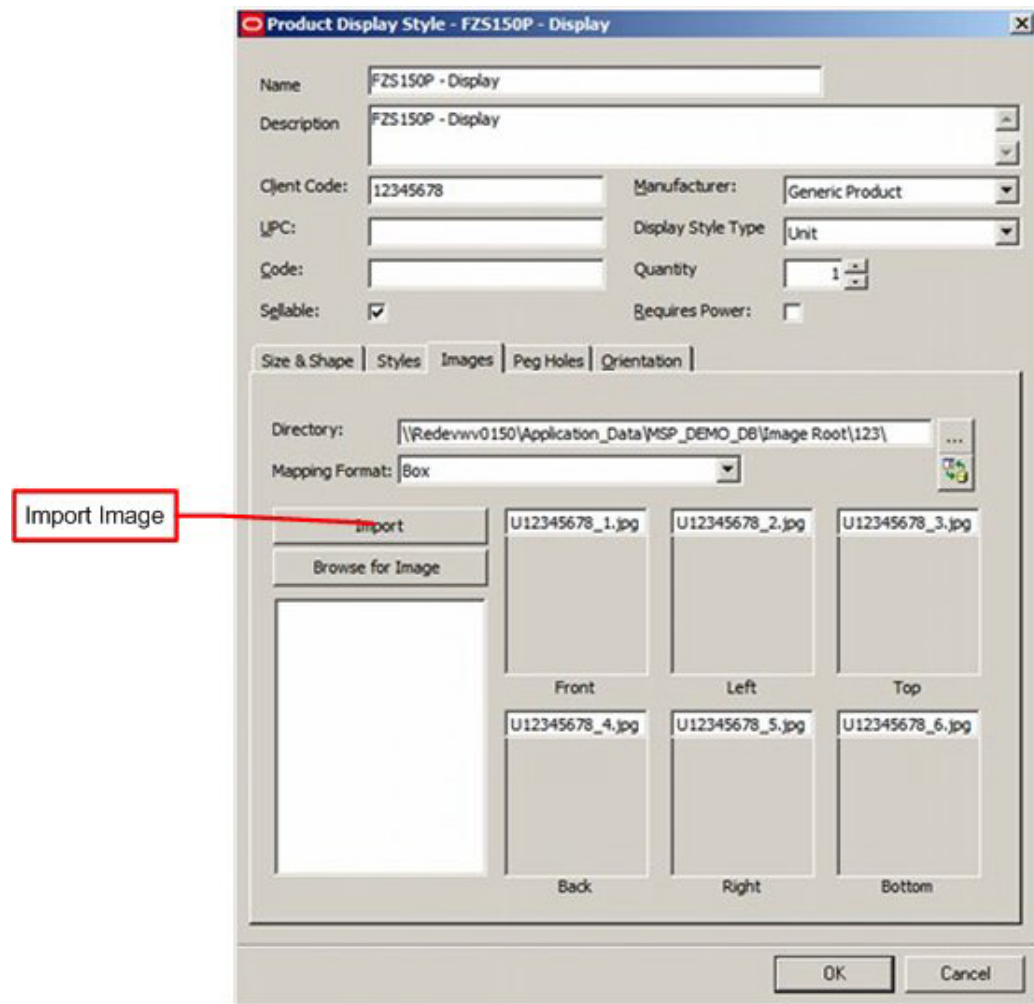
Semi-Automatically Importing Images

Images are used in an 'associative' fashion in the Merchandiser module - no record is stored in the database, but the application looks for images for specific name stored in a specific directory when representing the display style in a floor plan. The Image Name and directory are based in settings in the Product Image Configuration dialog box accessed from the View menu.

If there is an image in the Image Capture directory specified in the Configuration Module with a name that matches that specified by the settings in the Product Image Configuration dialog box, when the Import button is clicked that image will be moved or

copied to the sub-directory below the Image Root specified by the settings in the Product Image Configuration dialog box.

Note: Unlike the Import Product Images option on the View menu, this will only import product images that match the specified criteria for this Display Style.



The results will be reported in a dialog box.



If the option in the Product Image Configuration dialog box was set to SKU Code or UPC Code, up to 6 images can be imported for each display style. If the option is set to Product Description, only a single image will be imported.

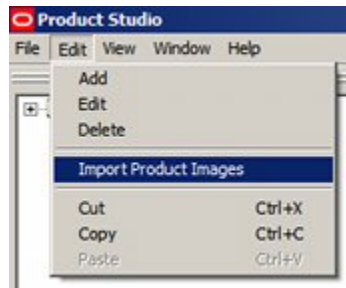
Note: Care needs to be taken that there are no trailing spaces in the field that is used to determine the image name. For example if the image name is to be based on the display style description, if the description has trailing spaces the import will fail.

Automatically Importing Images

Images are used in an 'associative' fashion in the Merchandiser module - no record is stored in the database, but the application looks for images for specific name stored in a specific directory when representing the display style in a floor plan. The Image Name and directory are based in settings in the Product Image Configuration dialog box accessed from the View menu.

If there is an image in the Image Capture directory specified in the Configuration Module with a name that matches that specified by the settings in the Product Image Configuration dialog box, when the Import Product Images option on the view menu is clicked that image will be moved or copied to the sub-directory below the Image Root specified by the settings in the Product Image Configuration dialog box.

Note: Unlike the import button in the Images tab of the Display Styles dialog box, this will import all product images that match the specified criteria.



The results will be reported in a dialog box.



Using Transparency in Product Images

Overview of Transparency and Product Images

Note: An alternative to using the technique described in the section below is use the ability in most image processing software to turn the background of an image transparent. This will mean the background will not display in Macro Space Planning, leaving only the product itself on display. Consult the help files of your image processing software for more information.

Product Studio gives user the option of turning specific parts of the image transparent when displayed.



The television on the left has had parts on the image made transparent; the television on the right has not. Making parts of images transparent can make display styles look more realistic in the Merchandiser module.

The process of making parts of images transparent is outlined in the flow chart below.



1. The `DEFAULT_TRANSPARENCY_COLOUR` system variable in the Administration module is set to a precise RGB value.
2. The parts of the product image to be made transparent are colored the precise RGB value
3. The image is imported into Product Studio
4. The image is assigned to a Display Style
5. When this Display Style is used in Merchandiser, the specified parts of the image will appear transparent.

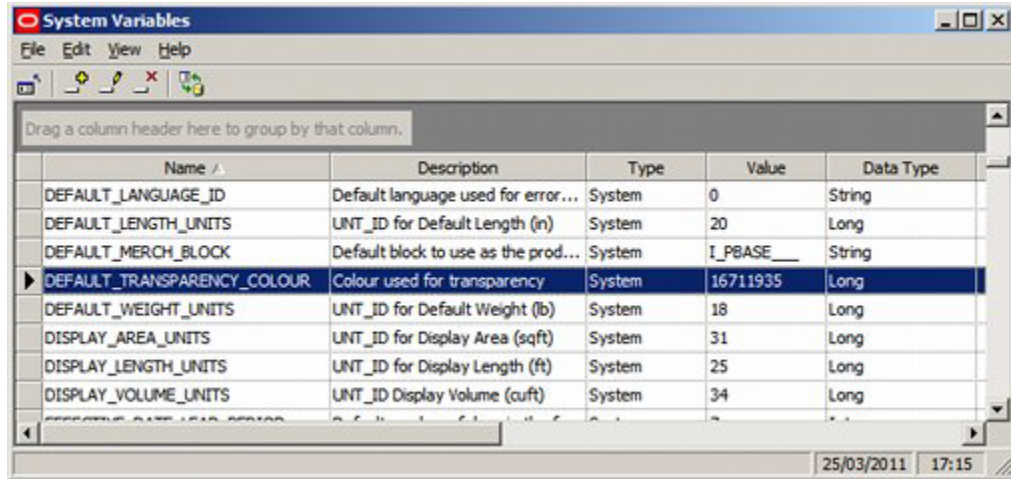
Setting the `DEFAULT_TRANSPARENCY_COLOUR` System Variable

Note: An alternative to using the technique described in the section below is use the ability in most image processing software to turn the background of an image transparent. This will mean the background will not display in Macro Space Planning, leaving only the product itself on display. Consult the help files of your image processing software for more information.

The `DEFAULT_TRANSPARENCY_COLOUR` System variable is set in the Administration module. Only users with the correct privileges can access this module.

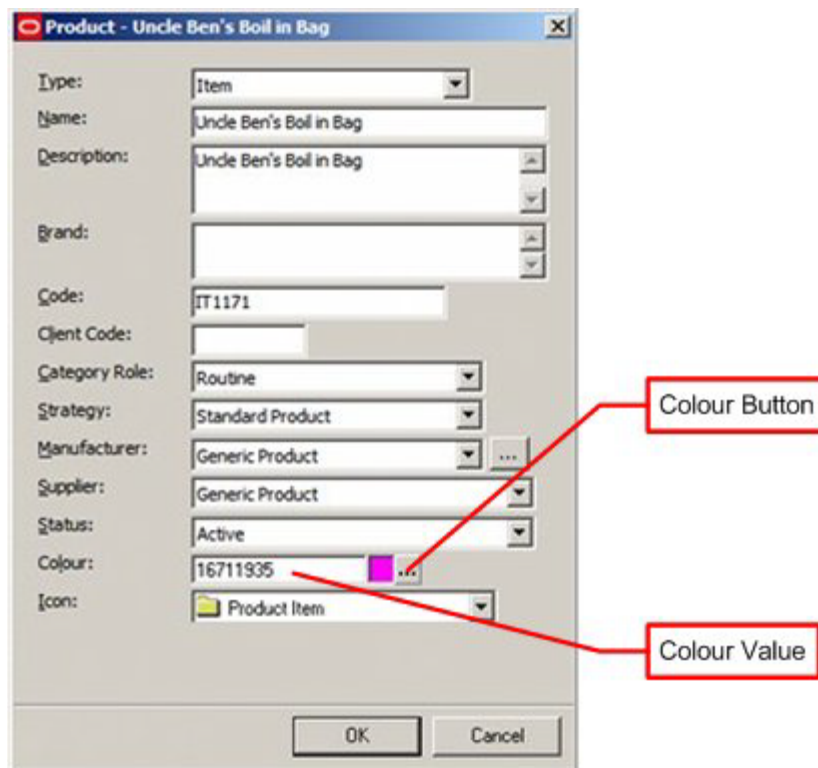
Note: Users will require the appropriate access rights to open the Administration module

This is set by selecting the System Variable option from the General menu to bring up the **System Variable dialog box**.

