Guide

Getting started with Telelogic® Focal Point™

Version 1.6

09 October 2008

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Introduction

The objective of this document is to guide you as an inexperienced Telelogic® Focal Point™ user through some of the basics in Focal Point, from setting up a simple module, through prioritization and visualization, to printing. You will touch upon the basic decision-making mechanisms, and learn something about how to analyze and draw conclusions from the results. In concrete terms, you will add a module that can contain information about cars, add some cars, prioritize them with regards to design and cost, and then see which one is "best".

In order for you to better understand the terminology used, we first of all want to introduce you to some basic concepts:

- Module – The repository in which you store all information is structured in a number of modules. Different types of information are handled in different *modules.* A module contains elements and all elements within the same module share the same set of attributes. It is therefore a good idea to build up a module for each type of information. It may also be a good idea to have different modules for different levels of information.
- Element – Each module contains a number of elements. For example, a module called Cars contains the elements SAAB, Toyota, Porsche, Volvo, Audi, Mercedes, and Jaguar.
- Attribute – All elements are built up by a set of attributes. For example, the element SAAB contains the attributes ID, Title, Description, Type, and Price.
- View – a view is a way of displaying information stored in the repository (the modules). Only administrators have access to the repository – normal users only see information through views that the administrator creates. A definition of a view is "what the user is *allowed* to see and it normally contains only a subset of the information in the repository". For example, a view can be defined to display only elements that have status New or all elements that have been assigned to a certain user etc.

Prerequisites

To follow this guide, you need to be administrator for a workspace in a Focal Point installation. You may either have installed a local version of the tool on your computer, or have access to a hosted installation. The example and the screenshots in this document are based on a completely fresh workspace, with no other modules than the ones that are created automatically with a new workspace. However, it is not a requirement to have an empty workspace; the module in the example could be created in any workspace.

The screenshots in this guide are based on Focal Point version 6.3.

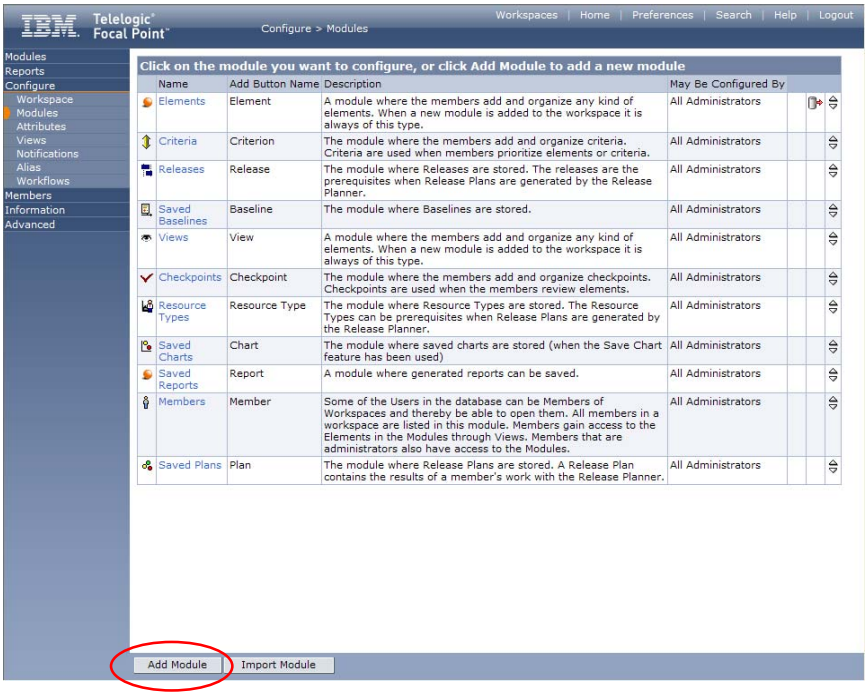
Create a module of elements

The first step is to create a module that can contain the elements that we want to manage. You need to be a workspace administrator to create and change the module definition. When the module is created you will be asked about what information attributes (e.g., size, speed, status) you would like the elements to contain.

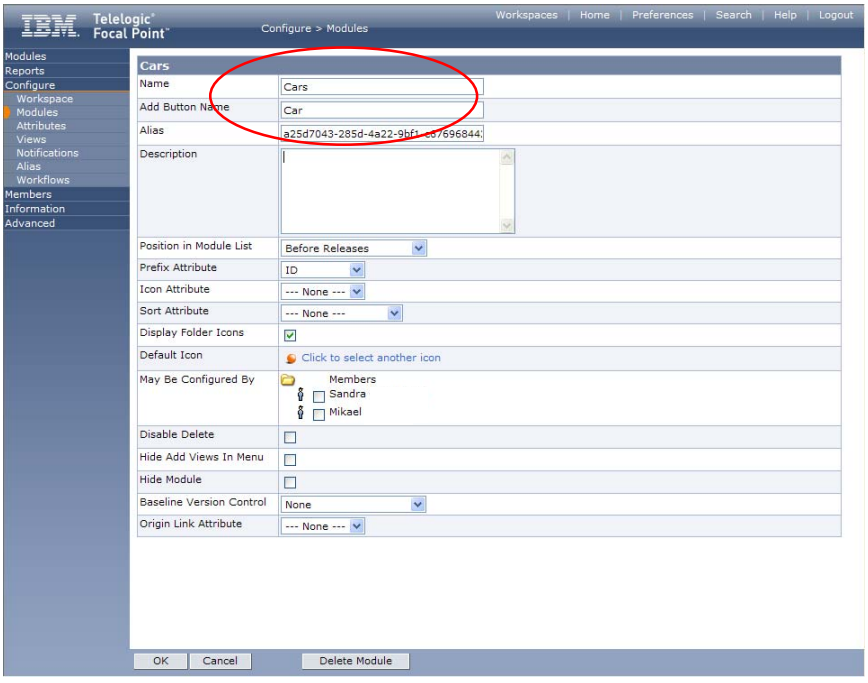
1. Click on **Configure** in the navigation bar and then **Modules**.

This brings up a list of all the available modules. (You may have other modules in your list than shown below)

2. Click on the Add Module button.



3. Give the new module a name, e.g. “Cars”, a label for the “Add” button that will show up later, a short description.

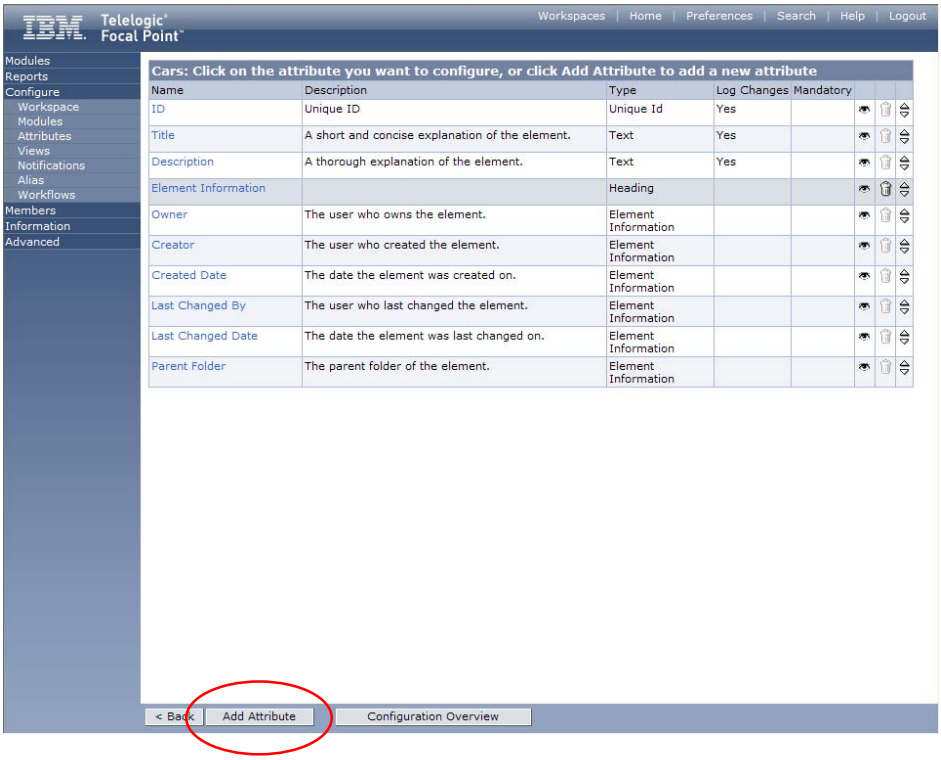


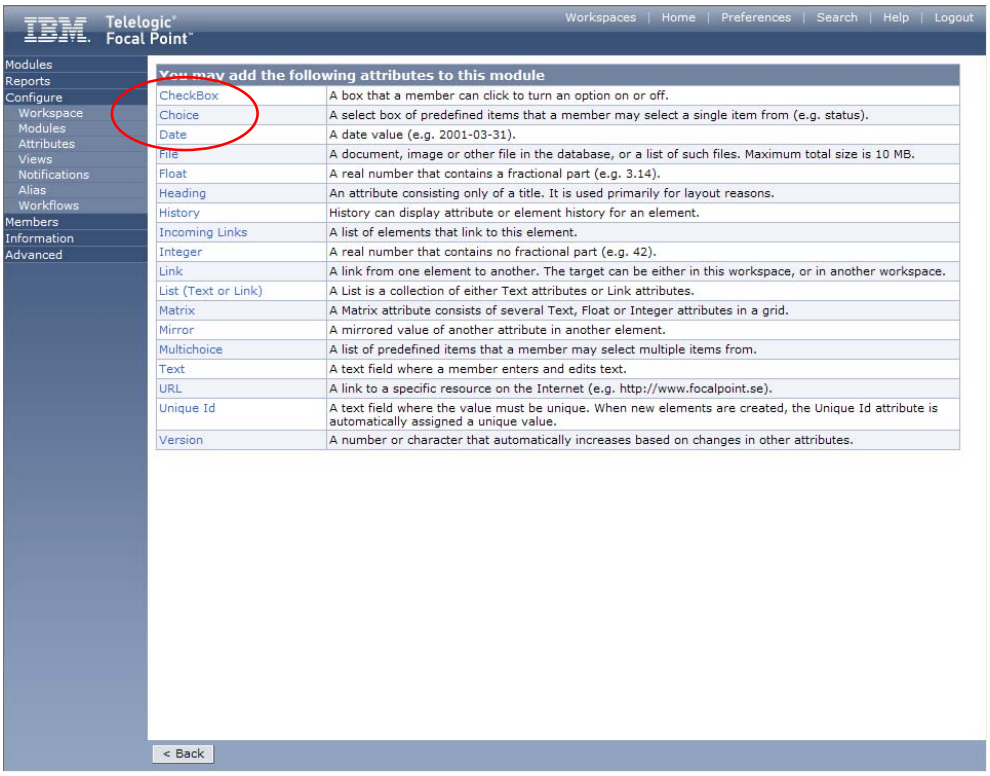
Click OK!

