Traceability of the elements in EHR-S FM

In the EHR-S FM there are different relationships between the elements. The Traceability window in Enterprise Architect enables you to quickly see how elements, headers, functions and criteria in a functional model or profile, are connected and how they influence each other. How to use this functionality is explained below.

- When a header, function or criterion is selected in the Project Browser it immediately becomes the top point in the Traceability window.

To get the Traceability window select View in the top navigation and select Traceability. See figure 1.

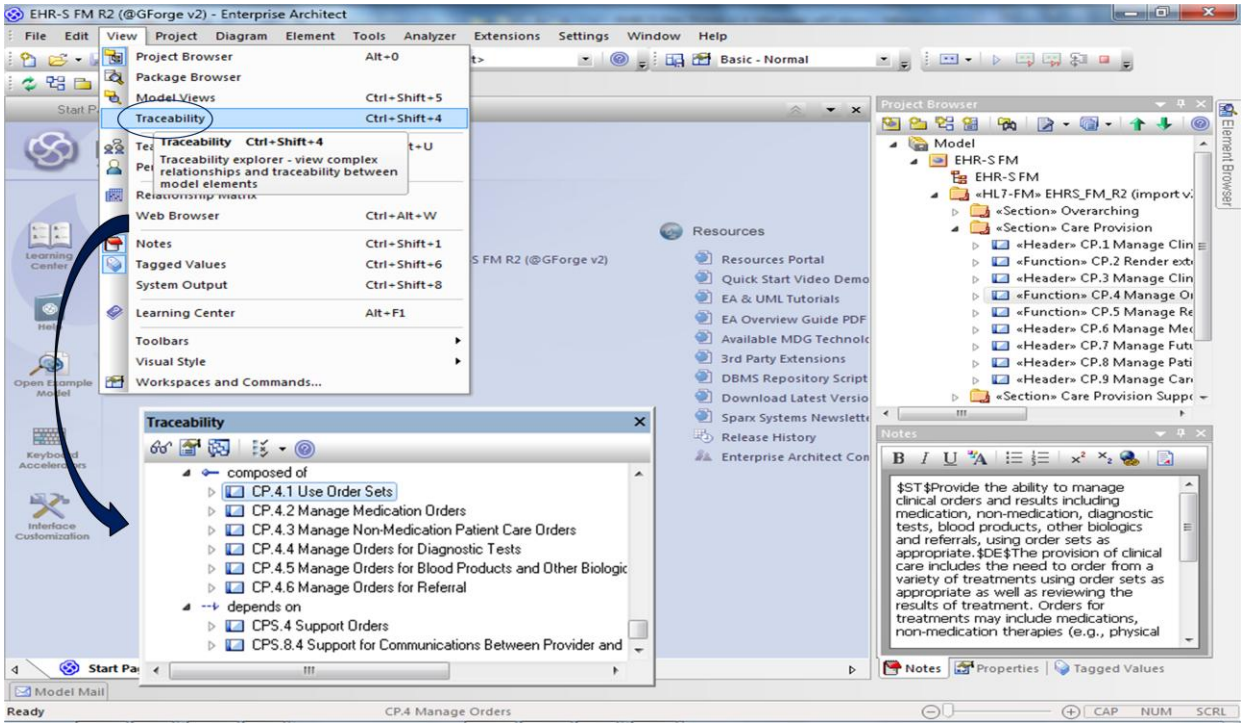

Figure 1. Open the Traceability window.

The window will open and you will see the traceability for the selected header, function or criterion. See figure 2. Now you can drag the Traceability view to the navigation right besides the Notes, Properties and Tagged Values. This is visible under the Project Browser.

See figure 2. In this case the function CP.1.1 Manage Patient History is selected.