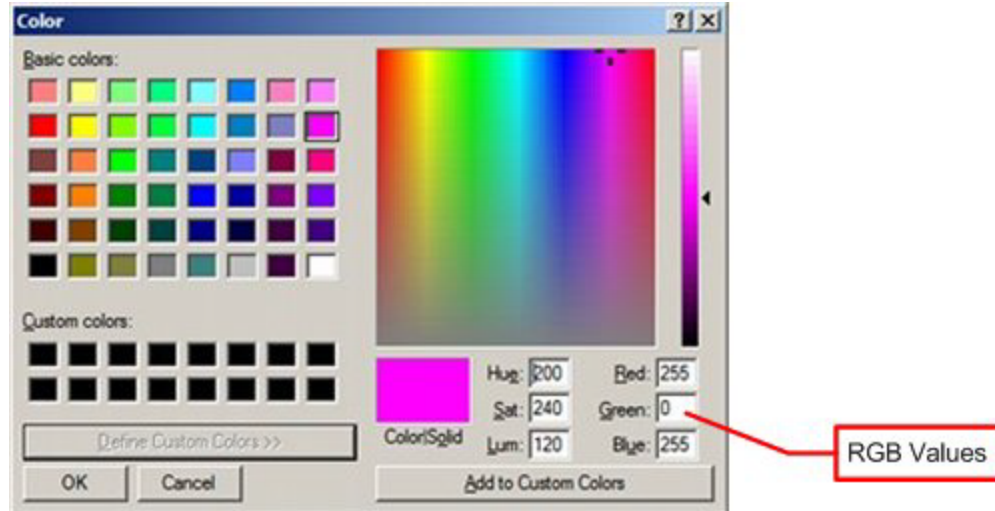


The system variable is set by entering decimal equivalent of an RGB (Red, Green, Blue) value into the Value text box, pressing Return and exiting the dialog box.

The decimal equivalent of the RGB value can be obtained by opening any dialog box in the product hierarchy.



The color value (expressed as a decimal equivalent) can be seen as a color value in the text box. In the above example, it is 16711935. To find the RGB equivalent click the **Color Button**. This will open the Color dialog box. Clicking the **Define Custom Colors >>>** button will expand the dialog box. The RGB values can be seen towards the right.



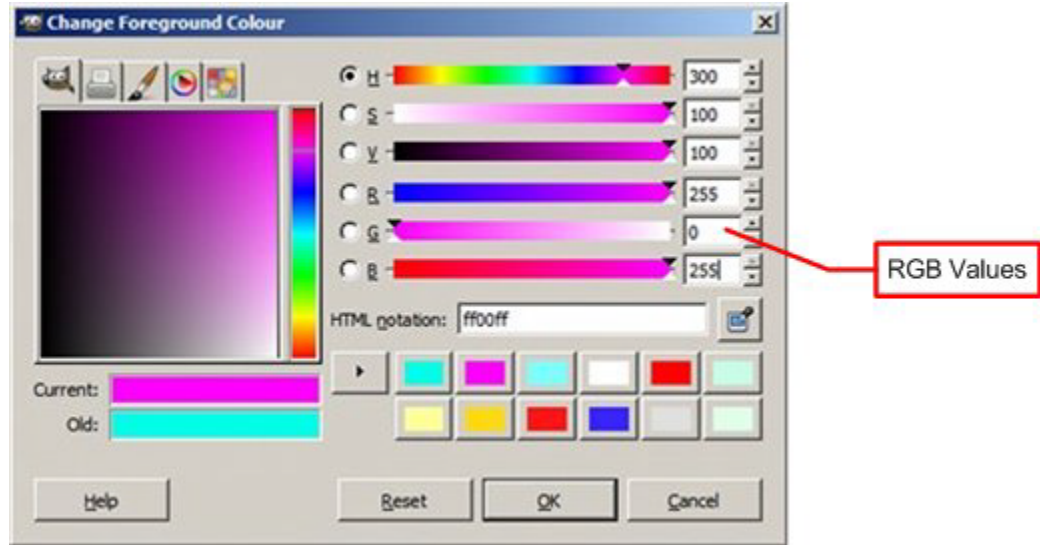
In the above example the RGB vales are as follows: Red = 255, Green = 0 and Blue = 255. These values define a Magenta shade.

Note: To convert RGB values to the single value stored in the database, apply the following formula: DB Value = Red Value + (Green Value x 256) + (Blue Value x 63536).

Preparing the Image

Note: An alternative to using the technique described in the section below is use the ability in most image processing software to turn the background of an image transparent. This will mean the background will not display in Macro Space Planning, leaving only the product itself on display. Consult the help files of your image processing software for more information.

In order to prepare the image, parts of it must be colored the precise RGB value specified in the DEFAULT_TRANSPARENCY_COLOUR system variable. This can be done with most photo editing software. Set the color to be added to the precise RGB values.



The areas of the image to be made transparent can then be filled with the precise shade of color.



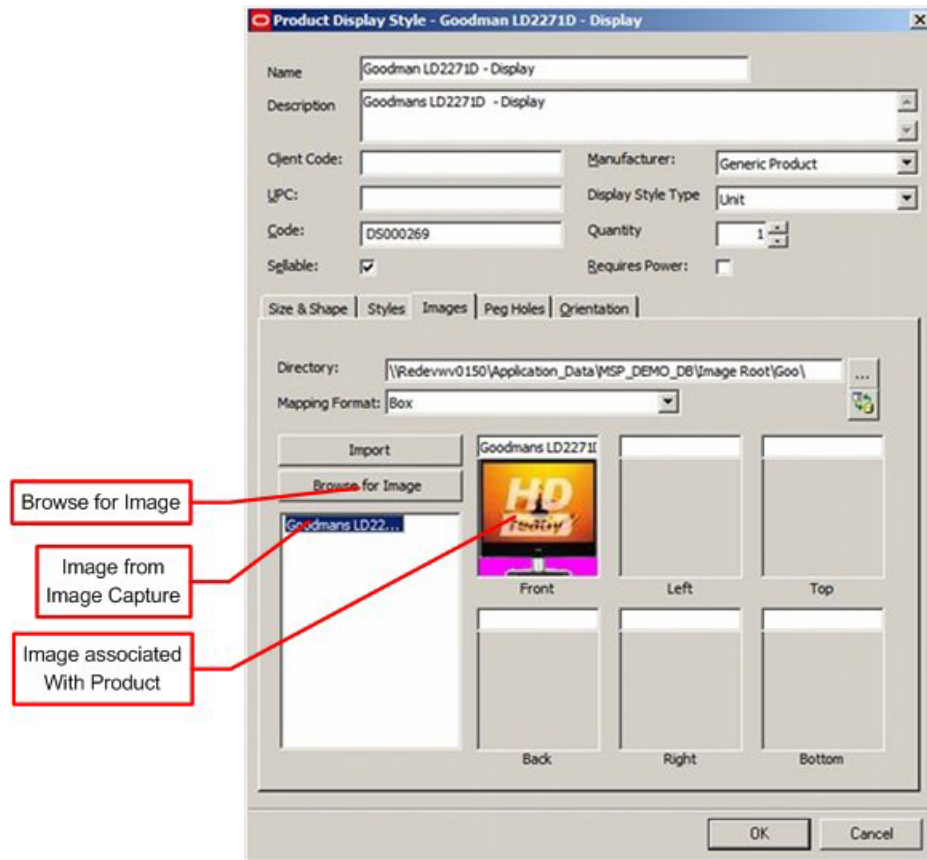
In the example above, the area by the base of the TV is to be made transparent and has been colored accordingly.

Once colored, the image must be saved as a bit map (.bmp extension). This is because bit map images save colors more accurately than a jpg image.

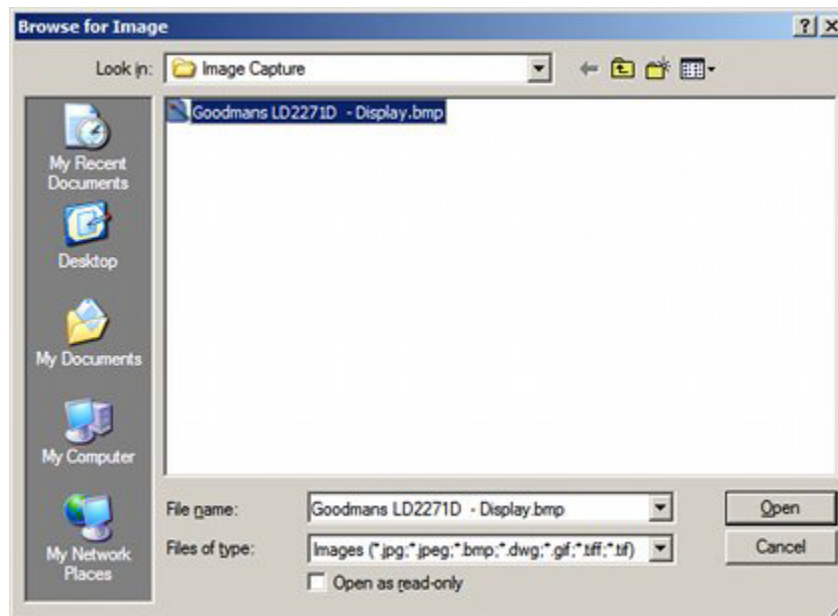
Adding the Image to a Product

Note: An alternative to using the technique described in the section below is use the ability in most image processing software to turn the background of an image transparent. This will mean the background will not display in Macro Space Planning, leaving only the product itself on display. Consult the help files of your image processing software for more information.

The bit map image can now be added to a Display Style level product. This is done via the Images tab of the Display Style dialog box.



The image (with added transparency color) should be in the Image Capture directory specified in the Configuration module. On clicking **Browse for Image** the Browse for Image dialog box will open. The required image can then be selected.



When the **Open** button is clicked, the image will appear in the left pane in the Display Style dialog box. It can then be 'dragged and dropped' to where it is needed on the product sides.

Note: The number of images required for each product will depend on settings in the Product Image Configuration dialog box.

As the image is imported into the appropriate folder under the Image Root in the windows folder structure, it will be converted from a bit map file (.bmp) to a .jpg file. Every time the image is changed, it must be done as a fresh .bmp file as jpg files do not store RGB colors as precisely. Re-saving the .jpg file after editing it will almost certainly change the value of the transparency color to one different from that specified in the DEFAULT_TRANSPARENCY_COLOUR system variable and the colored areas will not appear transparent.