Add attributes that describe the elements

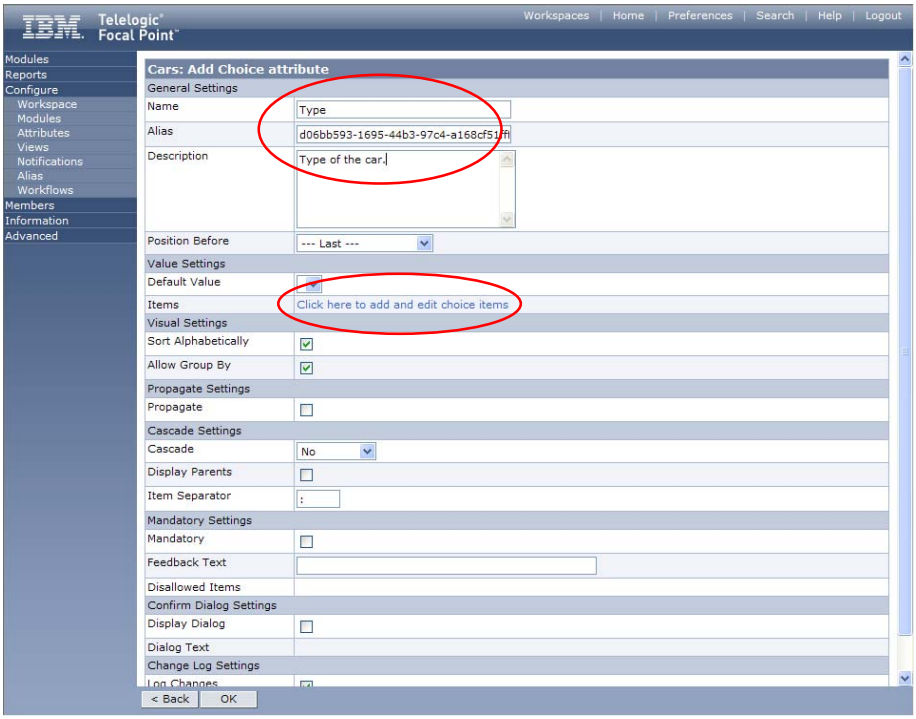
Now, in the pop-up window, you will be asked to define attributes for your new module. Press OK to confirm the question. You will see a list of all pre-defined attributes. These are common and useful attributes that you probably want to leave in there. However, for various reasons we may for example want to carry information about the *Type* of car, and the *Price*. For this you need to add two more attributes to this list.

1. First we will add the Type attribute, which is a typical choice type of attribute since it can be only one of a predefined set, in this case: Sports, Sedan or Estate.. Click Add Attribute and then Choice.



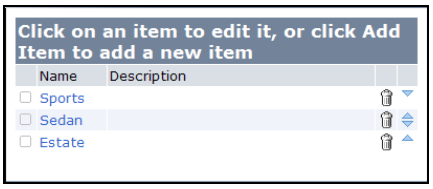


2. Edit the name and the description of the attribute, and then click to add choice items



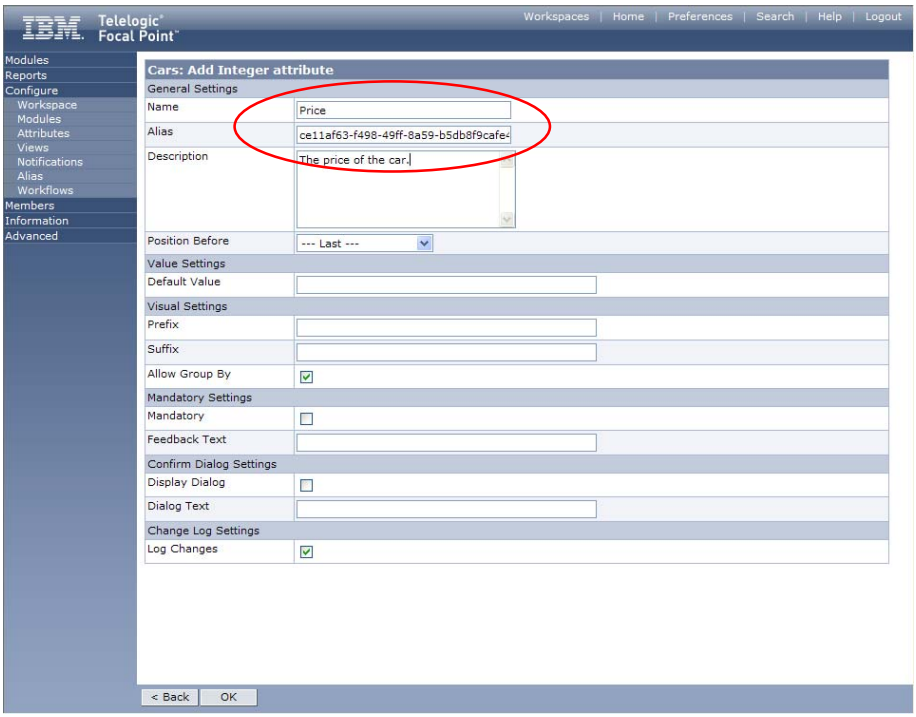
3. For each of the three items: Sports, Sedan, Estate, click Add Item and fill in the name:

You should now have a list like this:

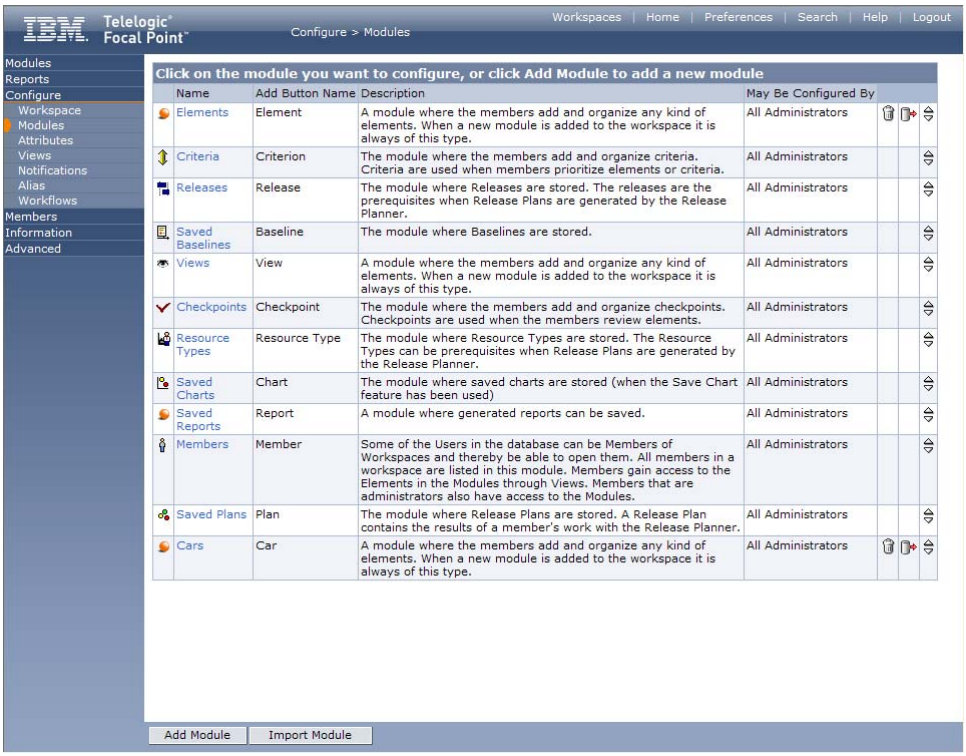


4. Then click OK twice to get back to the list of attributes. Note that the Type attribute is positioned last in the list. You may move it up and down the list by clicking the arrows in the list.

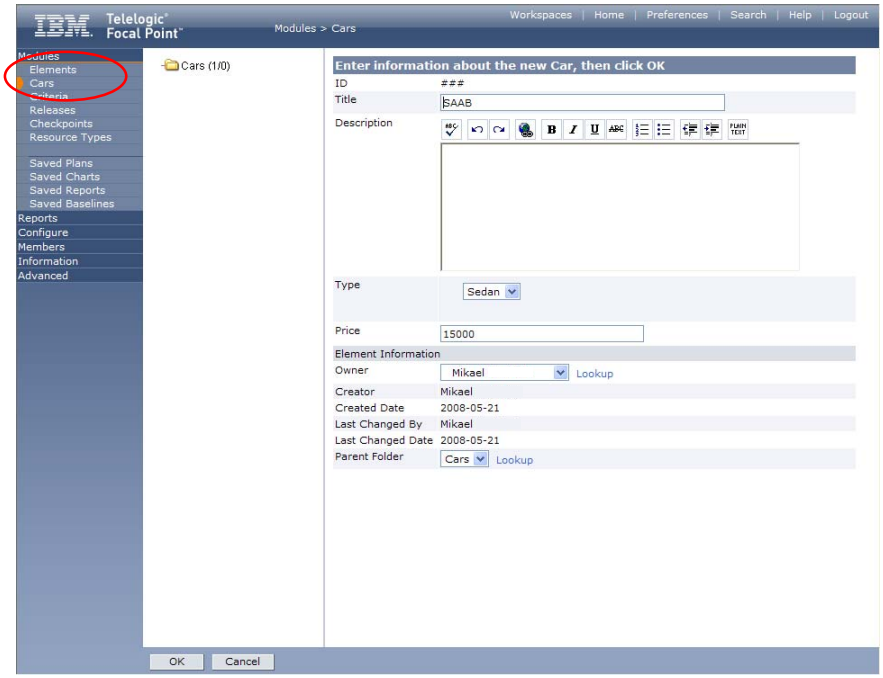
5. Now, add the Price attribute. This is a typical integer. Click Add attribute and select Integer.