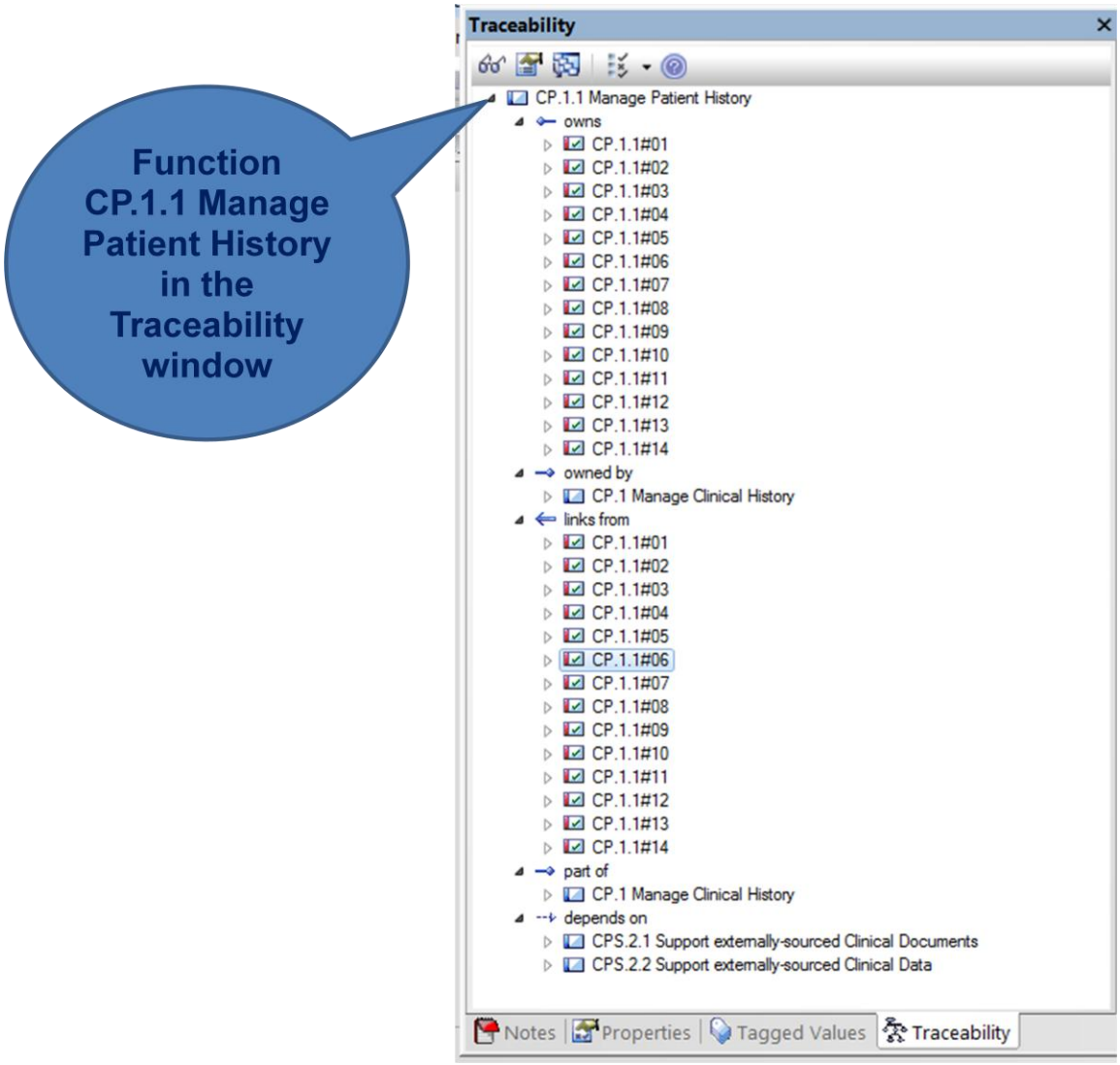

Figure 2. Open Traceability window.

In the Traceability window you see that the selected function is the top point in the window. You see the different relationships of function CP.1.1 Manage Patient History:

- ***Owns*** means that the chosen function, CP.1.1, *owns*, so has, the listed criteria. See figure 2.
- ***Owned by***: the header (parent) where the function belongs to. In this case CP.1 Manage Clinical history.
- ***Links from*** means the other direction. The criteria mentioned here links from the function CP.1.1. If you open a criterion in the Traceability window, it is showed that the criterion is owned by the function CP.1.1 and links to the function CP.1.1.
- ***Part of:*** means that the selected function is part of another element, in this case header CP.1.

- ***Depends on:*** relationships with other functions, so called ConsequenceLink. In some criteria of function CP.1.1 there is the text 'conforms to function', in this case functions CPS.2.1 and CPS.2.2.

Headers, functions and criteria have their own kind of relationships. Just click on them and view the relationships in the traceability view.

In the traceability window you can also view the related element properties. To view this:

- Right click on the element you want to view, for example CP.1.1#3 (also a right click on the element will work)
- Select 'View Related Element Properties.
- The view of the selected element will open. See figure 3.