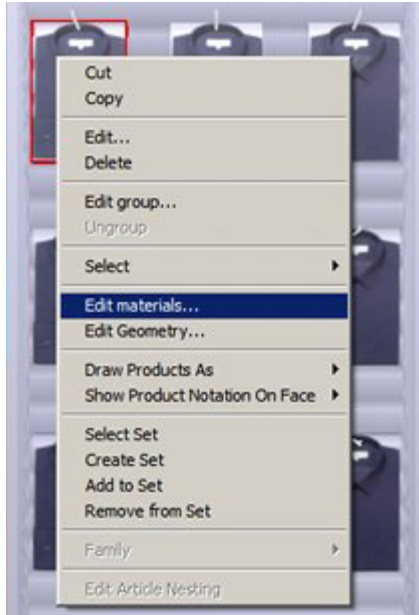
Displaying the Image in Merchandiser

Note: An alternative to using the technique described in the section below is use the ability in most image processing software to turn the background of an image transparent. This will mean the background will not display in Macro Space Planning, leaving only the product itself on display. Consult the help files of your image processing software for more information.

If lights are present in the floor plan when the image is displayed in Merchandiser, then there may be 'reflections' from the transparent area. This can be seen in the left hand image below. It is possible to adjust the properties of the image to eliminate the 'reflection'. This can be seen in the right hand image below.

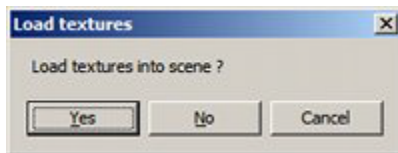


The first stage of eliminating 'reflections' is to select a display style. Bring up the right click menu and select **Edit Materials...**

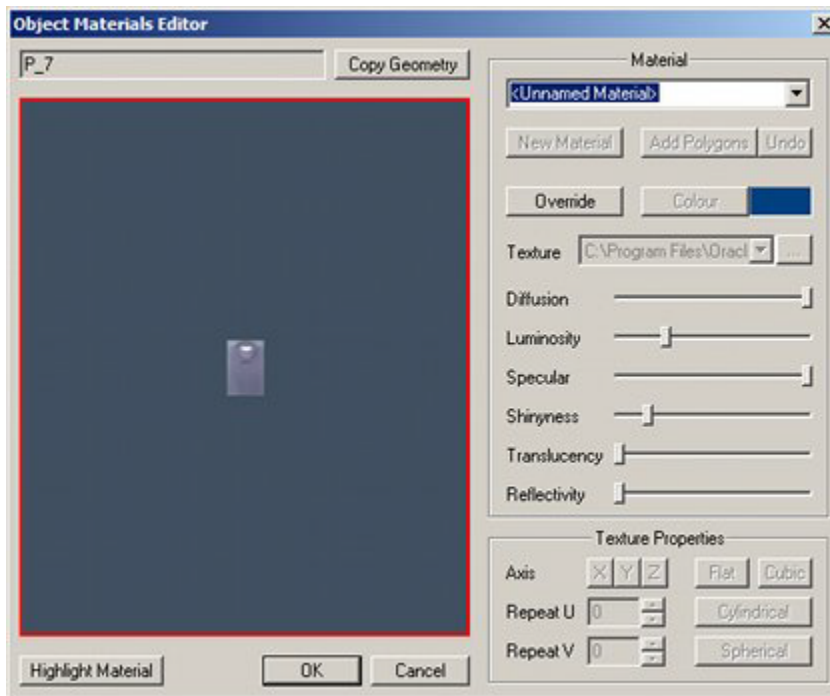


Note: Only one display style at a time can be selected.

This will bring up the **Load Textures** dialog box. Click **No**.



The **Object Materials Editor** dialog box will appear.



Carry out the following steps:

1. Click the Override button
2. Set the Specular slide control to 0
3. Click OK

(It may be necessary to repeat these actions).

The 'reflection' will now be eliminated.

Note: These changes are purely present in the floor plan and will not be saved when the floor plan is saved and closed.

Setting up and Maintaining the Product Hierarchy

Setting up the Basic Hierarchy

Setting up Company, Group, Division and Department Levels

Company, Group, Division and Department Levels are set up starting from the Product Root using the Product dialog box. Additional levels can be added using the Add option from the Edit menu or the right click menu.

The screenshot shows a 'Product' dialog box with the following fields and values:

- Type: Company (dropdown)
- Name: Example (text box)
- Description: Example (text box)
- Brand: Example (text box)
- Code: 12345678 (text box)
- Client Code: (empty text box)
- Category Role: (empty dropdown)
- Strategy: (empty dropdown)
- Manufacturer: Generic Product (dropdown with ellipsis)
- Supplier: Generic Product (dropdown)
- Status: Planned (dropdown)
- Colour: 0 (text box with color swatch and ellipsis)
- Icon: Product Company (dropdown)

Buttons: OK, Cancel

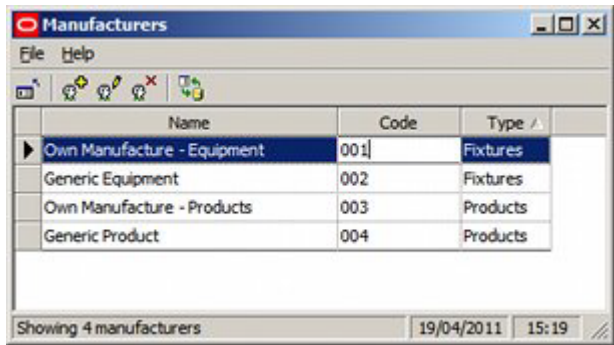
The Hierarchy Level Type can be set using the Type drop down list.

The options are in the following sequence:

- Company (Optional)
- Group (Optional)
- Division (Optional)
- Department (Mandatory)

Once a level has been added, its child will only be available from those levels below it in the hierarchy.

Only when a Department has been added will the Class option be available in the drop down list of Hierarchy Level Types.

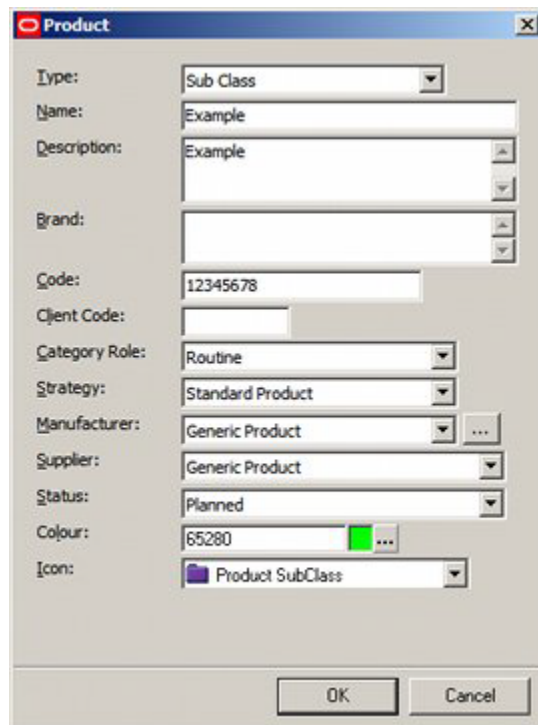
Parameter	Comment
Name	The Name is the name of the Company, Group, Division or Department.
Description	The Description is a more informative version of the name.
Brand	The Brand field is used if the children of this node in the product hierarchy belong to an identified brand of merchandise - for example 'Acme Clothing'.
Code	<p>The Code is a client specified identifier for this item in the product hierarchy. It would generally contain an item of data from the database the product information is imported from. For example, it could be the primary key from a table in the third-party database. This item of data enables the data to be referenced back to the third-party database.</p> <p>If planograms are being imported, and this node in the hierarchy is being used as a placeholder in a planogram, it is assumed this field is unique.</p>
Client Code	The Client Code is another client specified identifier for this item in the product hierarchy. It would generally contain an item of data from the database the product information is imported from. For example, it could be the primary key from a table in the third-party database. This item of data enables the data to be referenced back to the third-party database.
Category Role	This option is grayed out and unavailable for these levels in the product hierarchy
Strategy	This option is grayed out and unavailable for these levels in the product hierarchy
Manufacturer	<p>The Manufacturer can be set from the drop down list. The drop down list is configured using the Manufacturers option in the Administration module. Although access to the Administration module is generally accessed to users with Administrators privileges, Product Studio users can access the Manufacturers option by clicking on the button to the right of the text box. This will bring up the Manufacture's dialog box from the Administration Module, allowing users to add, edit or delete entries.</p> 
Supplier	The Manufacturer can be set from the drop down list. The drop down list is configured using the Manufacturers option in the Administration module.
Status	The status shows where product is in its life cycle. It can be set from the drop down list - the options in this list are configured using the Status option in the Administration module.
Color	The color can be set from a standard color pallet. When the product is placed in Planner, Merchandiser or In-Store Space Collaboration it will be displayed using this color.

Parameter	Comment
Icon	The icon is set by default when the hierarchy level is first created, but can be manually set from the drop down list

Setting up Class and Sub-Class Levels

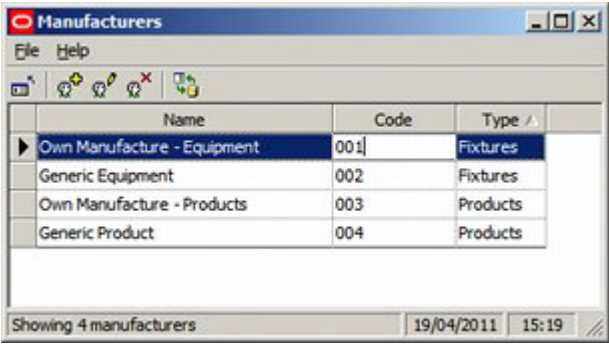
A **Class** level in the Products hierarchy can only be set up as a child of a Department and a **Sub-class** level in the Products hierarchy can only be set up as a child of a Class.

Both levels are mandatory in the hierarchy, and both are configured by means of the Products dialog box. They are using the Add option from the Edit menu or the right click menu.



Only when a Sub-class has added will the next three options be available in the drop down list of Hierarchy Level Types.

Parameter	Comment
Name	The Name is the name of the Company, Group, Division or Department.
Description	The Description is a more informative version of the name.
Brand	The Brand field is used if the children of this node in the product hierarchy belong to an identified brand of merchandise - for example 'Acme Clothing'.
Code	The Code is a client specified identifier for this item in the product hierarchy. It would generally contain an item of data from the database the product information is imported from. For example, it could be the primary key from a table in the third-party database. This item of data enables the data to be referenced back to the third-party database. If planograms are being imported, and this node in the hierarchy is being used as a placeholder in a planogram, it is assumed this field is unique.