6. We now have a module that contains elements representing car information. Let's see what it looks like.



7. Click Modules in the left navigation bar and then Cars, which brings us to the tree view of cars. This is of course empty still. To add cars to your module, click the Add Car button at the lower frame

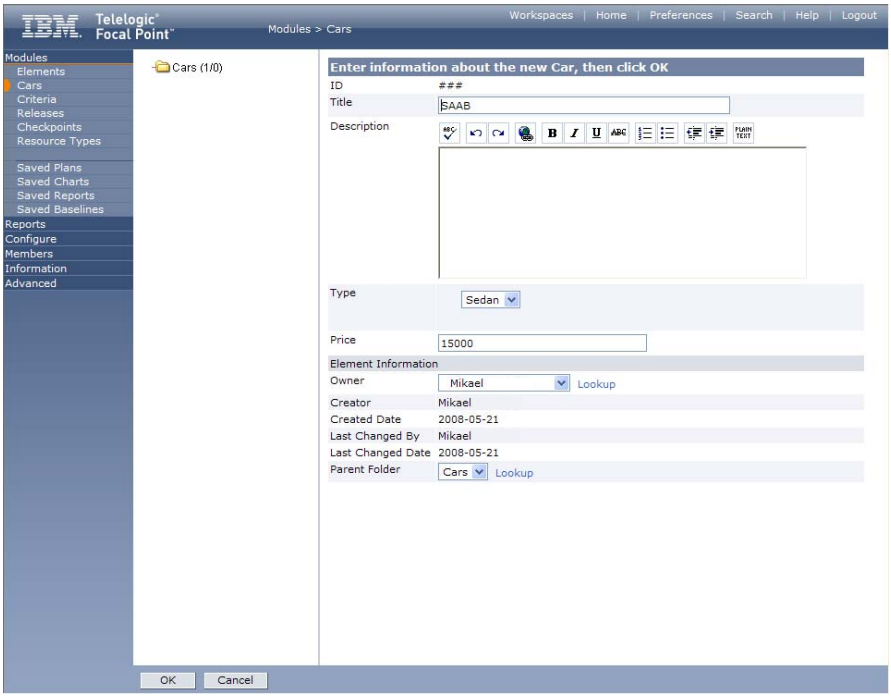


Add elements

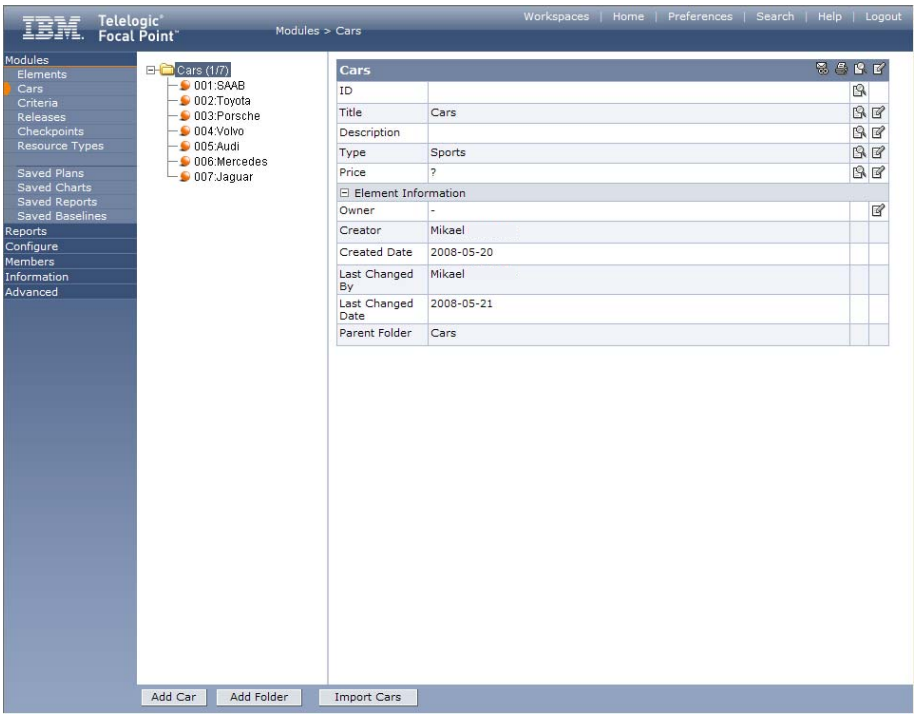
1. Add the following cars by filling out the Title, Type and Price attributes (neglect the rest until later) according to the following:

Title (make)	**Type**	**Price**
SAAB	Sedan	15000
Toyota	Estate	13000
Porsche	Sports	26000
Volvo	Estate	14000
Audi	Sedan	18000
Mercedes	Estate	20000
Jaguar	Sports	28000

Confirm each addition by clicking OK.



2. After this is done, you will have a module with 7 elements:

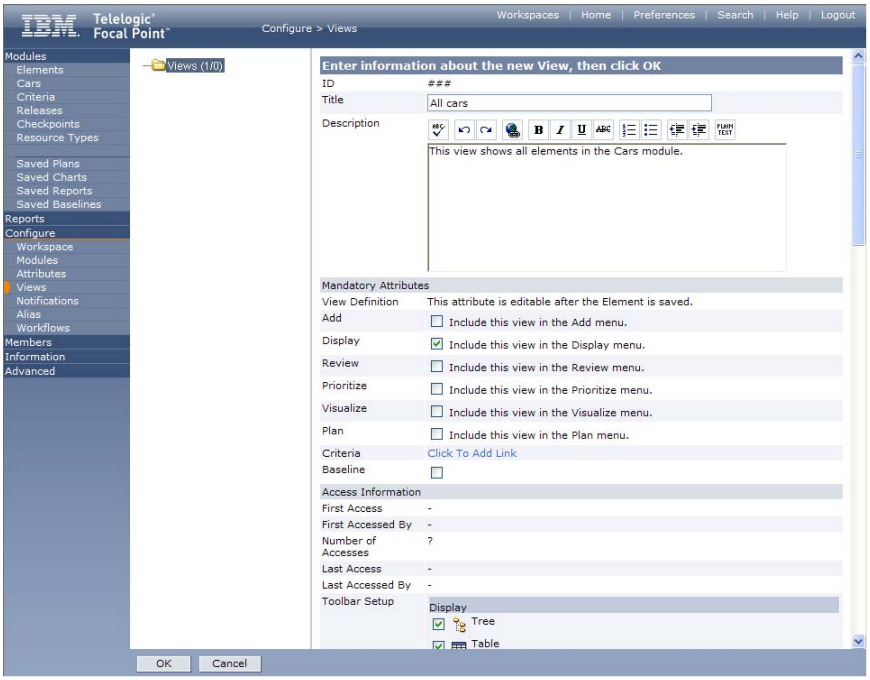


Create a view of the elements

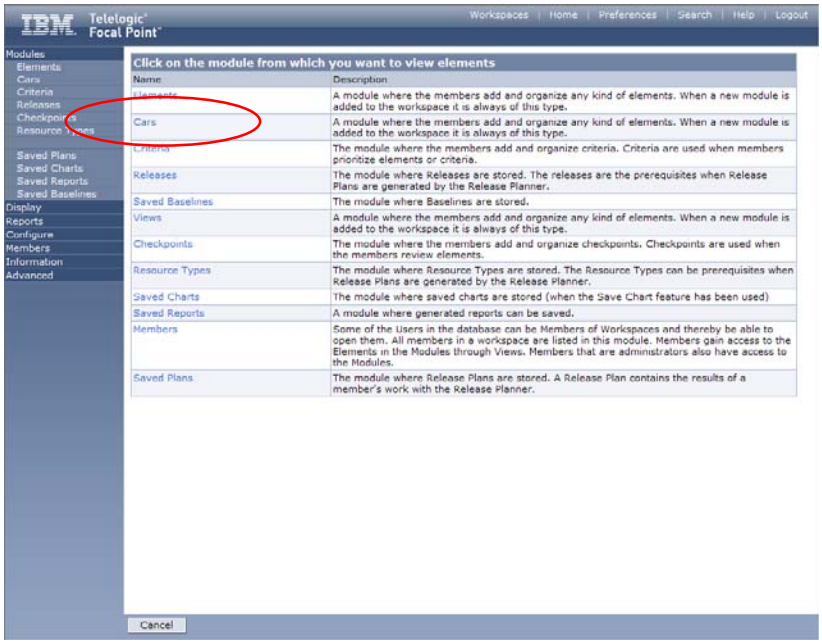
So far, you have been working with the Focal Point repository directly. You can add, delete and change elements in the repository, but to start exploring the unique features of Focal Point, you have to define a view of the elements. Unless you are a workspace administrator you will not have access to the repository directly, but always via views defined by the administrator. Views thus define what the user is *allowed* to see.

You can define a view that only shows Estate cars, only those costing less than 20000, or only those that a specific user created after a specific date etc. However, we will now create a view that shows *all* the elements.

1. Click on the Views in Configure, and then on the button Add View. Fill in the Title and Description fields:



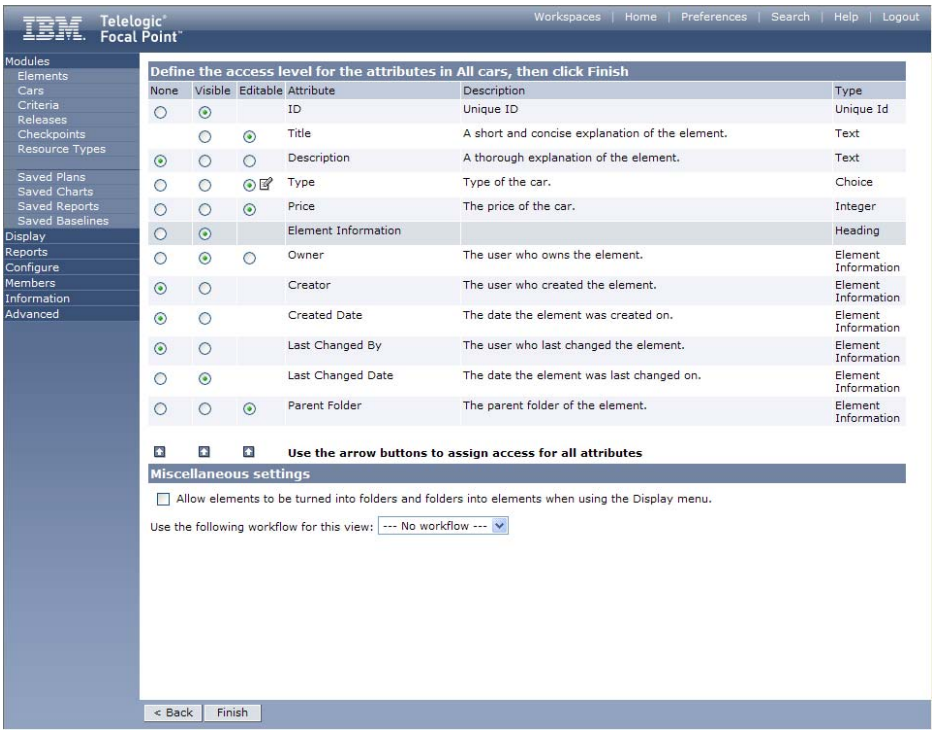
2. Leave all the other attributes as they are and click OK. This will bring you to a list of available modules, where you define what module the view should be applied to:



3. Select the module Cars in the list of Modules on the left. This starts a wizard that guides you through a series of steps. First in this series is a general selection rule:

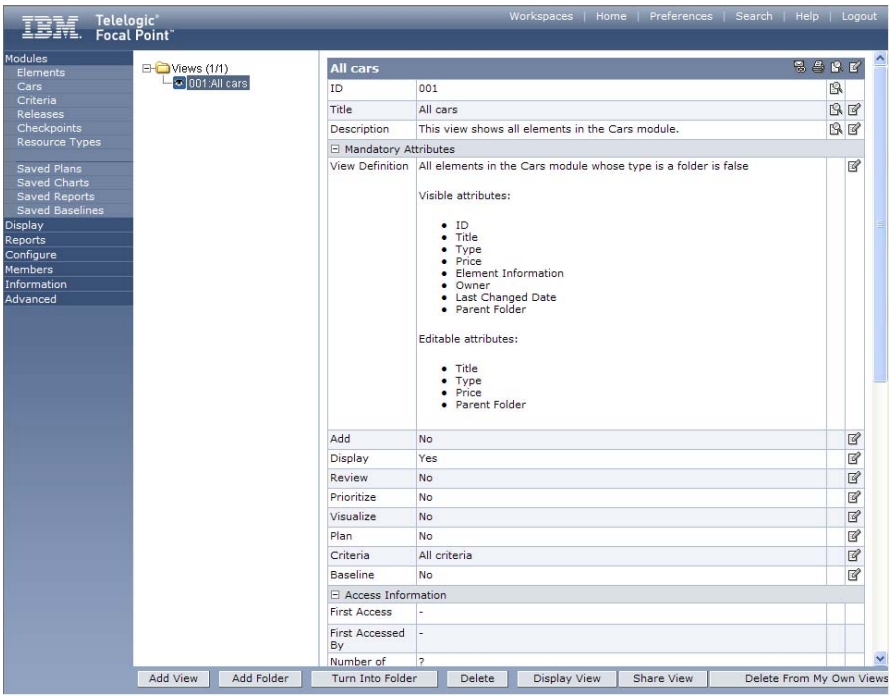
This text means that the view should show all the elements that are not folders. The elements can be structured in a folder hierarchy, and sometimes these should be shown and sometimes not. Just leave the defaults and click OK.

4. Now, click the  button, which brings you a window where you can define what attributes should be visible and editable via the view:



Since there are several administrative attributes that we may not be interested in, let's hide some of them. Make the choices between None, Visible and Editable according to the above selection.

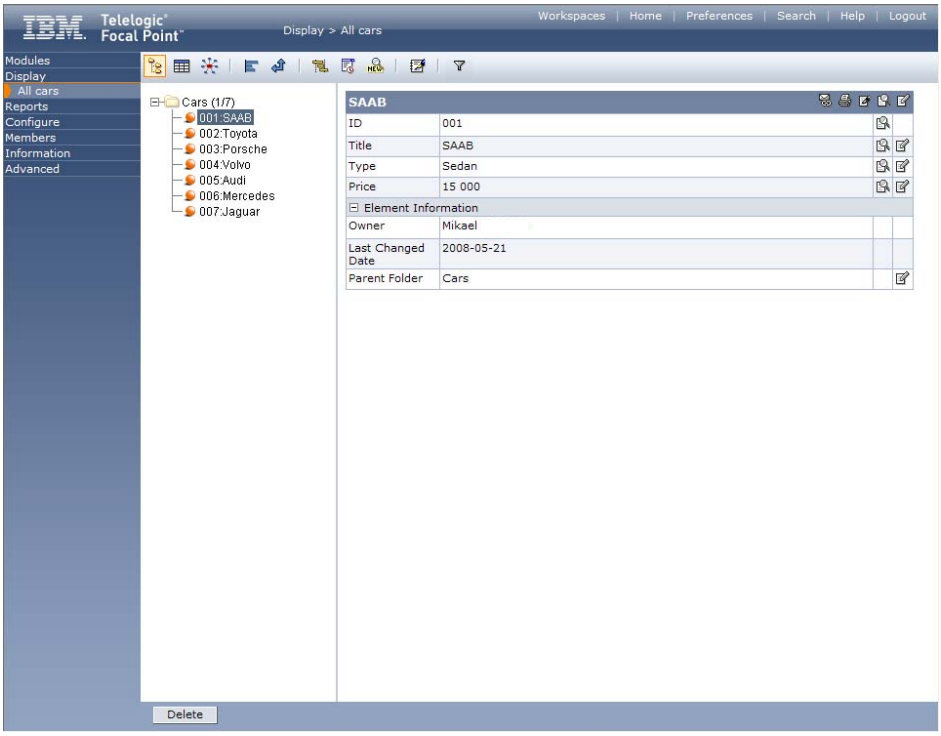
5. By clicking the Finish button we will be brought back to the tree structure of the Views and the view definition is shown: "All elements in the Cars module whose type is a folder is false".



6. Since we defined that the view should be visible in Display menu section (this was set by default in the first step of creating a new view), it should now appear if we click Display in the navigation bar. So click Display and then “All cars” to show the contents of the view you just created.

Display the elements

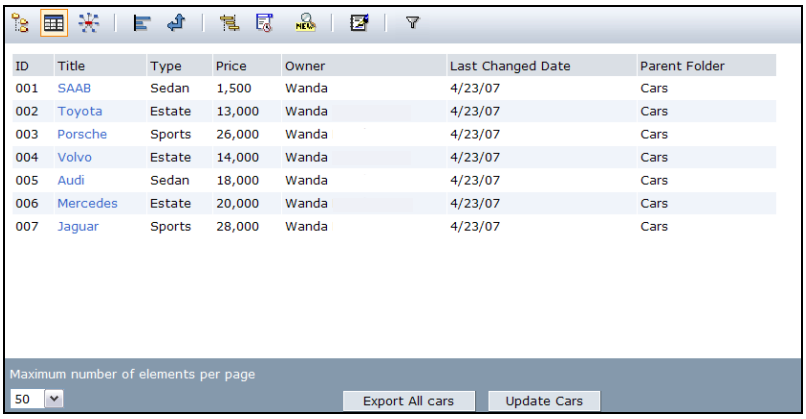
Focal Point has several very powerful display techniques that are suitable in various situations. Let's just go through a few of them. One common display mode is the tree view which we have already seen in the Cars Module (the repository). However, as we now use the view definition that we created, some of the attributes are hidden.



All display modes are available at a click of the mouse:

From left to right, these modes are called: **Tree**, **Table**, **Relational graph**, **Attribute statistics**, **Traceability Matrix**, **Gantt**, **History** and **What's New**. Not all these modes make much sense with our small Cars example, so some of them, will be shown with other data, just to give an idea of what they can be used for.

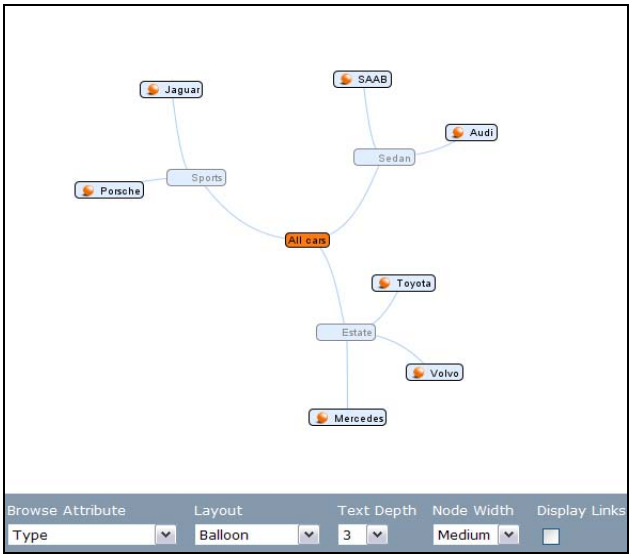
1. Let's start with the Table mode  :



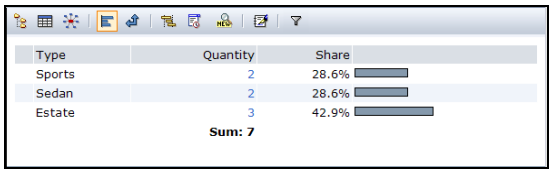
ID	Title	Type	Price	Owner	Last Changed Date	Parent Folder
001	SAAB	Sedan	1,500	Wanda	4/23/07	Cars
002	Toyota	Estate	13,000	Wanda	4/23/07	Cars
003	Porsche	Sports	26,000	Wanda	4/23/07	Cars
004	Volvo	Estate	14,000	Wanda	4/23/07	Cars
005	Audi	Sedan	18,000	Wanda	4/23/07	Cars
006	Mercedes	Estate	20,000	Wanda	4/23/07	Cars
007	Jaguar	Sports	28,000	Wanda	4/23/07	Cars

2. Here, you get a good overview of all the elements and all the visible attributes. You may also sort the elements on any attribute. To sort the elements alphabetically according to Title, just click Title.

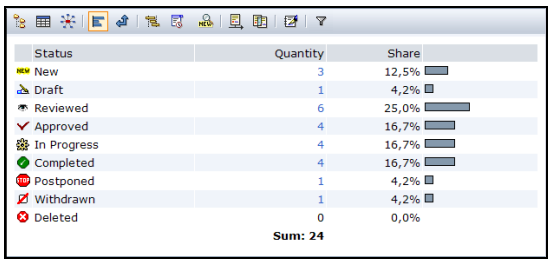
3. In the Relational graph  you may dynamically see all relationships between the element, either structural (e.g., by type of car, as below) or linked (but there are no links in our example yet). Please note the settings in the bottom frame to get this view:



4. The Attribute statistics mode  can be used to summarize facts about your elements, such as how many cars are Sports cars in our Cars example, how many of your requirements have the status “New”, or how many requirements is currently in particular status of development, in another example.