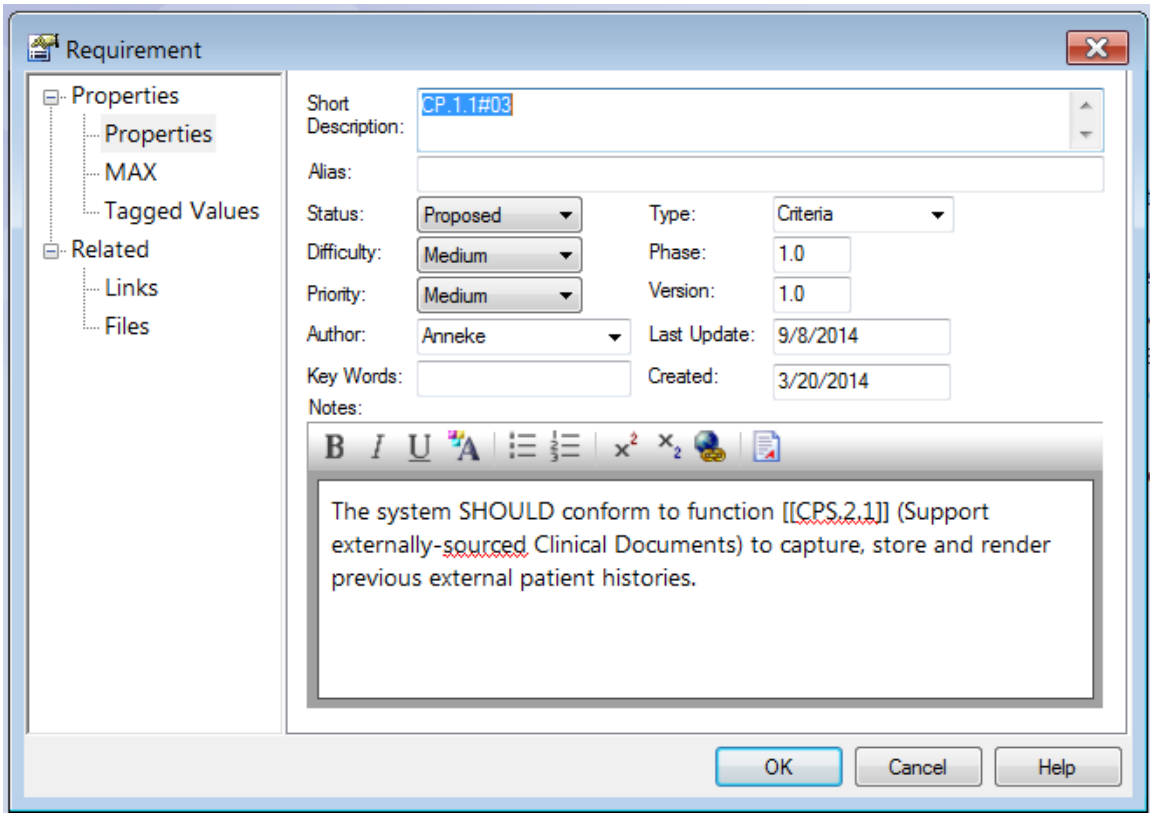

Figure 3. View Related Element Properties opened from the traceability view.

Traceability view in a diagram

Another way to look at the different relationships between the elements is by adding a diagram to the EHR-S FM package. To do this, follow the next steps.

- Right click on the package EHR-S FM, click on Add and next on add Diagram.
- Select Extended in the left box and Requirements in the right box. In the Name field you can give the diagram a name. Click OK.
- Now you see new diagram in the Project Browser. See figure 4.