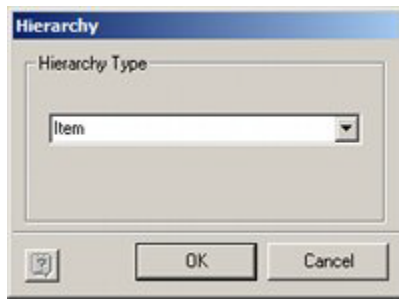
Parameter	Comment
Client Code	The Client Code is another client specified identifier for this item in the product hierarchy. It would generally contain an item of data from the database the product information is imported from. For example, it could be the primary key from a table in the third-party database. This item of data enables the data to be referenced back to the third-party database.
Category Role	This option is grayed out and unavailable for Class level, but available for Sub-class Level. Category Roles are used to assign what the retailer believes is the reason customers purchase specific products.
Strategy	This option is grayed out and unavailable for Class level, but available for Sub-class Level. Strategies are used to assign what the retailers' business objectives are to the products that will be used to accomplish them.
Manufacturer	The Manufacturer can be set from the drop down list. The drop down list is configured using the Manufacturers option in the Administration module. Although access to the Administration module is generally accessed to users with Administrators privileges, Product Studio users can access the Manufacturers option by clicking on the button to the right of the text box. This will bring up the Manufacture's dialog box from the Administration Module, allowing users to add, edit or delete entries.
	
Supplier	The Manufacturer can be set from the drop down list. The drop down list is configured using the Manufacturers option in the Administration module.
Status	The status shows where product is in its life cycle. It can be set from the drop down list - the options in this list are configured using the Status option in the Administration module.
Color	The color can be set from a standard color pallet. When the product is placed in Planner, Merchandiser or In-Store Space Collaboration it will be displayed using this color.
Icon	The icon is set by default when the hierarchy level is first created, but can be manually set from the drop down list

Setting up Style, Item and SKU Levels

Style, Item and SKU Levels are set up based on the Sub-Class level in the hierarchy. To add a Hierarchy level, complete the following steps:

1. Right-click and select Add. The Hierarchy Level dialog box will open.
2. Using the drop down list, select one of the following Hierarchy Level Types:
 - Style (Optional)
 - Item (Optional)

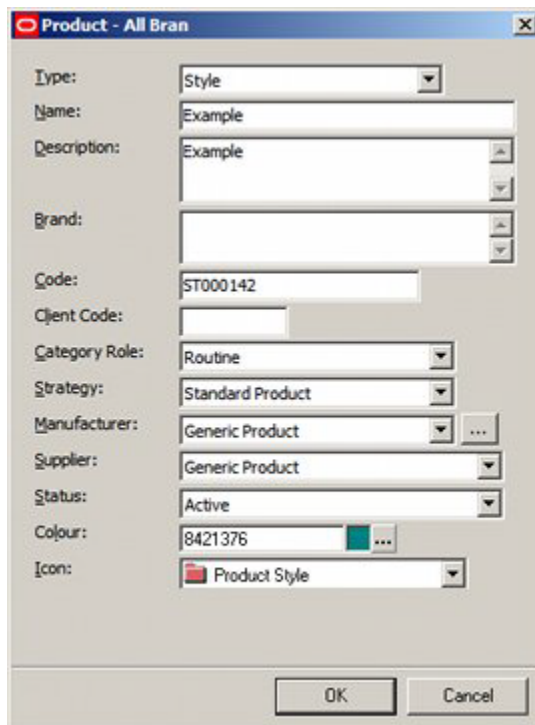
- SKU (Mandatory)



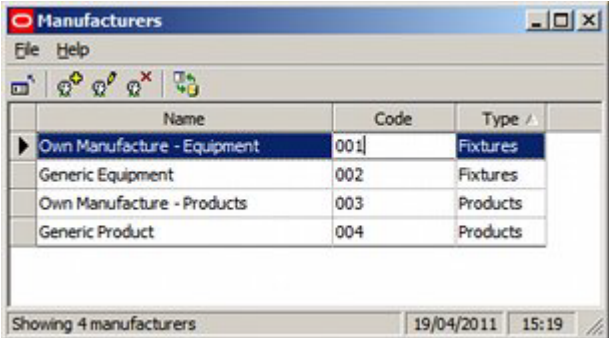
- From Sub-Class level, the user will be able to add either Style, Item or SKU levels.
- From Style level the user will be able to add either Item or SKU levels.
- From Item level the user will only be able to add SKU level merchandise.

Once a level has been added, only its child levels may subsequently be added. For example, if a user at Sub-class level adds Item as the next level in the hierarchy, it will no longer be possible to add a Style level above it in that level of the hierarchy.

If Style or Item levels are added in the hierarchy, the Product dialog box will appear.



Parameter	Comment
Name	The Name is the name of the Company, Group, Division or Department.
Description	The Description is a more informative version of the name.
Brand	The Brand field is used if the children of this node in the product hierarchy belong to an identified brand of merchandise - for example 'Acme Clothing'.

Parameter	Comment
Code	<p>The Code is a client specified identifier for this item in the product hierarchy. It would generally contain an item of data from the database the product information is imported from. For example, it could be the primary key from a table in the third-party database. This item of data enables the data to be referenced back to the third-party database.</p> <p>If planograms are being imported, and this node in the hierarchy is being used as a placeholder in a planogram, it is assumed this field is unique.</p>
Client Code	<p>The Client Code is another client specified identifier for this item in the product hierarchy. It would generally contain an item of data from the database the product information is imported from. For example, it could be the primary key from a table in the third-party database. This item of data enables the data to be referenced back to the third-party database.</p>
Category Role	<p>This option is grayed out and unavailable for Class level, but available for Sub-class Level. Category Roles are used to assign what the retailer believes is the reason customers purchase specific products.</p>
Strategy	<p>This option is grayed out and unavailable for Class level, but available for Sub-class Level. Strategies are used to assign what the retailers' business objectives are to the products that will be used to accomplish them.</p>
Manufacturer	<p>The Manufacturer can be set from the drop down list. The drop down list is configured using the Manufacturers option in the Administration module. Although access to the Administration module is generally accessed to users with Administrators privileges, Product Studio users can access the Manufacturers option by clicking on the button to the right of the text box. This will bring up the Manufacture's dialog box from Administration, allowing users to add, edit or delete entries.</p> 
Supplier	<p>The Manufacturer can be set from the drop down list. The drop down list is configured using the Manufacturers option in the Administration module.</p>
Status	<p>The status shows where product is in its life cycle. It can be set from the drop down list - the options in this list are configured using the Status option in the Administration module.</p>
Color	<p>The color can be set from a standard color pallet. When the product is placed in Planner, Merchandiser or In-Store Space Collaboration it will be displayed using this color.</p>
Icon	<p>The icon is set by default when the hierarchy level is first created, but can be manually set from the drop down list</p>

If a SKU Level Item is added, the SKU Dialog box will appear. This dialog box is discussed in more detail in the section on SKU Level information.

Setting up Display Styles

Display Styles are set up below the SKU level in the hierarchy. To set up a display style, select the pertinent item at SKU level in the hierarchy, then use Add from the edit menu or right click menu.

This dialog box is discussed in more detail in the section on Display Style information.

SKU Level Information

Overview of SKU Information

The **SKU Information** is used to configure the information for a specific unit of sale.

The screenshot shows a dialog box titled "Product SKU - Example SKU" with four tabs: "Details", "Physical", "Financial", and "Custom". The "Details" tab is selected. The fields are organized as follows:

- Name:** Example SKU
- Description:** Example SKU
- UPC Type:** Anything
- Code:** 12345678
- UPC:**
- Category Role:** Routine
- Strategy:** Standard Product
- Manufacturer:** Generic Product
- Supplier:** Generic Product
- Status:** Active
- Icon:** Product SKU
- Brand:** Example
- Sub-brand:** Example 2
- Client Code:** ABCDEF
- Client Barcode:** 12345678
- Publish Date:** 31 March 2011
- Effective Date:** 07 April 2011
- Expiry Date:** 01 January 2012
- Bank:** 0
- Import Identifier:** 0
- Import Name:**
- Import Date:**
- Creation Date:** 31 March 2011
- Created By:** pw
- Last Modified Date:** 31 March 2011
- Last Modified By:** pw

There are four tabs, each holding a different category of information.

Details Tab

The **Details Tab** is used to configure the details for the product.

This screenshot is identical to the one above, showing the "Details" tab of the "Product SKU - Example SKU" dialog box with the same field values.

Parameter	Comment
Name	The SKU name
Description	A description of the SKU
UPC Type	UPC type can be set from a drop down list. The list can be configured using the Product Code Type option in the Administration Module.
Code	The Code for the product.
UPC	The UPC for the product - it must conform to the mask set in UPC type option.
Category Role	This option is grayed out and unavailable for Class level, but available for Sub-class Level. Category Roles are used to assign what the retailer believes is the reason customers purchase specific products.
Strategy	This option is grayed out and unavailable for Class level, but available for Sub-class Level. Strategies are used to assign what the retailers' business objectives are to the products that will be used to accomplish them.
Manufacturer	Selected from the drop down list - the list can be configured using the Manufacturers option in the Administration module.
Supplier	Selected from the drop down list - the list can be configured using the Manufacturers option in the Administration module.
Status	Selected from the drop down list - the list can be configured using the Status option in the Administration module.
Icon	Selected from the drop down list - the available icons are pre-loaded with the application and cannot be altered.
Brand	The Brand for the product. This might be the manufacturer of a brand of cereals - such as 'Acme Clothing'.
Sub Brand	The sub-brand for the product. This might be a sub division of a brand - such as Cornflakes
Client Code	The Client Code for the product - this equates to the SKU code.
Client Barcode	The Client Barcode for the product.
Publish Date	This is the date at which the ordering of this SKU can begin. For example, if this is a new product it could be available for ordering from 1st June
Effective Date	This is the date that the product will be available for use within stores. This date would be later than the Publish date and would take into account the delay in the supply chain before it could appear in a store. For example, if the earliest date the product could be ordered is 1st June, the effective at might be set to 1st July.
Expiry Date	This is the date at which the product will be removed from use within stores. This date would be set (or updated) if this SKU is being superseded by another product.
Rank	Rank is an integer that can be used to rank SKUs in order of preference. It is primarily of use in the Object Grid, where it can be used as a method of selecting one SKU in preference to another. (Whether the rank displays in the Object Grid depends on the custom SQL being used - this can only be changed by an Administrator with database rights).

The Effective Date and Expiry Date can also be used to control whether products can be selected from the Object Browser. This is controlled by the MERCH_TREE_EFFECTIVE_DATE System Variable. If set to 0 (Off), the Effective Date and Expiry Date will have no effect on whether products can be selected or not. If set to 1 (On), products with an Effective Date and an Expiry Date after the Active date for the floor plan (set at the top of the Object Browser, or in the File Properties dialog box in Store Manager) will be grayed out in the Object Browser and cannot be selected.