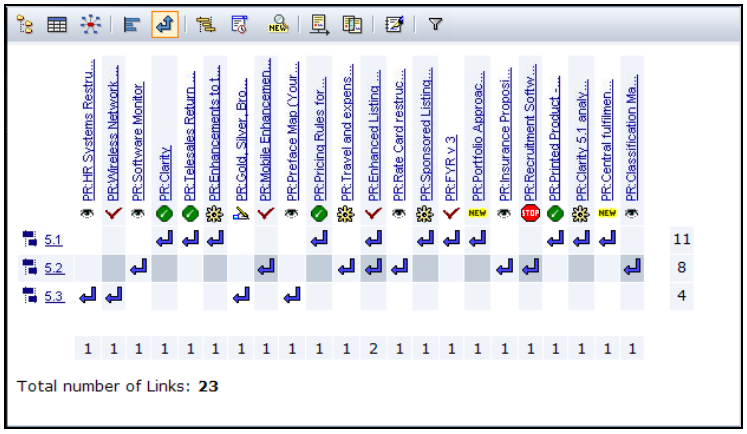
Type	Quantity	Share
Sports	2	28.6%
Sedan	2	28.6%
Estate	3	42.9%
	Sum: 7	



Status	Quantity	Share
New	3	12,5%
Draft	1	4,2%
Reviewed	6	25,0%
Approved	4	16,7%
In Progress	4	16,7%
Completed	4	16,7%
Postponed	1	4,2%
Withdrawn	1	4,2%
Deleted	0	0,0%
	Sum: 24	

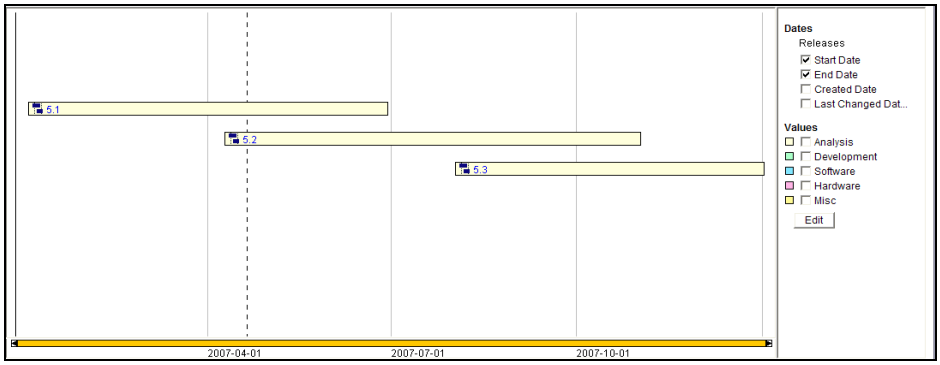
Note! This example is based on other data!

5. The Traceability matrix can be used to show relationships between elements:



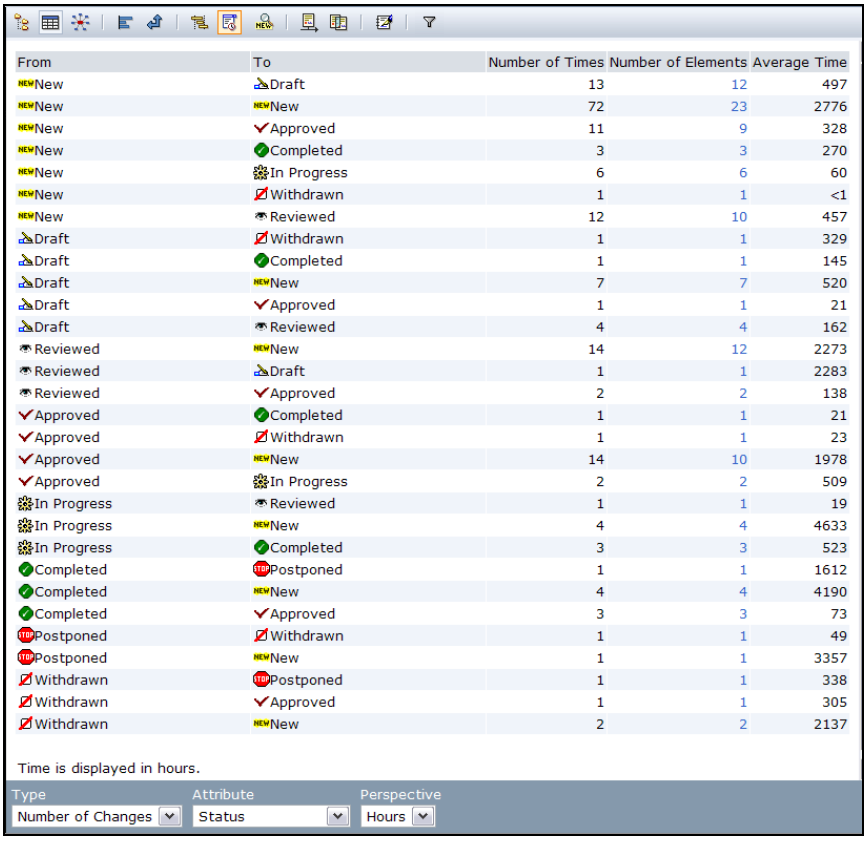
Note! This example is based on other data!

6. The Gantt mode is suitable when the time dimension is important, such as when a set of release projects should be viewed:



Note! This example is based on other data!

7. The History mode  may show how attributes of the type Choice have changed over time, for example. The following example shows how the Status attribute of a set of requirements have changed, so that conclusions can be drawn about the development process:



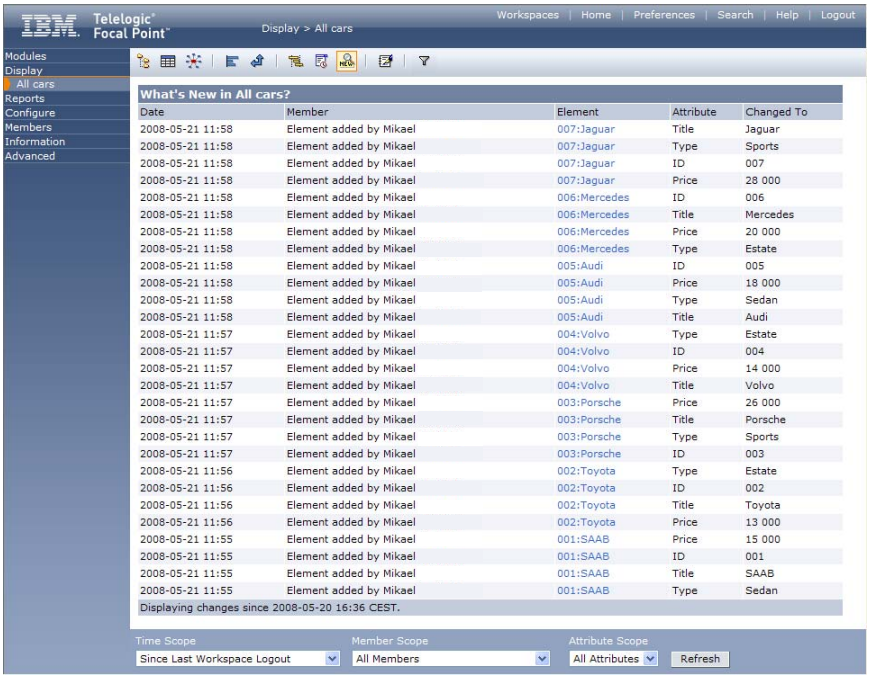
From	To	Number of Times	Number of Elements	Average Time
New	Draft	13	12	497
New	New	72	23	2776
New	Approved	11	9	328
New	Completed	3	3	270
New	In Progress	6	6	60
New	Withdrawn	1	1	<1
New	Reviewed	12	10	457
Draft	Withdrawn	1	1	329
Draft	Completed	1	1	145
Draft	New	7	7	520
Draft	Approved	1	1	21
Draft	Reviewed	4	4	162
Reviewed	New	14	12	2273
Reviewed	Draft	1	1	2283
Reviewed	Approved	2	2	138
Approved	Completed	1	1	21
Approved	Withdrawn	1	1	23
Approved	New	14	10	1978
Approved	In Progress	2	2	509
In Progress	Reviewed	1	1	19
In Progress	New	4	4	4633
In Progress	Completed	3	3	523
Completed	Postponed	1	1	1612
Completed	New	4	4	4190
Completed	Approved	3	3	73
Postponed	Withdrawn	1	1	49
Postponed	New	1	1	3357
Withdrawn	Postponed	1	1	338
Withdrawn	Approved	1	1	305
Withdrawn	New	2	2	2137

Time is displayed in hours.

Type: Number of Changes | Attribute: Status | Perspective: Hours

Note! This example is based on other data!

8. Finally, the What's New mode  may be used to spot changes that, for example, have been made since you last logged out, or for the last 8 hours and only the Type attribute, as in the following:



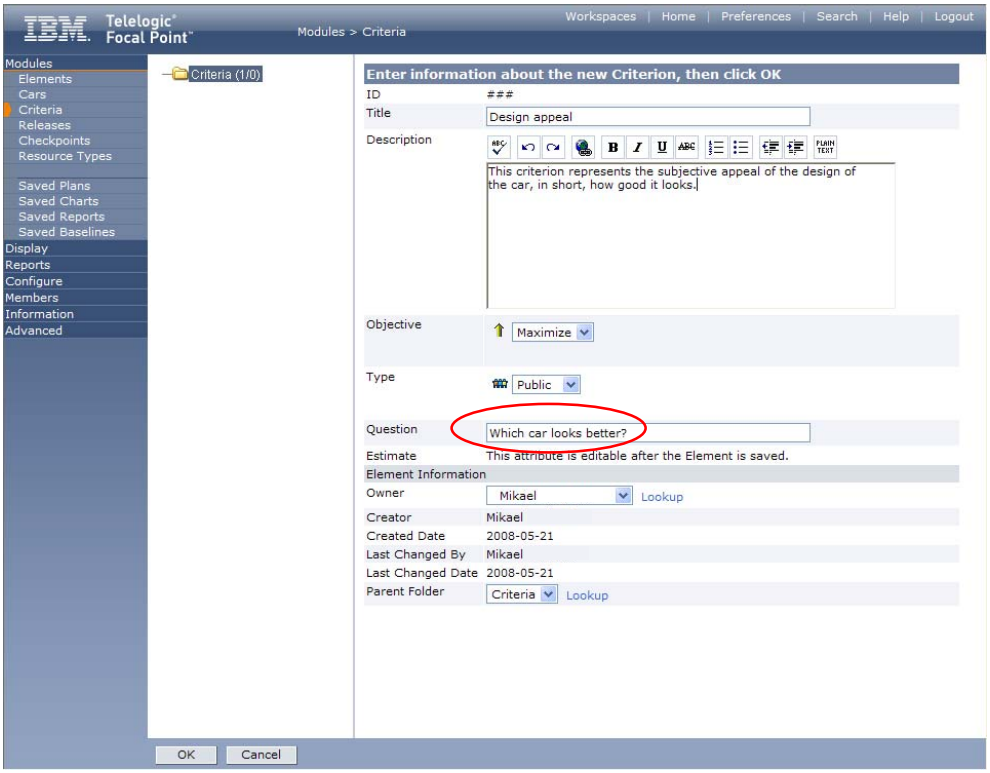
Create criteria for prioritizing your elements

A unique feature of Focal Point allows you to prioritize elements in a structured way. Many situations in for example Product Management or Requirements Management require that you make decisions based on your information. For instance, which features should go into the next release? What risks are most severe? What competitors constitute the largest threat? etc.