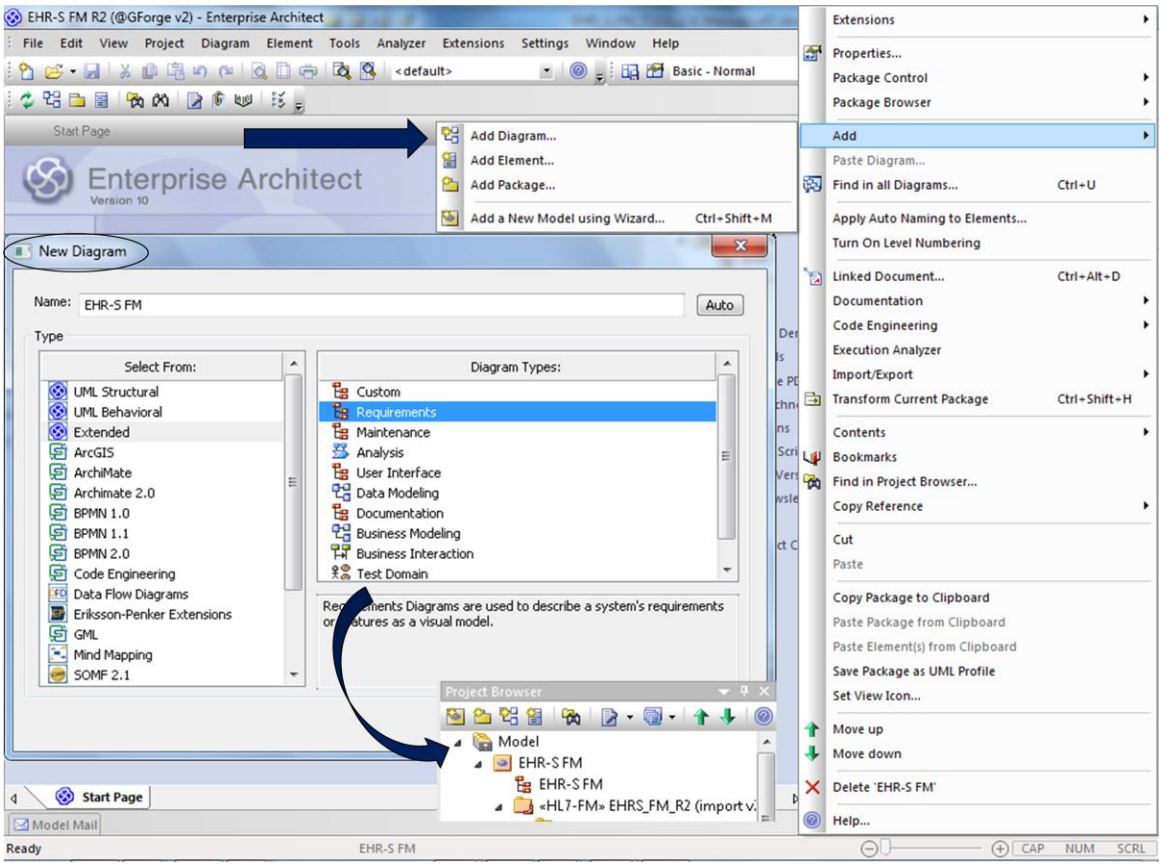

Figure 4. Add a Diagram to the EHR-S FM.

- Now you see a Grid in EA (empty window for the diagram). Select a function in the EHR-S FM model, click on that and drag this function to the Grid. In the box, Paste Element, select Link in the Paste as field and click on OK. See figure 5.

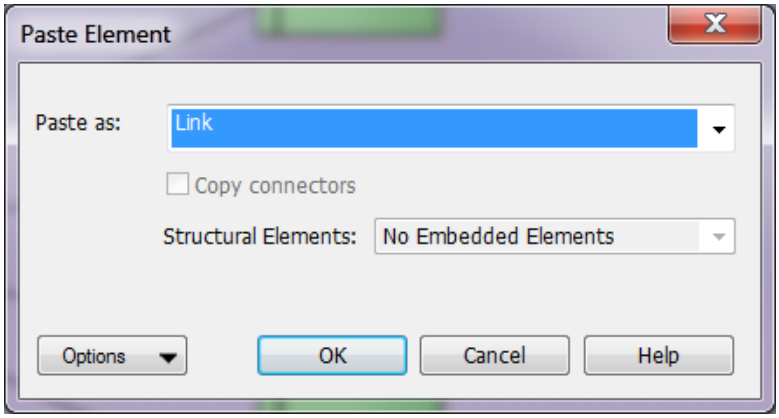

Figure 5. Making a diagram of a selected function.

- Now you see the selected function as a class in the diagram window.
- Right click on the class and select 'Insert Related Elements'. You will get the following (Figure 6):