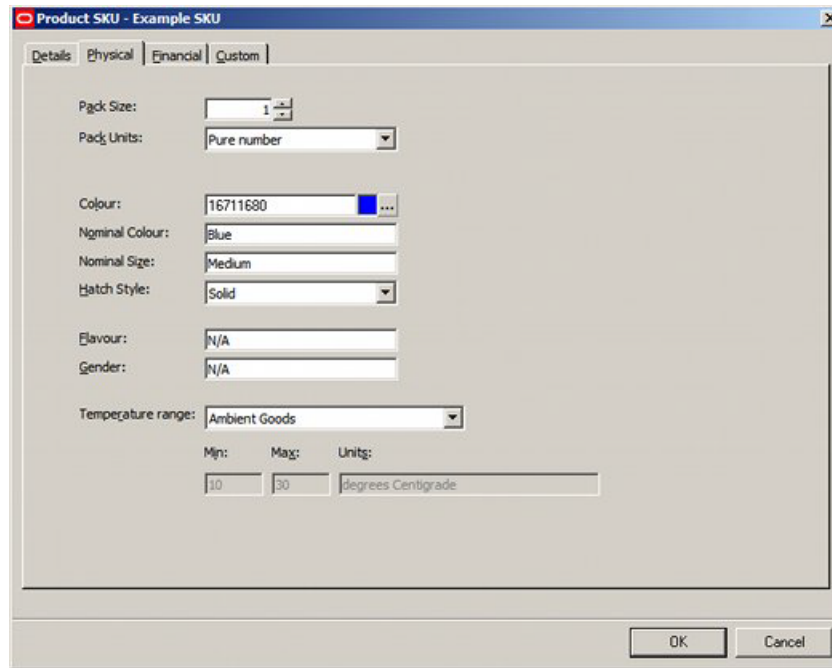
The Effective Date and Expiry Date can also be used to control whether products can be selected from the Object Grid. This depends on the custom SQL being used - this can only be changed by an Administrator with database rights).

In addition, there is some read only information.

Parameter	Comment
Import Identifier	This field contains an item of data from the database the product information is imported from. For example, it could be the primary key from a table in the third-party database. This item of data enables the data to be referenced back to the third-party database.
Import Name	This field contains an item of data from the database the product information is imported from. For example, it could be a table name from in the third party database. This item of data enables the data to be referenced back to the third-party database.
Import Date	This is assigned during data import and identifies date of the specific import that brought in or modified the product information.
Creation Date	This identifies the date the product information was imported.
Created By	This identifies the user who executed the import that brought in the product information.
Last Modified Date	This identifies the date the product information was last modified
Last Modified by	This identifies the user who last updated the product information.

Physical Tab

The **Physical Tab** is used to specify details concerning the physical aspects of the SKU.



Parameter	Comment
Pack size	The pack size is the number of items in a pack of the product - it can be set to any positive numerical value. (Whether the SKU is a single item or a pack is set using the Cost Basis drop down list in the Financial tab.
Pack Units	This is set from a drop down list - the list can be configured using the Units option in the Administration Module.
Color	The color can be set from a standard color pallet. When the product is placed in Planner, Merchandiser or In-Store Space Collaboration it will be displayed using this color.
Nominal Color	This field can hold a text description of the product's color - such as Red, Green or Blue. It can be used for information purposes.
Nominal Size	This field can hold a text description of the product's size - such as small, medium or large. It is used for information purposes.
Hatch Style	This field can hold a hatch style for when a floor plan is printed with this product placed. It is currently not implemented.
Flavor	This field can hold a text description of the product's flavor - such as Peppermint or Vanilla. It is used for information purposes.
Gender	This field can hold a text description of the gender the product is intended for - such a Male, Female or None. It is used for information purposes.
Temperature Range	The temperature range specifies the temperature the product should be stored and displayed at. For the product to place in Merchandiser the fixture or shelf object it is to be placed on must have an identical temperature range assigned. Temperature ranges are configured using the Ranges option on the Merchandising menu in the Administration module.

Parameter	Comment
Max, Min and Units	These read only values show the maximum and minimum temperature the product should be stored and displayed at. It also shows the units those temperatures are displayed in. Temperature ranges are configured using the Ranges option on the Merchandising menu in the Administration module.

The text fields such as Nominal Color and Nominal Size can be used within the Macro Space Planning application. For example, the information could be displayed in the Summary Window of the Object Browser, or displayed in the Object Grid and used as filter for selection.

Note: Changes to what is displayed in the Object Browser or Object Grid can only be made by changing the Custom SQL in the Macro Space Planning database. This option is only available to Database Administrators.

Financial Tab

The **Financial Tab** is used to record financial information on the SKU. Typically this will be 'static' data based on organization wide averages. More specific information is often brought in with the Product UDA information for planograms.

The screenshot shows a software window titled "Product SKU - Example SKU" with a "Financial" tab selected. The window contains the following fields and values:

- Currency: UK Sterling
- Price £: 15.25
- Cgst £: 7.15
- Profit £: 8.1
- Calendar Period: Week
- Sales £: 0
- Unit Movement: 50
- Lead Time: 1 Week
- Days of Supply: 10
- Cost Basis: Item
- Tax Code: Standard Rate

Buttons for "OK" and "Cancel" are visible at the bottom right of the dialog.

Note: The precise definition of some of the terms described below varies from retail organization to retail organization.

Parameter	Comment
Currency	The currency is the unit of measure for the financial values. It is set from a drop down list. The available values in the drop down list are configured using the Units option from the General menu in the Administration module. The selected unit of currency also appears as a suffix in other fields in the dialog: for example Price £:
Price	The retail price of the SKU.
Cost	The purchase cost of the SKU.
Profit	This is the profit attributable to the SKU. Depending on the organization, it may be gross profit (sales price less the cost from the supplier), or net profit (profit after indirect overheads have been taken into account).
Calendar Period	The calendar period is the time period the financial data is for. This is set using a pre-configured drop down list.
Sales	Definitions may vary, but sales are typically the average value of sales for a store within the specified calendar period.
Unit Movement	This is the number of SKU units that sell during a specific time period.
Lead Time	The delay between placing an order and receiving it. It can be set to any positive integer.
Unit Movement	The rate at which the item is consumed. This is often for the time period specified in the Calendar Period.
Days of Supply	Definitions may vary, but days of supply is typically total inventory in the system divided by average daily consumption.
Cost Basis	Cost Basis can be selected from a drop down list. It is set from a pre-configured drop down list. The options are Item or Pack. if set to Pack, the pack quantity can be set using the Pack Size spin control on the Physical tab.
Tax Code	Tax code can be selected from a drop down list. The options are configured using the Tax Code option accessed from the General menu in the Administration Module.

Custom Tab

The **Custom Tab** can be configured to hold customer specific items of information. The list of items displayed can be configured using the **User Defined Attributes** option accessed from the **General menu** in the Administration Module. A maximum of 60 items can be configured

Property	Value
1 Hazardous if damaged	<input type="checkbox"/>
2 Sale to over 18's Only	<input type="checkbox"/>
3 Sale to Over 21's Only	<input type="checkbox"/>
4 Needs to be out of reach of children	<input type="checkbox"/>
5 Perishable Product	<input checked="" type="checkbox"/>
6 Special Instructions	
7 Comment Line 1	
8 Comment Line 2	
9 Comment Line 3	

This tab enables customer specific information to be assigned to the SKU. In the above example, there are five check boxes that allow Yes/No options to be set regarding properties of the product, one line for special instructions and three lines for comments. This information can either be set manually or (more probably) brought in via a data import.

Display Style Information

Overview of Display Styles

Display Styles can only be used in the Merchandiser module. They allow products to be represented on equipment or shelves with differing degrees of accuracy ranging from a simple box to a virtual reality image.

The dialog box consists of the following parts:

1. A header section that primarily contains information copies from the SKU item that is its parent.
2. A Size and Shape tab that describes the physical form of the Display Style
3. A Styles tab used to specify the style determining which fixtures and shelves the Display Style is compatible with.
4. An Images tab that allows the user to associate product images with the Display Style.
5. A Peg Holes tab that allows users to specify how the Display Style will hang from a peg (shelf object).
6. An Orientation Tab that will indicate the positions (upright, on its side, etc), that the Display Style can take up when placed on a fixture or shelf object.

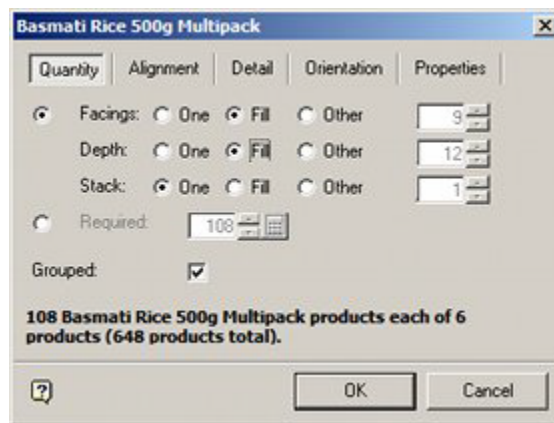
General Information

Reflected through from SKU...

Parameter	Comment
Name	The name of the display style is generally the same as the parent SKU with an addition (such as Hanging or Boxed) to show the physical form of the display style.
Description	The description of the display style is generally the same as the parent SKU with an addition (such as Hanging or Boxed) to show the physical form of the display style.
Client Code	The client code (if used) will normally be the same as for the parent SKU.
UPC	The UPC (if used) will normally be the same as for the parent SKU.
Code	The code (if used) will normally be the same as for the parent SKU.
Manufacturer	The manufacturer will normally be the same as for the parent SKU.
Display Style Type	Display Style Type is set from a drop down list. (This list can be configured from the Display Style types on the View menu in Product Studio.
Unit	If the display style type is one which holds multiple instances of a SKU item, the quantity should be set to that value. For example a multi pack might contain 6 items. This information is required for accurate reporting purposes.

Parameter	Comment
Sellable	The Sellable checkbox indicates whether the display style is for sale or is merely there to show the product. An example of a non-sellable display style would be when a television is taken out of its boxed and turned on. This is a flag that can be set for reporting purposes - for example in a KPI.
Requires Power	The Requires Power checkbox indicates in the display style requires power. An example of this type of display style would be a television that is to be shown working. This is a flag that can be set for reporting purposes - for example in a KPI.

Note: If the Display Style quantity is set to anything other than 1, when the product is placed in Merchandiser, the Quantity tab of the Add Products dialog box will show the total number of units of merchandise placed.



In the above example, 9 x 12 (=108) Display Styles has been placed. As each multi pack contains six SKUs, a total of 648 SKUs have been placed on that item of equipment.

Size and Shape Tab

The **Size and Shape Tab** allows the user to specify the Size and Shape of the product.