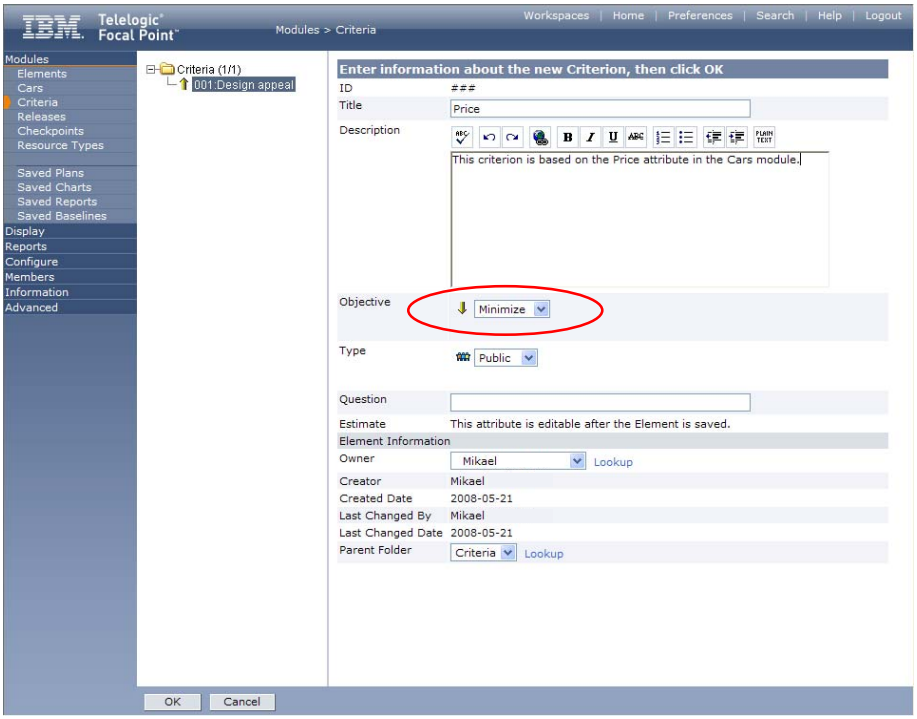
Whereas some attributes, such as *Price* and *Type*, are represented by facts, some attributes are more relative. If we were to add information about the design of our cars, for example, how should that be represented? This is where the criteria come in.

Let's create two criteria: Design appeal and Price, and then use these to do some comparisons of the cars.

1. To create criteria go to Criteria in Modules, and then click on the Add Criterion button.
2. Enter a name for the criterion and short description. Make sure the type is set to Maximize, since this is a positive criterion. Also, enter a question that illustrates this criterion. Then click OK

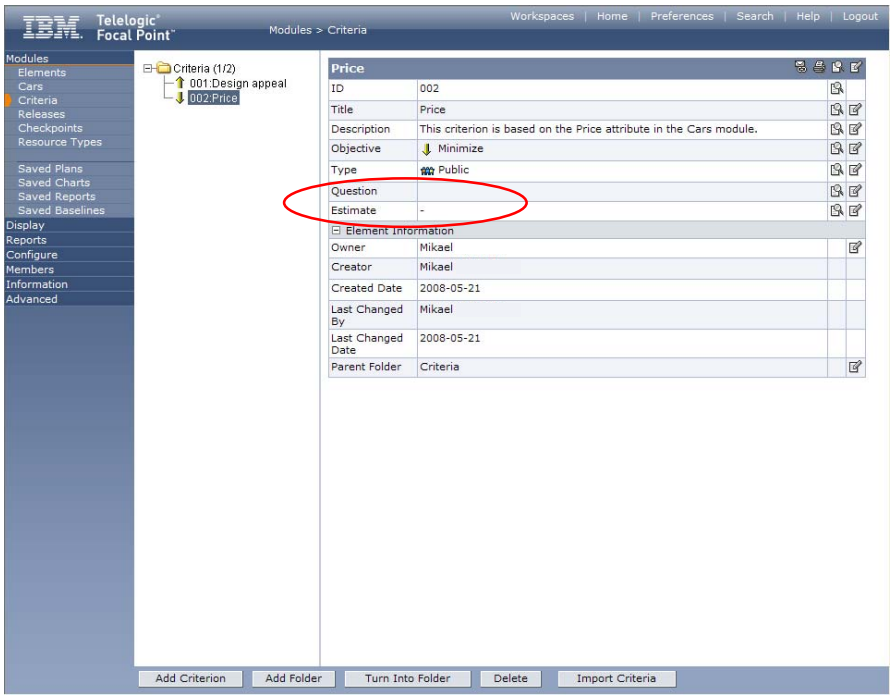


3. Now, create Price criterion. Since we already know the price of each car, we may simply want to use that number instead of making subjective judgments about it. Focal Point can handle this situation as well, by linking the criterion to the Price attribute. We will do that in the next step, but first, just create the criterion, and define it as a negative criterion that should be minimized:

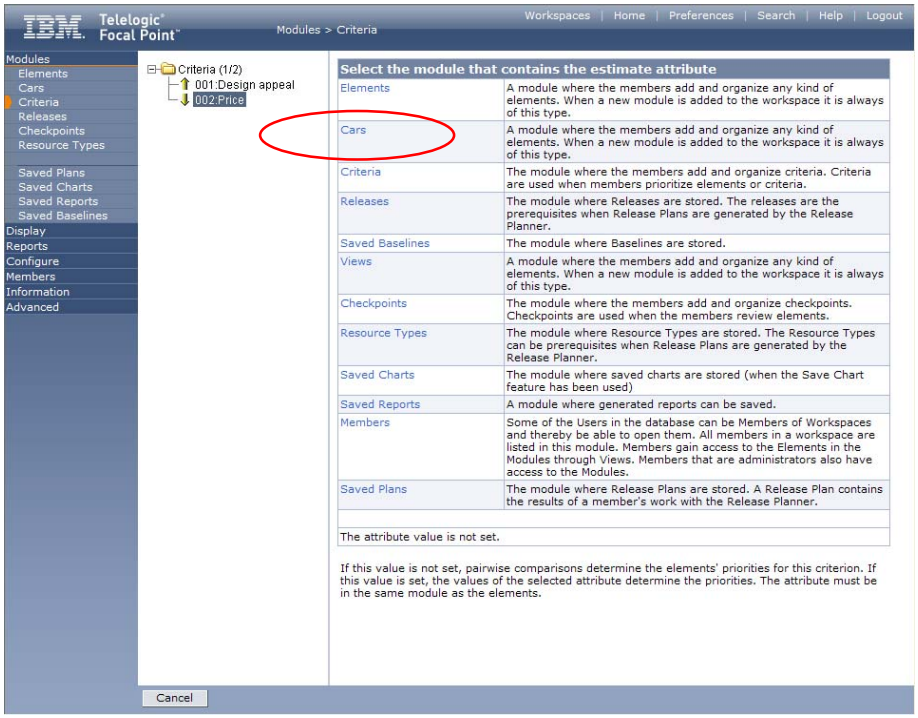


Click OK.

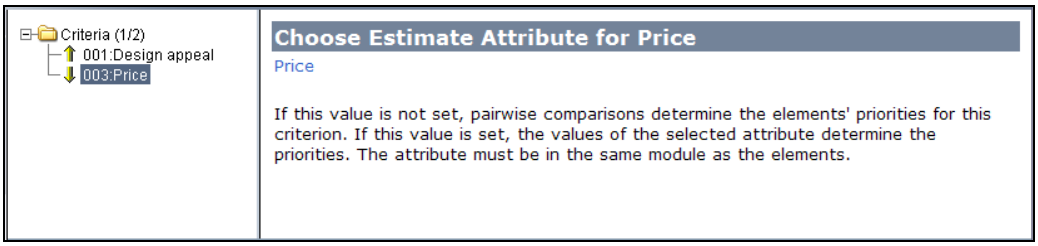
4. Once the criterion is created, you may now set the link between it and the Price attribute of the Cars elements. This is done by editing the Estimate attribute. Click on  button next to Estimate.



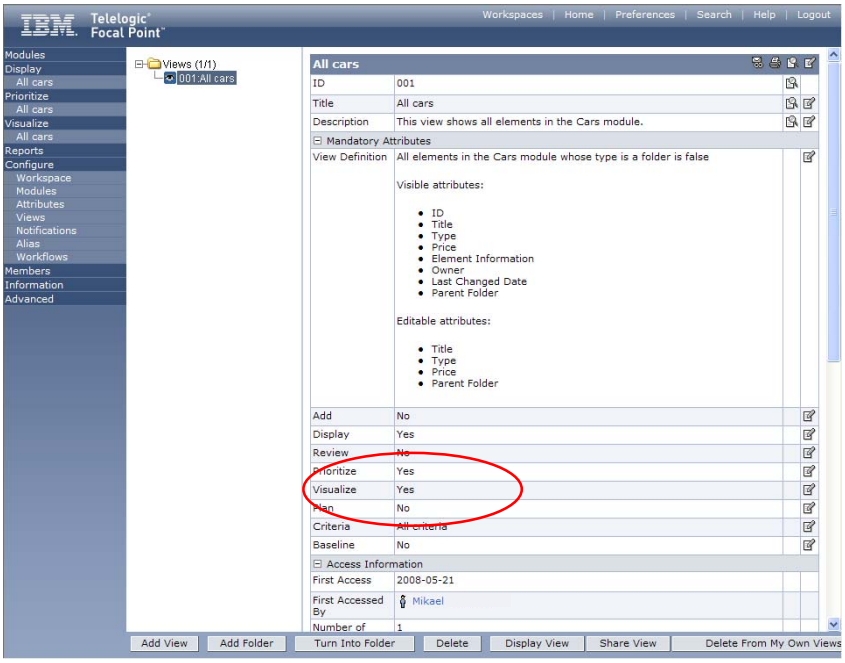
5. Select the Cars module:



6. Select the Price attribute (which is the only one available because there is only one integer attribute in the Car element):


Criteria (1/2)
001:Design appeal
003:Price
Choose Estimate Attribute for Price
Price
If this value is not set, pairwise comparisons determine the elements' priorities for this criterion. If this value is set, the values of the selected attribute determine the priorities. The attribute must be in the same module as the elements.