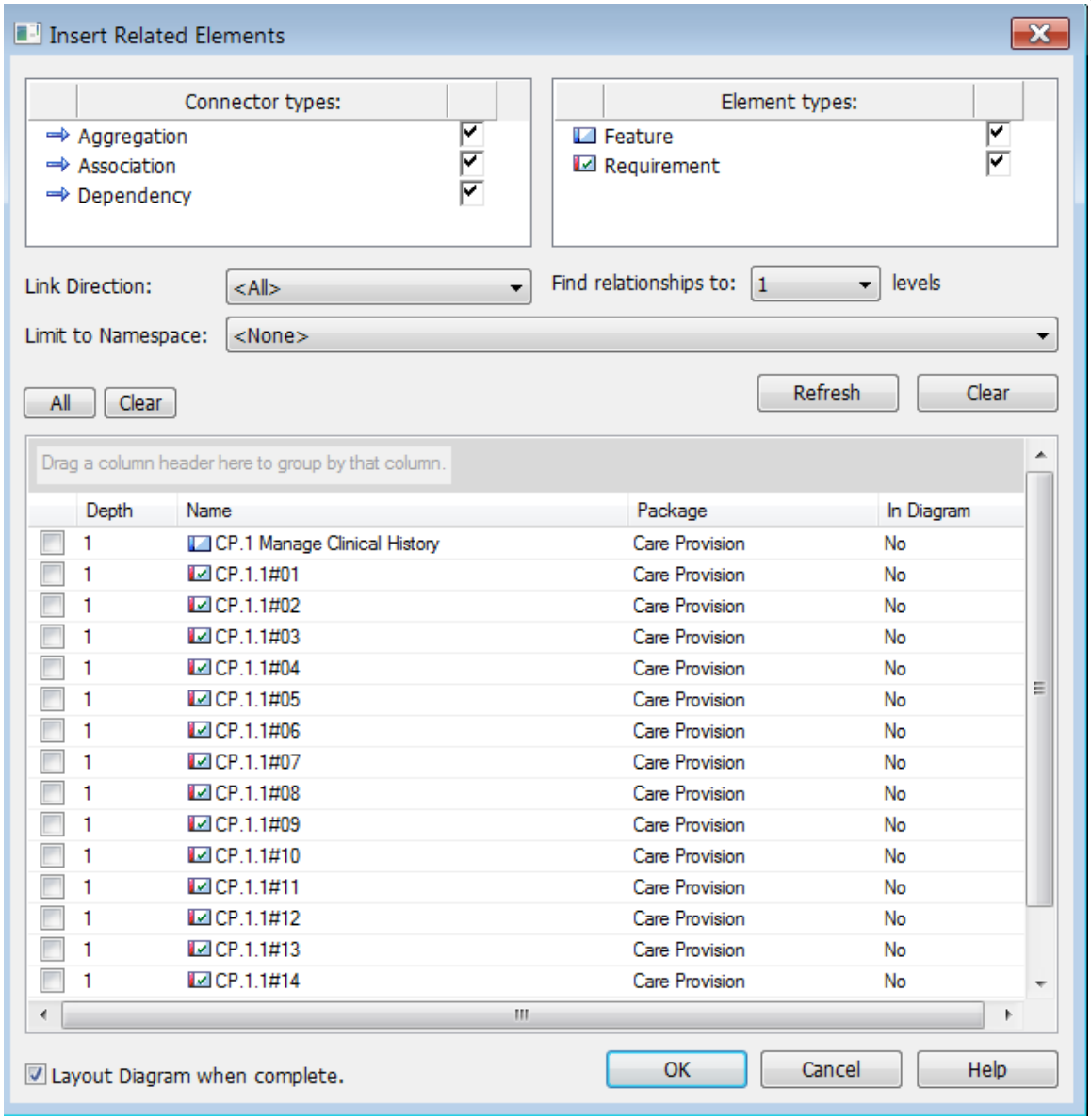

Figure 6. Insert Related Elements in Enterprise Architect in the context of the EHR-S FM.

- After this you can select the
  - 1) Connector types,
  - 2) Element types,
  - 3) Link direction,
  - 4) Find relationships to,
  - 5) Limit to Namespace,
  - 6) All elements (is linked to find relationships to)

- Every single change must be followed by clicking on the Refresh button.

- After selecting OK you will get a diagram which shows the relationships of the selected function. See figure 7, a diagram of function CP.1.1 and its relationships. Here you see again the relationship with functions CPS.2.1 en CPS.2.2.

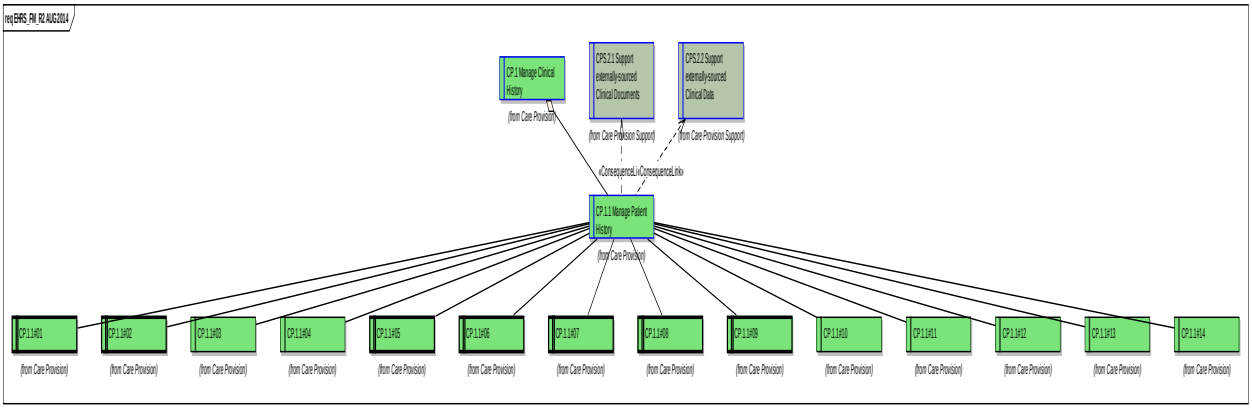

Figure 7. Relationship diagram of function CP.1.1.

- By a right click on the diagram field (so not on a class and not on a relationship) the properties of the diagram can be changed. See figure 8.