Parameter	Comment
Weight	Can be set to any positive numerical value - the units are specified in 'Weight Units' below.
Weight Units	Units are selected from a drop down menu and can be set to metric or imperial units.
Length Units	Units are selected from a drop down menu and can be set to metric or imperial units.
Finger space Above	This spin control sets the finger space above the products. At present this information is for information purposes only.
Finger space Beside	This spin control sets the finger space beside the products. At present this information is for information purposes only.
Shape	Shape is selected from a drop down list. It specifies the Product Block used for the product, and hence the general type of shape that will be displayed - box, cylinder, etc.
Color	This is the color used for simple representations of the product. It can be selected from a standard pallet.

Parameter	Comment
Material	This is the coloring form used when products are represented when shown as textured boxes. It is selected from a drop down list. (Materials are configured via the view pull down menu)
Jumble Factor	The Jumble Factor is a factor that can be used to allow for the lower packing density of loose objects. At present this information is for information purposes only.
Size	Length, depth can be set to any positive numerical value - the units being specified in 'Length Units' above. The size must be set to a positive value or the display style will error when being placed in Merchandiser.
Nesting	This specifies the degree to which one unit can be stacked inside each other. It is entered as a positive numerical value. (For example, 5 vases of height 300 mm and a nesting height of 50 mm would have a total height of 500 mm).
Crush Factor %	This specifies how much the dimensions of soft items (such as cushions) can be compressed when stacked. Crush factor does not apply to the top item in the stack as it is not being compressed. (Three items of 100 mm height with a crush factor of 25% would have a combined height of 250 mm: 75 mm + 75 mm + 100 mm).
Gap	This is the gap between multiple instances of a product. It can be set to any positive numerical value - the units being specified in 'Length Units' above. Half the gap is normally applied to each side of the product. Items stacked on top of each other will not normally have a height gap.
Min Stacking/Facings	This is the minimum number of products that can be placed in the facing, depth and height orientations.
Max Stacking/Facings	This is the maximum number of products that can be placed in the facing, depth and height orientations.

Styles Tab

The **Styles Tab** allows the user to specify the Style(s) associated with the product. These in turn determine which fixtures and shelves the product can be placed on. A product must have at least one style assigned before it can be placed - and that style must have a defined style relationship with the style on the object on which it is being placed.

Parameter	Comment
Available Styles	This is the list of styles that can be assigned to the product
Selected Units	This is the list of styles that have been assigned to the product.

Styles are selected or de-selected using the Selection Option buttons. Styles can be configured in the Administration Module. The Style Configuration button allows users to access this option.

Product Display Style - Example SKU - Hanging

Name: Example SKU - Hanging

Description: Example SKU: Examle SKU - Hanging

Client Code: ABCDEF Manufacturer: Generic Product

UPC: Display Style Type: Unit

Code: 12345678 Quantity: 1

Sellable: Requires Power:

Size & Shape | **Styles** | Images | Peg Holes | Orientation

Available Styles:

- Hung Product
- Binned Product

Selected Styles:

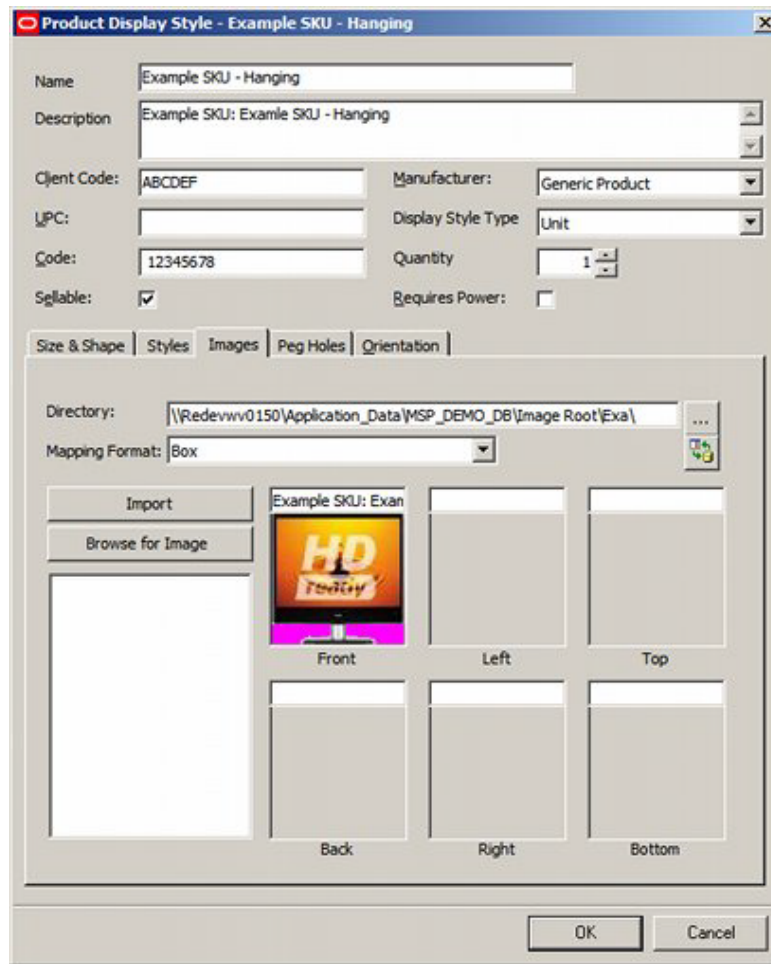
- Standard Shelved Equipment Display

OK Cancel

Images Tab

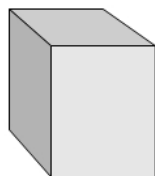
The **Images Tab** allows the user to specify the Images associated with the product. These will display when the product is placed in Macro Space Management Merchandiser if the Draw Products as Graphical option is selected to display the product.

Images can be imported into Macro Space Management (via Data Importer) or manually selected from the Image Capture directory specified in the Configuration Module.

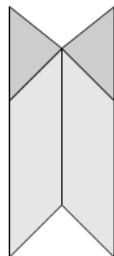


The Directory is the directory that the imported image is held in.

The Mapping Format specifies whether the images are to be shown using a box or a cross format.



In a Box format, the images are placed on each of the six sides of a cuboid, so the left, right, front back, top and bottom images can be seen depending on which direction the product is being viewed from.

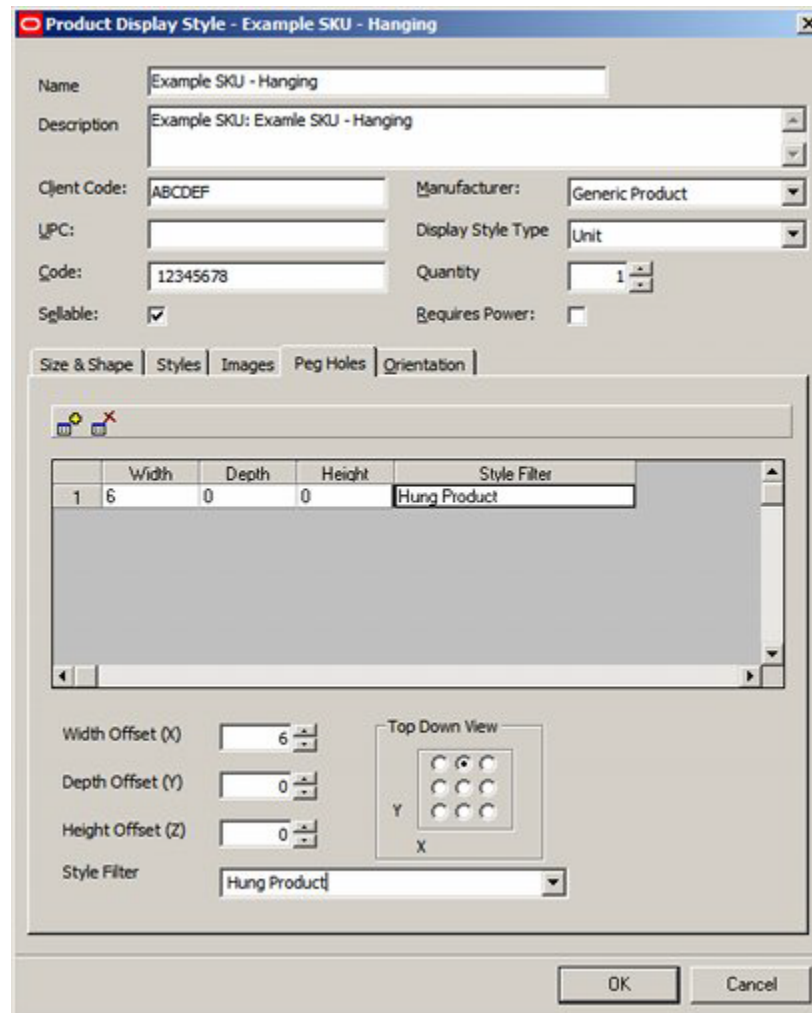


In a Cross format, the images are placed on the sides of a vertically aligned cross. This allows users to see images when rotating around it in the horizontal axis, but not when viewing it from above or below. Images that can be associated with a product are found in the Image Capture directory (specified in the Configuration Module). When assigned, they are stored in the Image Root and its associated sub-directories.

Note: Full details of how to import images are in the section on Importing Product Images.

Peg Holes

The **Peg Holes Tab** allows the user to specify the Peg Holes associated with the product.



The **Peg Hole Toolbar** allows users to add a new peg hole to the product, or to delete an existing, highlighted one.

The **Peg Hole Settings** allow the user to define the position of the peg hole. This may be done either using the radio buttons, or by using the spin controls to set the X, Y and Z offsets.

The **Defined Pegs Holes** show the settings defined for each peg hole. In this example, one peg hole has been defined midway across the top of the product.

The **Style Filter** is used when multiple styles have been assigned to the product on the Styles tab. If the fixture or shelf object also has multiple styles assigned, the style filter can be used to pick which style is preferred.

Orientation Tab

The Orientation tab is used to specify which positions an item of Merchandise can assume when placed on a shelf object.

The screenshot shows a dialog box titled "Product Display Style - Example SKU - Hanging". It contains several input fields and checkboxes. The "Orientation" tab is selected, showing two panels: "Default Orientation" and "Preferred Orientations".