7. Now, we need to specify that All Cars should be available for prioritization and Visualization. This is done in the view that we have defined just a moment ago. Let's go back to Views in Configure and edit our All Cars view:



8. We need to edit some of the attributes. First, set the Prioritize and Visualize attributes to Yes, by clicking their respective "edit" icon to the right – or by double-clicking the attribute field – and changing the option:

By doing this, the Prioritize and Visualize menus appear in the navigation bar, and the *All cars* view is made available.

The criteria attribute is by default set to "All criteria" so in this case we don't actually need to edit that, since we only have two criteria in the criteria module. However, you may have many criteria for all sorts of element types. In that case you may select what specific criteria are relevant, by defining a view of the relevant criteria and linking this attribute to the view.

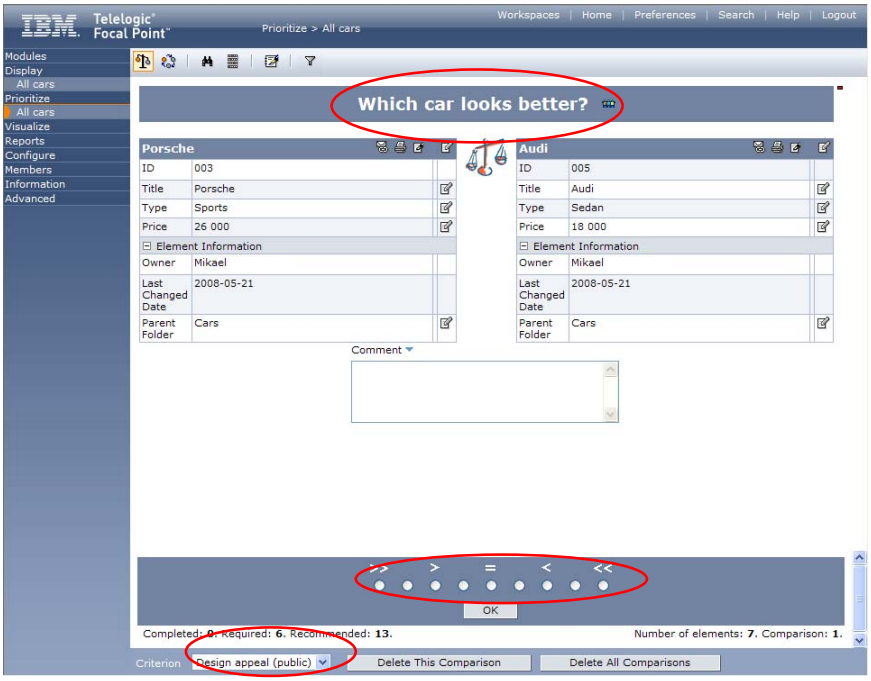
Now we are all set to start prioritizing.

Prioritize your elements

The decision support mechanisms are based on the fact that humans are not very well equipped to consider several elements according to several criteria at the same time. We tend to have difficulties even focusing exclusively on one criterion at a time, for example. Focal Point helps us to focus on two alternatives according to one criterion at a time, and then combines these simple choices to present the larger and more complex situation.

In our example, it may be difficult to just look at the list of cars and decide which one is “best”, and yet we only have two criteria and a few elements (and you are the only stakeholder). But with a few more elements, a few more criteria and a few more stakeholders it’s indeed difficult to get a fair overview without Focal Point.

1. To start the decision-making process, open up the Prioritization view of All cars by clicking Prioritized on the left and then choosing the All Cars view:



   There are a few things to note in this window. First of all, you are presented with a question which is based on what criteria you are currently considering. Your task is to consider these two elements (in this case the Porsche and the Audi) and indicate which one looks better. You indicate your judgment by marking the scale. If you think the Porsche looks better, place the mark to the left, and vice versa.

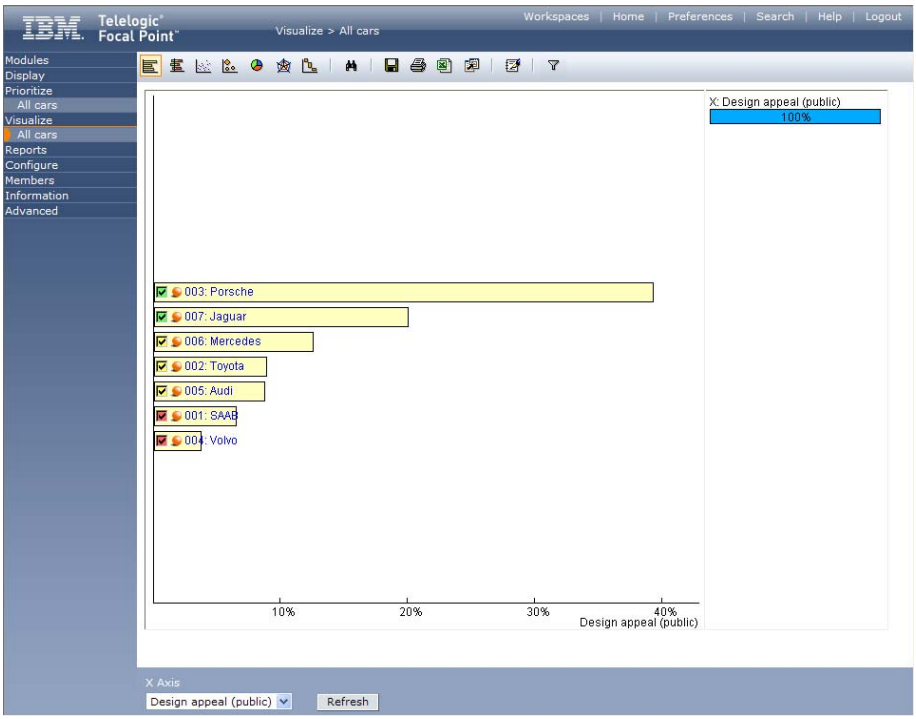
   Note also that there are no units, nor an absolute scale. Placing your mark to the extreme left doesn’t mean that the Porsche looks twice or three times as good as the Audi. The scale is relative, as is your judgment.

2. Now, do the pairwise comparisons for the Design appeal criterion by placing your marks and pressing OK. After 13 comparisons you will get a pop up message saying that you may now visualize the result. Click OK.

Visualize your results

The support you get for making decisions in Focal Point is very visual. Priorities are represented as bars, as "bubbles", as lines etc, with size and length relative to their priority. In the first example, we can see which car is best from a design perspective *(Note that you may of course have other priorities! Otherwise we wouldn't need Focal Point…)*

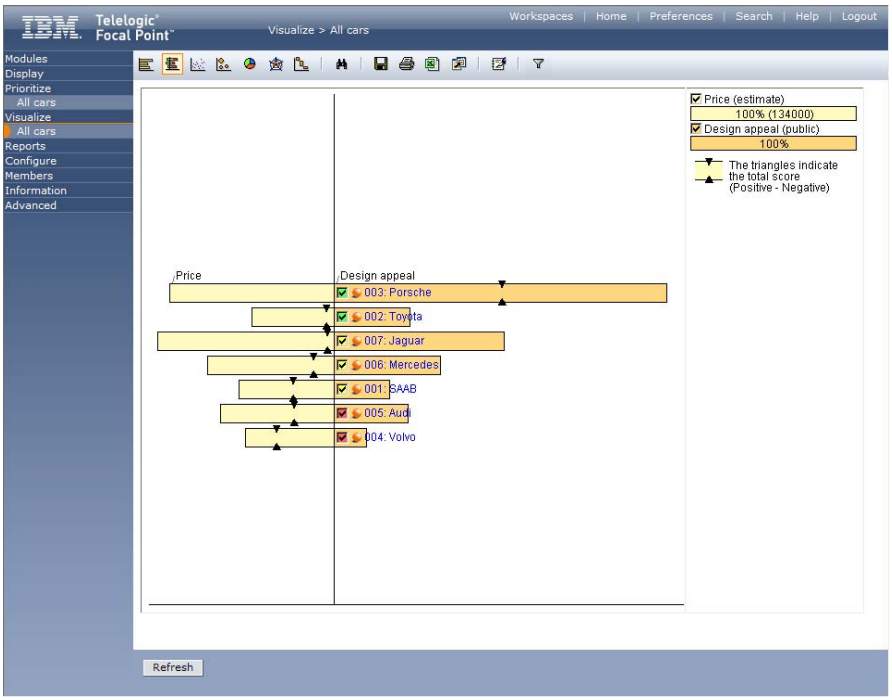
1. Select Visualize and the All Cars from the navigation bar, and make sure that the leftmost visualization mode  is selected



This diagram, called simply the **Bar chart**, shows only one criteria. Here, Porsche is clearly better looking than the Toyota. In fact the "best" ones are marked with a green checkbox. The scale shows relative design appeal in percentages, so the lengths of all bars sum up to 100%.

As you can see, there are several visualizations to choose from, and as previously there are no real guidelines in terms of what visualization techniques to use in what situations. However, in this example we will only try out one more, which is the **Stacked bar chart**.

2. Press the  button to see the Stacked bar chart.



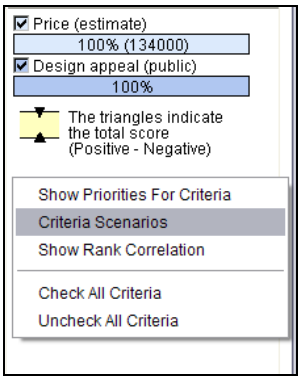
In the **Stacked bar chart** we may see more than one criterion at a time, and this is where Focal Point starts to show its real strength. In the visualization above we see that considering both cost and design, the relative rank is different. The bar at the top is “best” and the one at the bottom is “worst” considering both criteria.

We could of course have many more criteria, such as “Versatility”, “Environmental friendliness”, “Safety”, “Build quality” etc. Or, we might have more stakeholders that should have their own opinions represented. All these could be shown at the same time in the Stacked bar chart.