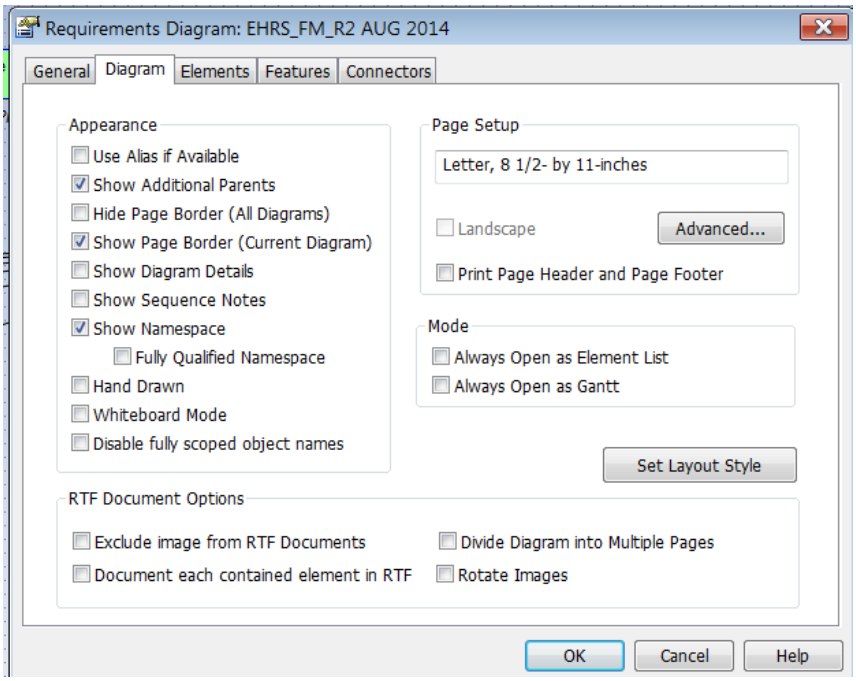

Figure 8. Properties of the diagram.

Diagram of a function without relationships

A different diagram can be made via the EHR-S FM Extension. This kind of a diagram shows all the criteria that belong to a selected function.

- Click right on a function and select Extension. Select EHR-S FM and select Create Diagram. See figure 9.

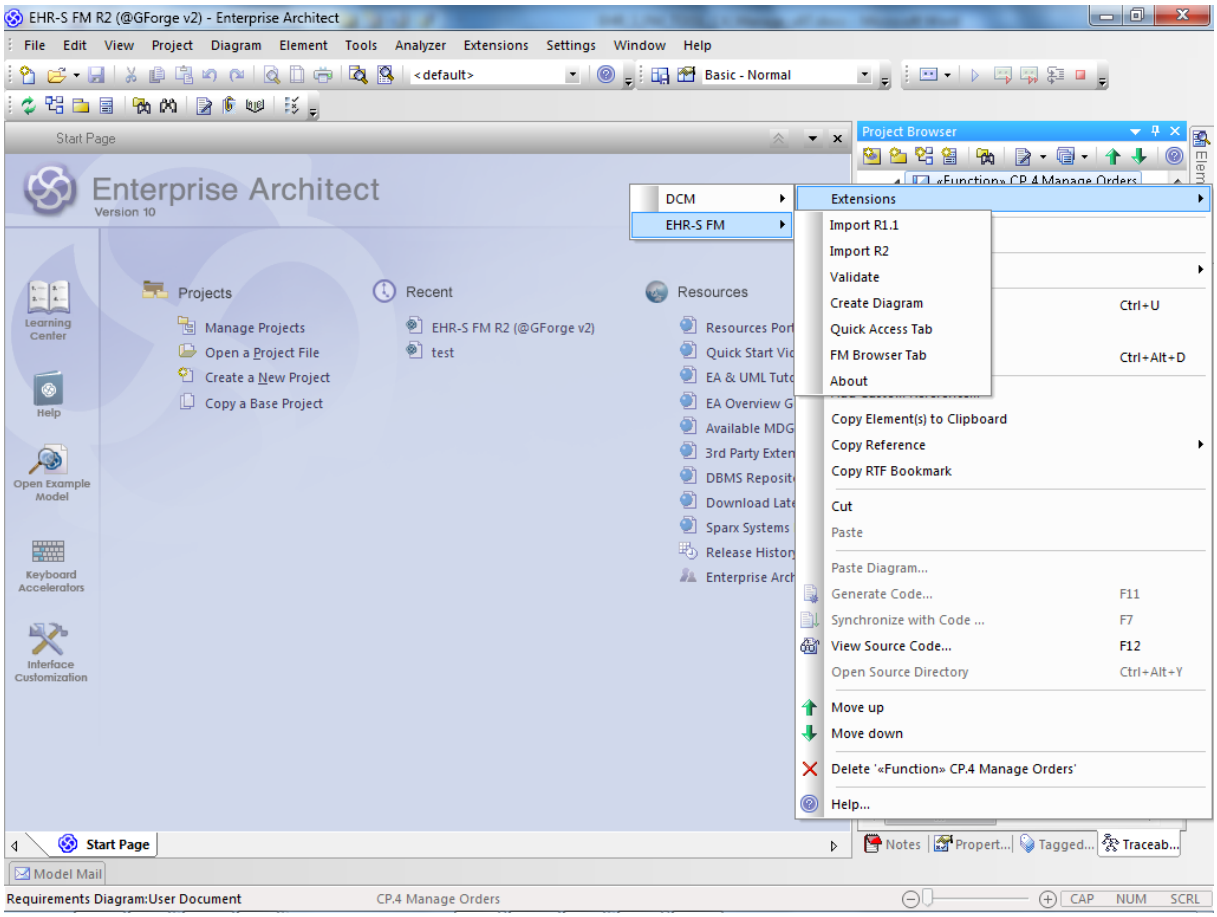

Figure 9. Create a diagram via the EHR-S FM Extension.

- An example in figure 10.