Default Orientation:

	0	90	180	270
Top	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Front	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bottom	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Left	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Right	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Back	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Preferred Orientations:

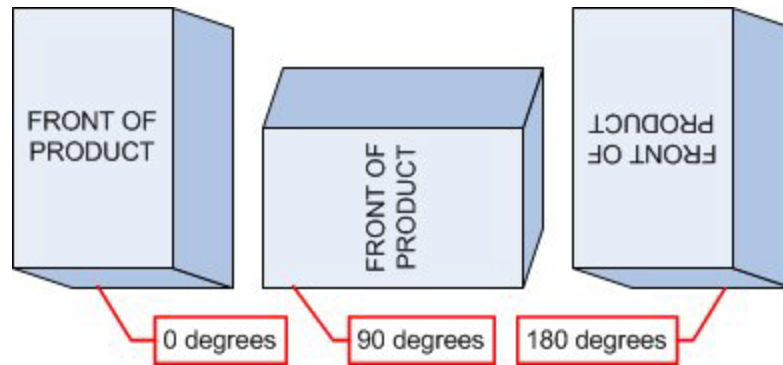
Allow all orientations

	0	90	180	270
Top	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Front	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bottom	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Left	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Right	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Back	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Buttons: OK, Cancel

An example where this functionality would be used is for a vase. This would be placed upright on a shelf, and not on its side. The default orientation is a combination of two factors:

- Which side of the product is facing the front of the fixture or shelf - for example the top or back.
- How that side of the product has been rotated.



In the above example, the default orientation is 'Front', while rotations of 0 degrees, 90 degrees and 180 degrees are illustrated.

Preferred Orientations

The check boxes in the Preferred Orientations frame can be used to indicate permissible orientations. There are six orientations that the product can be placed:

- The top of the product could be facing the front of the shelf of fixture.
- The front of the product could be facing the front of the shelf of fixture.
- The bottom of the product could be facing the front of the shelf of fixture.
- The left of the product could be facing the front of the shelf of fixture.
- The right of the product could be facing the front of the shelf of fixture.
- The back of the product could be facing the front of the shelf of fixture.

There are four rotations that can be given to the product.

- 0 degrees
- 90 degrees
- 180 degrees
- 270 degrees

These combinations of what faces the front of the fixture or shelf and a rotation are not unique. For example, 'Front' rotated 90 degrees is the same as 'Left' rotated 0 degrees.

Preferred orientations can be configured by means of the check boxes.

Default Orientation

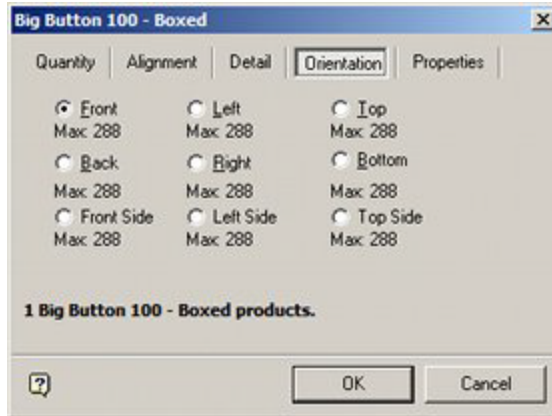
The default orientation is the orientation the Display Style takes when first placed on a fixture or shelf object.

The default orientation is configured by means of a radio button.

Note: The orientation functionality can be populated by data import or manual selection. The information can then be used for reporting purposes. There is currently no restriction placed on the orientation when placing a Display Style in the Merchandiser module - this functionality is in the process of being developed.

Selecting the orientation when placing the Display Style

The orientation when placing the Display Style in Merchandiser is selected from the Orientation tab of the Add Display Style dialog box. The orientation tab in the Display Style dialog box in Product Studio currently places no restrictions on the orientations that can be selected.



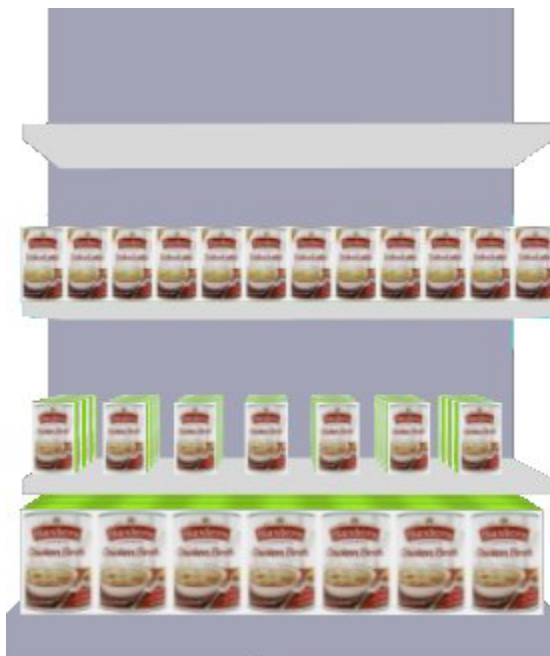
Note: At present this information can only be used for reporting purposes - it has no effect on actual product placement.

Display Style Functionality

Display Style functionality can only be seen operating in the Merchandiser module and in Front and Shelf Graphical view in In-Store Space Collaboration.

Gap

If a gap is set for a product, when that product is ungrouped, it will show the products separated by the specified gap.



The bottom shelf in the above diagram shows the grouped products.

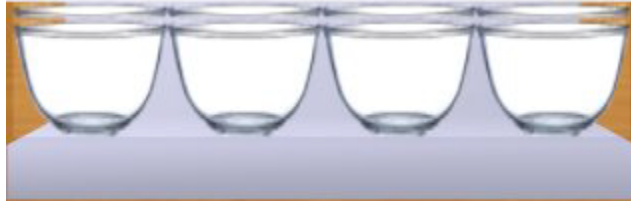
Note: while products are grouped, they are scales to show the size including the gap.

The middle shelf shows a similar product but now ungrouped.

The top shelf shows a similar product without a gap set.

Nested Products

The image below shows an example of nested products.



This option is typically used when objects like bowls or vases are stacked inside each other.

Other Product Studio Options

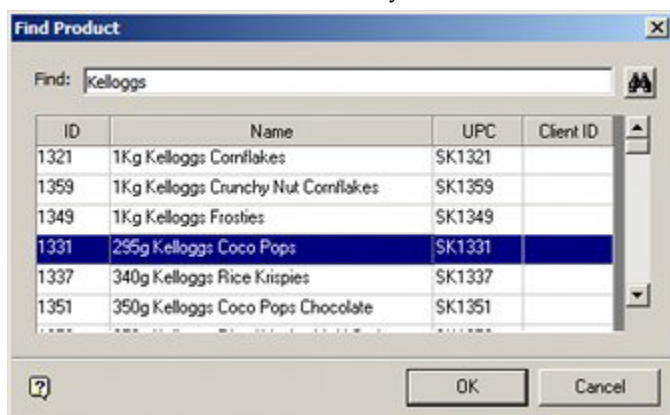
Find Option

The **Find Option** can be accessed from the View pull down menu or by pressing <Ctrl + F>. To use the Find option, complete the following steps:

1. In the Find field, enter a value (wild cards such as ? are allowed).

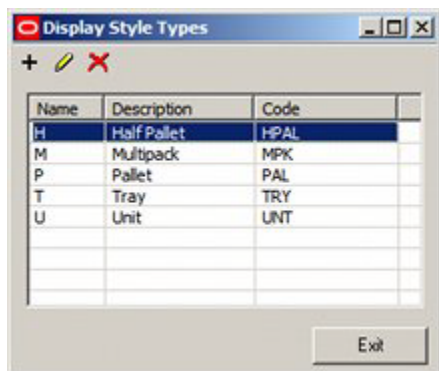
Note: If no wild card is used, implied wildcards are assumed: Find will search for all text containing the text string.

2. Click the Search icon to bring up a list of products matching the search string.
3. Highlight the required item in the result list, and click on OK to open the pertinent node in the Product hierarchy.



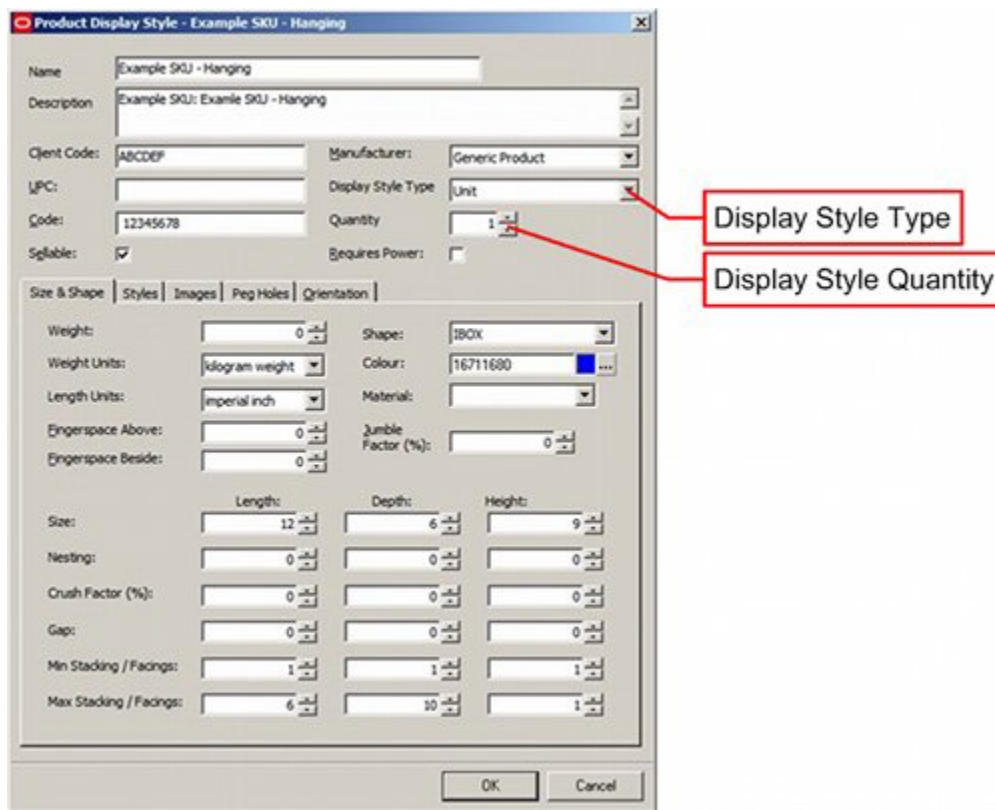
Display Style Types

The **Display Style Types** option is accessed from the View menu in Product Studio. The Add, Edit and Delete icons on the toolbar allow the list to be configured.