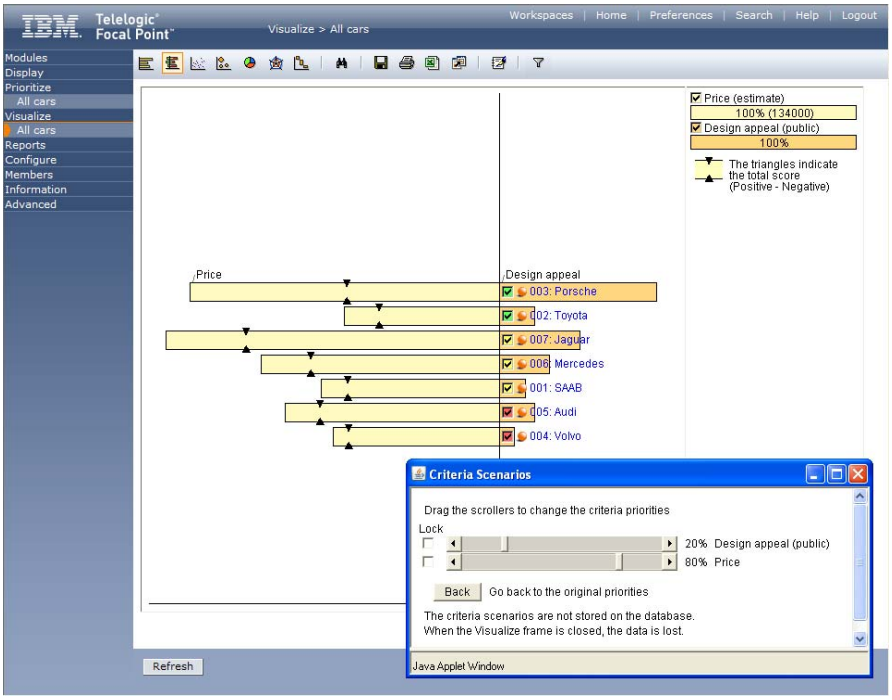
3. Now, let’s do some analysis. Try checking and unchecking some of the bars and see what effect that has on the value indicators in the top right corner. As you select and unselect the cars, the value indicators will reflect the fact that you don’t get all the relative value (“looks”) and not all the relative cost. In this example, this makes little sense, but if we instead had a set of features that we considered for implementation in a software product, you would be able to see exactly what features should be considered to get e.g., 60% of the value for 30% of the cost.

   In our example we will instead consider what happens if the Price criterion is really more important to us that the design criterion. Currently, both criteria have the same weight, but we may think that cost is in fact more important, or the other way around.

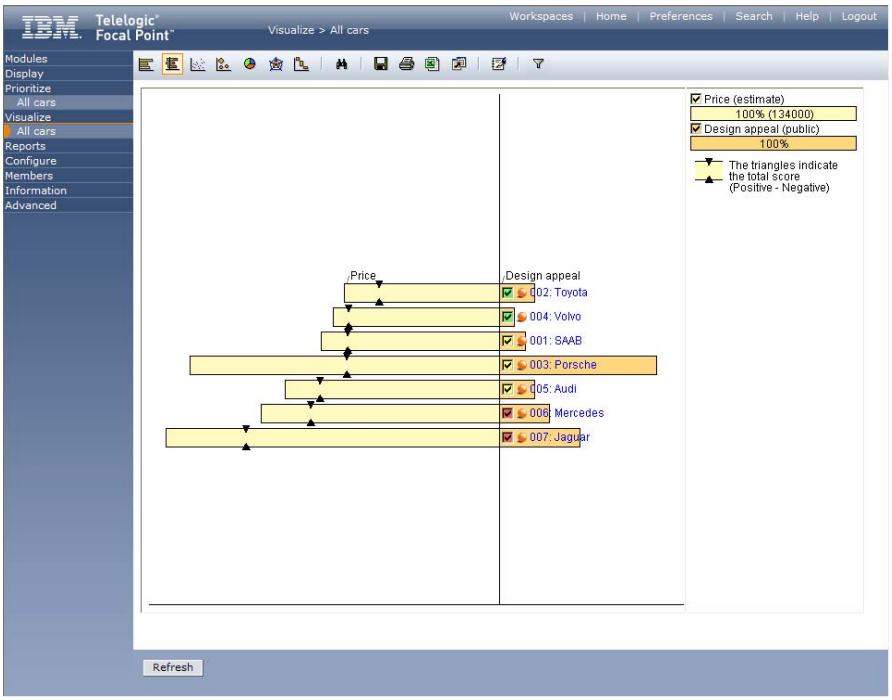
   In the rightmost frame, right-click and select Criteria Scenarios from the menu that pops up:



4. The Criteria Scenarios window comes up, which allows you to try out different scenarios. What if, for example, cost is twice as important as design? Drag the Price slider to the right until the value shows, e.g. 80%.



9. Look at the black triangles indicating the rank of the elements . Click again on the icon to refresh the order of elements on the Stacked bar chart.



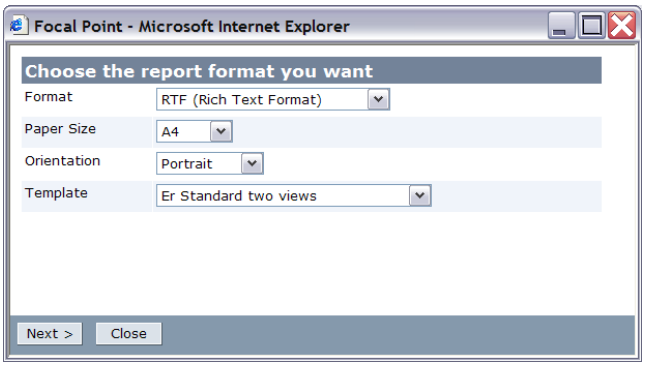
In the example above, we see that if we consider Price to be so much more important than design, that the Toyota is the best. This is indicated by the fact that the black triangles on the Toyota bar are the most to the right. In fact, the Jaguar turns out to give the least “design for the money”. In other situations you may consider such intricate problems as: “What if we need to cut the budget—how would that affect our planning?”, or “How robust is our risk analysis?” You can play around with these criteria to see the effects of such scenarios.

If you close the Criteria Scenarios window, the relative weight of the criteria will be fixed, but can of course be changed again by recalling the Criteria Scenarios window.

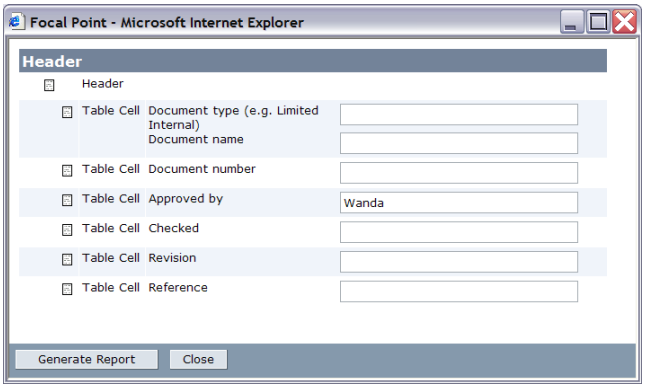
Print a report

Focal Point has a powerful built-in report generator which is highly customizable. But there is also a simple way to create a quick report.

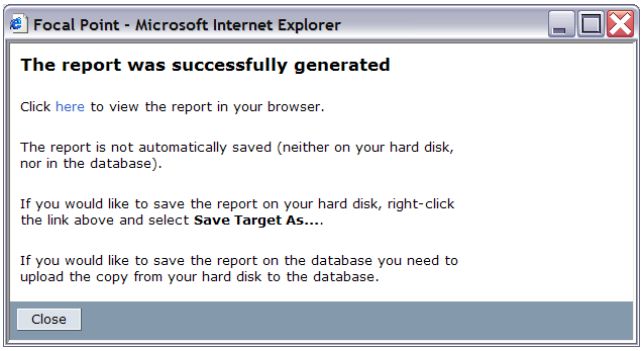
1. In Display, All cars, click the  button, which will bring up a window where you may fill in some basic administrative information (or leave it empty):



Click Next



Press the Generate Report button and follow the instructions



Summary and steps forward

Now you have completed all the steps in this "Getting Started…" guide. You have created a module (called Cars), added information (attributes) about its elements (the cars), displayed the information in various ways, prioritized them according to a couple of criteria (design and cost of owning), done some scenario analysis and printed a report. This is really only a scratch on the surface of what Focal Point provides. The areas that *have not* been explored include:

1. **Filtering**, which allows the end-user to filter out relevant information. Whereas views define what the user is *allowed* to see, the filters can be defined by end-users to select a subset of that.
2. **Linking information together**. Information elements are almost always linked to other elements in reality. Products to customers to releases to markets to requirements and so on. Linking information together and displaying these relationships is just a matter of pointing and clicking in Focal Point.
3. **Business rules**, which allows almost unlimited data manipulation. With business rules you can create workflows, do quality control, notify members via email on certain events etc.
4. **Role-based access**, so that Product Managers, Developers, Customers etc. can add, change, prioritize and display information relevant for them.
5. **Release planning**. Focal Point provides automatic release planning, where optimal sets of requirements are selected for several release projects and linked to to these projects.
6. **Review support** for information, where e.g. requirements can pass a review process to within an organization to secure clarity, understanding and quality.
7. **Versioning and baselining**, where changes to information elements can be tracked (and rolled back if necessary) down to attribute level.

However, you are now ready to explore all these powerful features of Focal Point. As you do that, please use the help system by clicking the Help link placed in the top right corner. If you want more information there are several resources, including guides, FAQ's, technical descriptions and more at

https://support.telelogic.com/focalpoint

Good luck!

More information

Contacting IBM Rational Software Support

Support and information for Telelogic products is currently being transitioned from the Telelogic Support site to the IBM Rational Software Support site.

During this transition phase, your product support location depends on your customer history.

Product support

• If you are a heritage customer, meaning you were a Telelogic customer prior to November 1, 2008, please visit the Focal Point Support Web site.

Telelogic customers will be redirected automatically to the IBM Rational Software Support site after the product information has been migrated.

• If you are a new Rational customer, meaning you did not have Telelogic-licensed products prior to November 1, 2008, please visit the IBM Rational Software Support site.

Before you contact Support, gather the background information that you will need to describe your problem. When describing a problem to an IBM software support specialist, be as specific as possible and include all relevant background information so that the specialist can help you solve the problem efficiently. To save time, know the answers to these questions:

• What software versions were you running when the problem occurred?

• Do you have logs, traces, or messages that are related to the problem?

• Can you reproduce the problem? If so, what steps do you take to reproduce it?

• Is there a workaround for the problem? If so, be prepared to describe the workaround.

Other information

For Rational software product news, events, and other information, visit the IBM Rational Software Web site.

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