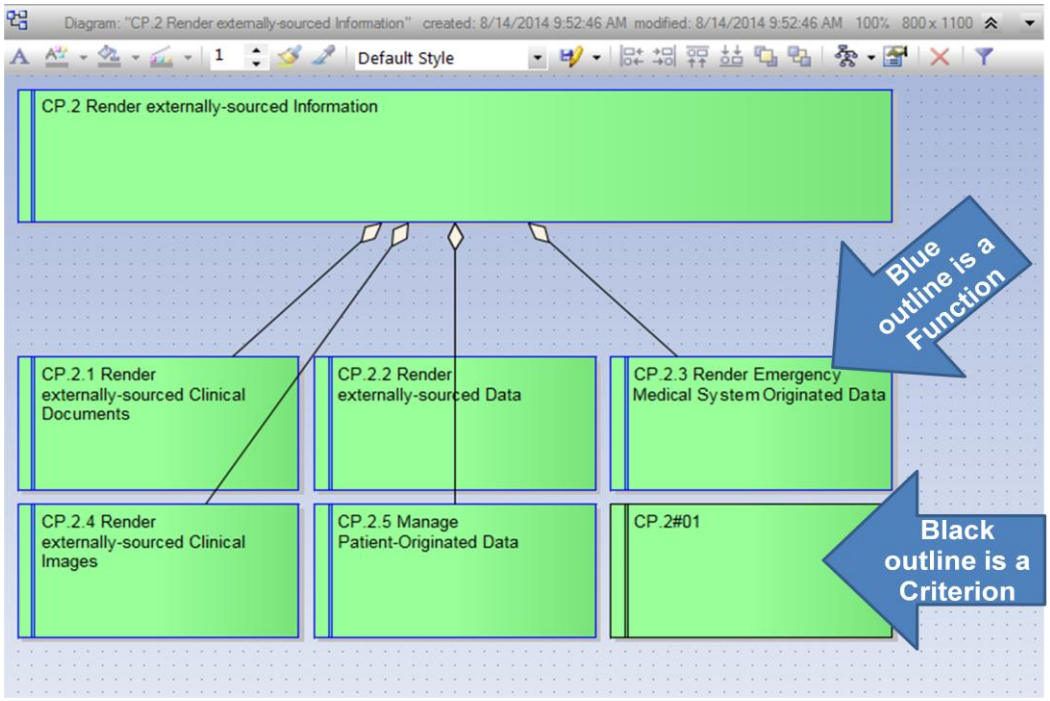

Figure 10. An example diagram of a function, without relationships, via the EHR-S FM Extension.

Because the diagram is a diagram of a header, you see the functions and criteria belonging to that header. The functions and criteria are distinguished from each other with a bold blue line for the function and a bold black line for the criteria.

In figure 11 a diagram of a function is shown. All the criteria belonging to the function are listed. The criteria with a bold black line are SHALL criteria. The others are SHOULD or MAY criteria.

If you select a criterion the criterion text can be read in the notes.