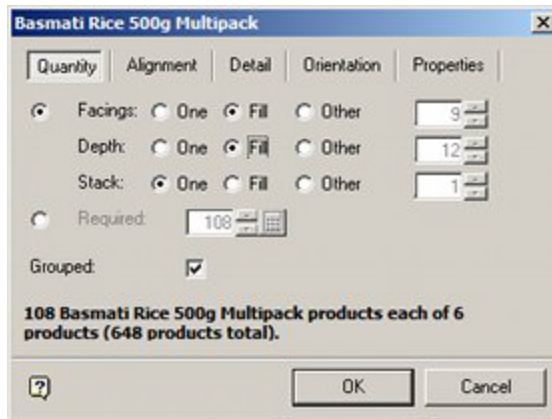


Parameter	Comment
Name	The name should be a single character. This character must be unique as it acts as the identifier (primary key) in the database.
Description	The description is the Display Style Type.
Code	The code is used as look-up when importing data. It is often used when the third-party database product data is being imported from does not have a display style type description, but merely a code. The Code is also used when manually or semi-automatically importing images to be associated with Display Styles.

The information is used to configure the list of Display Style Types that can be set in the Size & Shape tab of the display Styles dialog box.



If the Display Style quantity is set to anything other than 1, when the product is placed in Merchandiser, the Quantity tab of the Add Products dialog box will show the total number of units of merchandise placed.



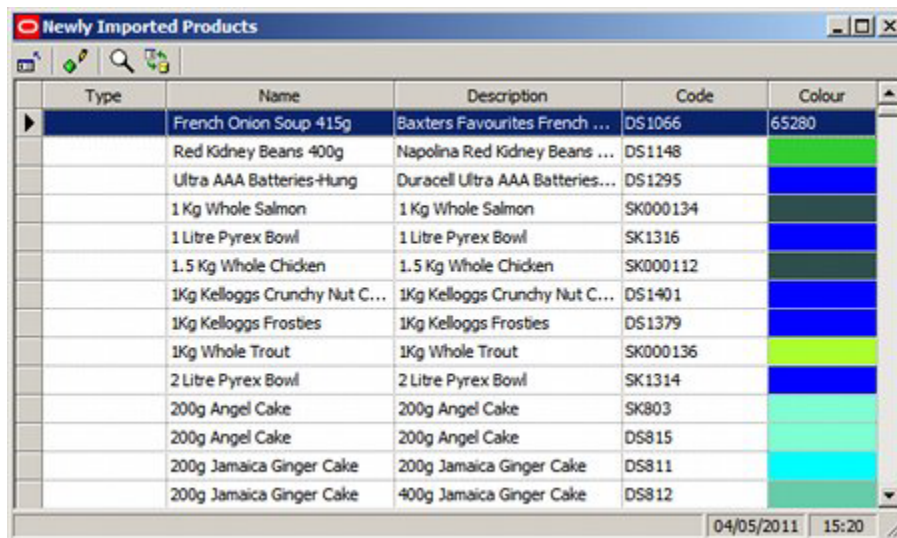
In the above example, 9 x 12 (=108) Display Styles has been placed. As each multi pack contains six SKUs, a total of 648 SKUs have been placed on that item of equipment.

Note: When reporting product quantities, the number of items in multi packs, etc, should be taken into account.

Newly Imported Products

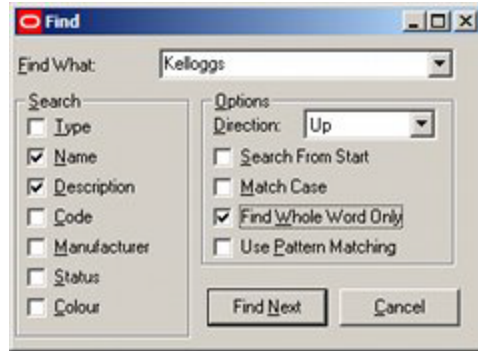
The **Newly Imported Products** dialog box allows users to find recently imported products. These often require editing if imported from an external database. This is because products defined in an external system may lack information required by Macro Space Management such as dimensions or images.

It can be accessed from the View pull down menu and will populate upon being selected with all products that have not been modified since the last import date.



The toolbar allows users to close the dialog, edit a selected item, find an item or refresh the list with the latest information from the database.

The Find dialog box is called from the toolbar.



It allows users to find items in the list of newly imported products.

1. In the Find field, enter a value (wild cards such as ? are allowed).

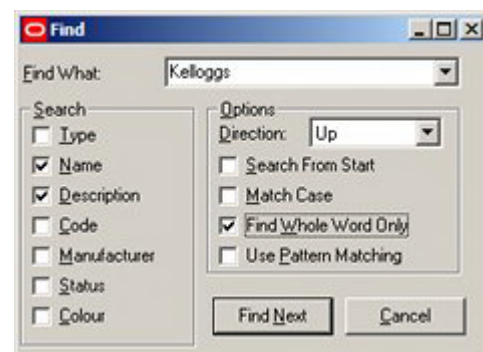
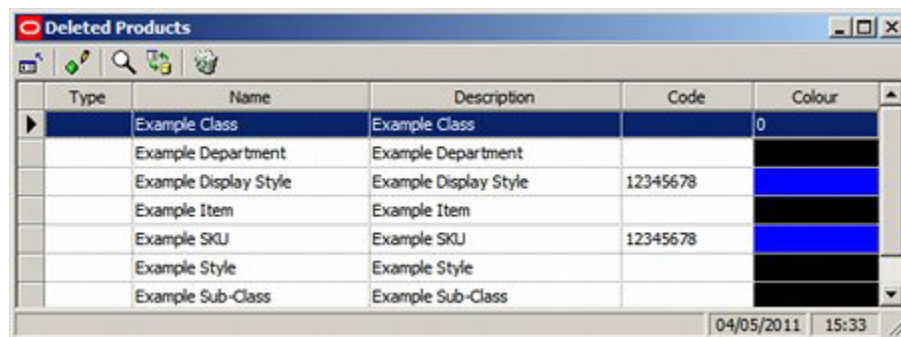
Note: If no wild card is used, implied wild cards are assumed: Find will search for all text containing the text string.

2. Check the required fields in the Search frame.
3. Set the search direction and other options in the Options frame
4. Click on Find Next to highlight a product in the list.

Deleted Products

The **Deleted Products** dialog box contains the list of all products marked for deletion.

The toolbar allows users to close the dialog box, edit a selected product, find a product, refresh the list of deleted products with the latest information from the database or restore a deleted product to the product hierarchy.



It allows users to find items in the list of newly imported products.

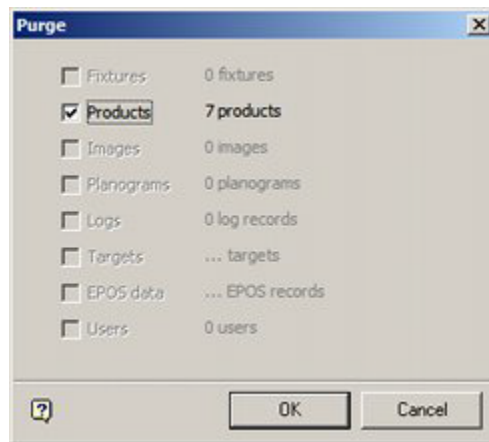
1. In the Find field, enter a value (wild cards such as ? are allowed).

Note: If no wild card is used, implied wild cards are assumed: Find will search for all text containing the text string.

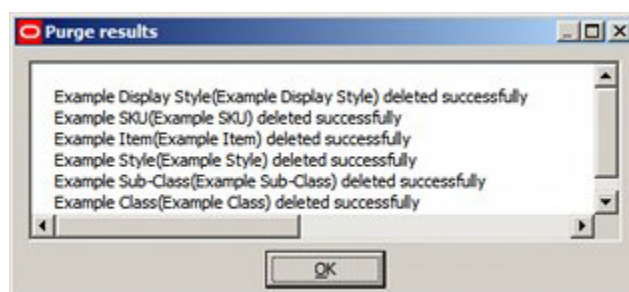
2. Check the required fields in the Search frame.
3. Set the search direction and other options in the Options frame
4. Click on Find Next to highlight a product in the list.

Purging Deleted Products

Deleted products can only be permanently removed from the database in the Administration Module. From the Administration Module, select **Tools - Purge**. This will bring up the Purge dialog as follows:



Checking the Products option and clicking OK will result in products in the deleted items list being permanently removed from the Macro Space Planning database. The results will be confirmed in a dialog box.

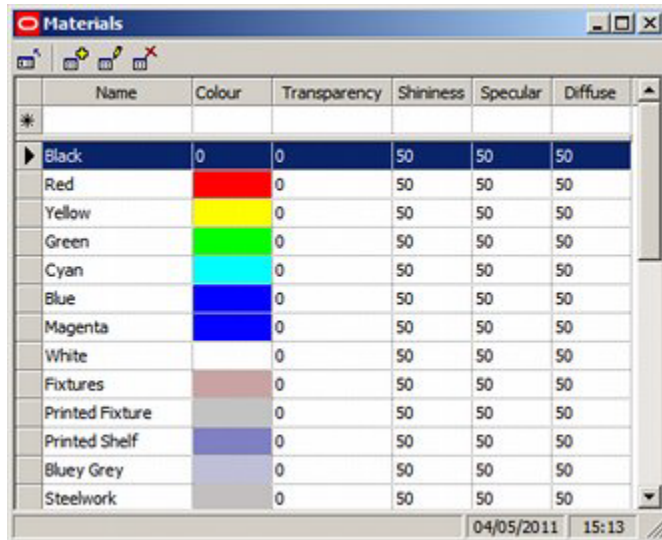


Materials

The **Materials option** allows users to configure the Materials using to color equipment. It is accessed from the View menu.

- Material colors can be added, edited or deleted using the toolbar.
- Transparency can range between 0 (opaque) to 100 (fully transparent).
- Shininess can range between 0 (matt) to 100 (shiny).

- Specular values can range between 0 (light only reflects in one direction) to 100 (light reflects in all directions).
- Diffuse values can range between 0 (light is not diffused) to 100 (light is diffused in all directions).



The screenshot shows a window titled 'Materials' with a table of material properties. The table has columns for Name, Colour, Transparency, Shininess, Specular, and Diffuse. The materials listed are Black, Red, Yellow, Green, Cyan, Blue, Magenta, White, Fixtures, Printed Fixture, Printed Shelf, Bluey Grey, and Steelwork. Each material has a corresponding color swatch and numerical values for the properties.

Name	Colour	Transparency	Shininess	Specular	Diffuse
Black	0	0	50	50	50
Red	0	0	50	50	50
Yellow	0	0	50	50	50
Green	0	0	50	50	50
Cyan	0	0	50	50	50
Blue	0	0	50	50	50
Magenta	0	0	50	50	50
White	0	0	50	50	50
Fixtures	0	0	50	50	50
Printed Fixture	0	0	50	50	50
Printed Shelf	0	0	50	50	50
Bluey Grey	0	0	50	50	50
Steelwork	0	0	50	50	50

The status bar at the bottom of the window shows the date 04/05/2011 and the time 15:13.