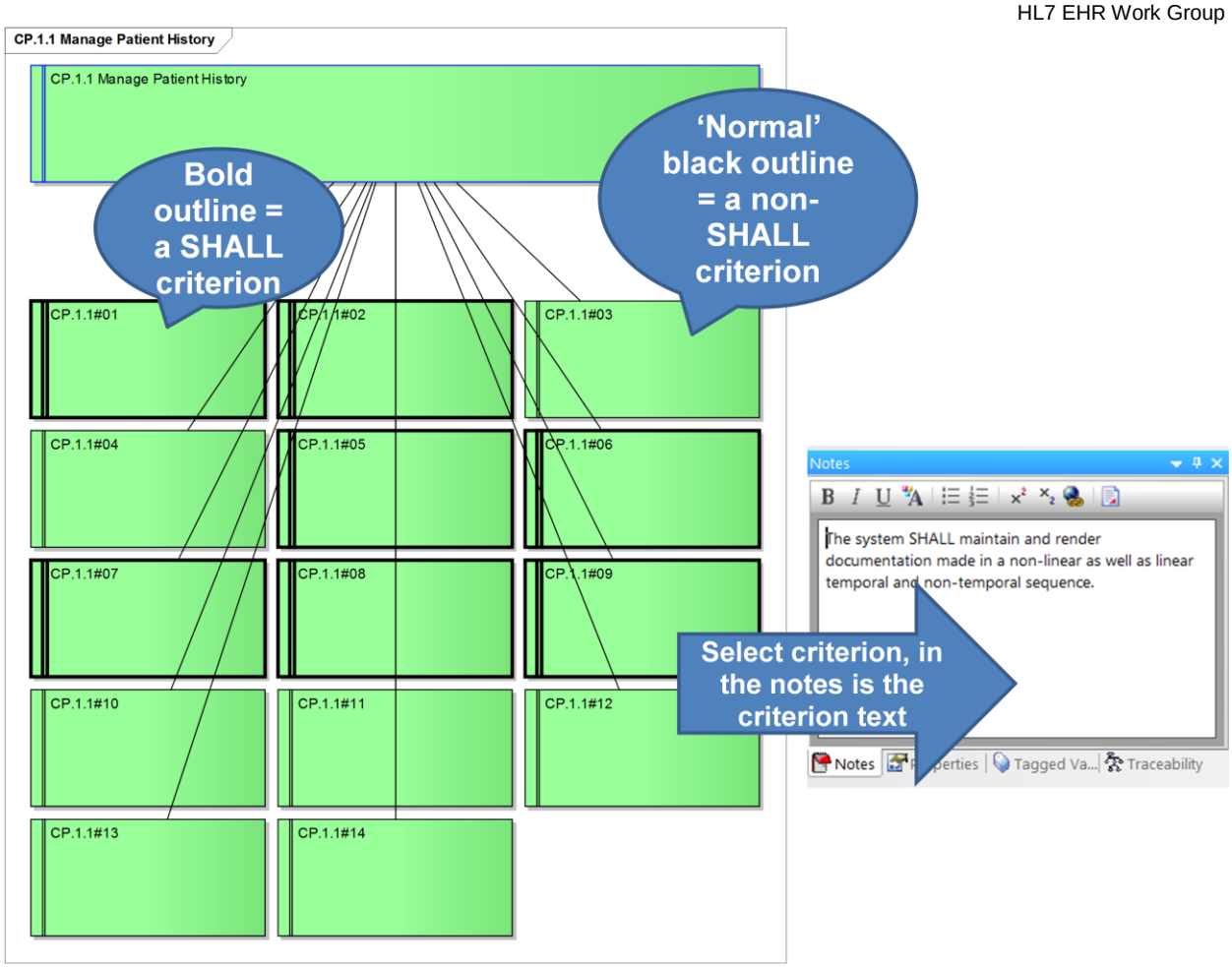

Figure 11. Diagram of a function.

NOTE: if the function has a lot of criteria the diagram is still a little bit crisscross. You can make the diagram more structured and viewable by dragging the criteria around until the diagram is readable.

Traceability to an older version of the Functional Model or Profile

The traceability of a header, function or criterion to the same header, function or criterion in an older version of the Functional Model or Profile can be found in the Tagged values. Both the version of the Functional Model or Profile is included, in the Reference.Alias, as the ID of the header, function or criterion in the older version, for example Reference.FunctionID. See figure 12.

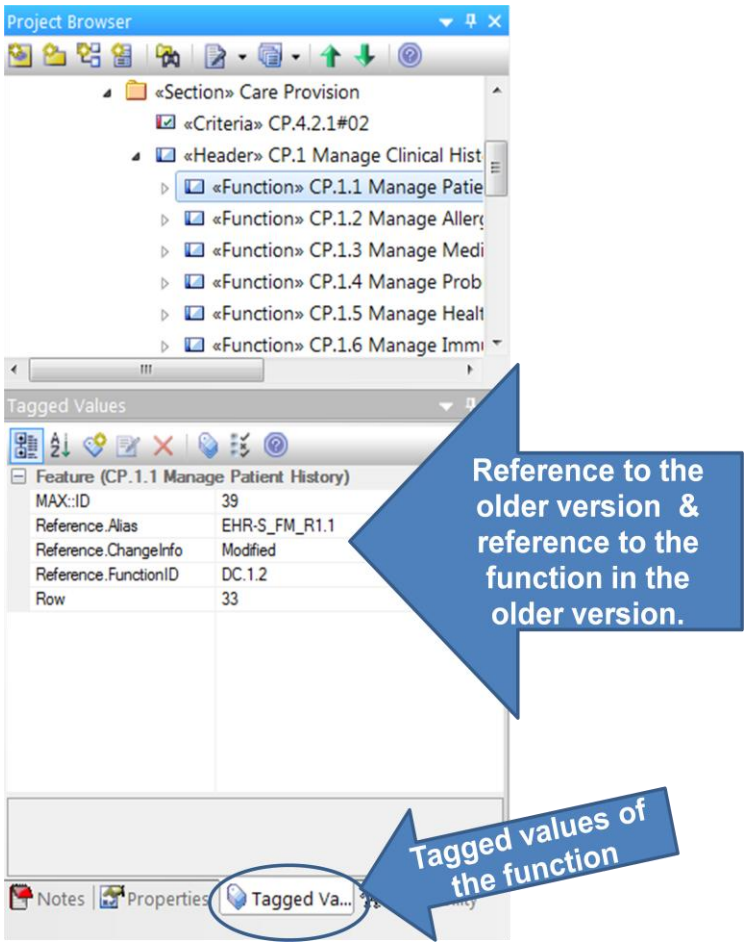

Figure 12. References for a function to an older version of the functional Model.

Another example is given in figure 13. In this figure the refence to the older version of the Function Model is given, Reference.Alias, the reference to the function, Reference.FunctionID, and the criterion, Reference.CriteriaID in the older function, and if the criterion was modified, Reference.Changeinfo.

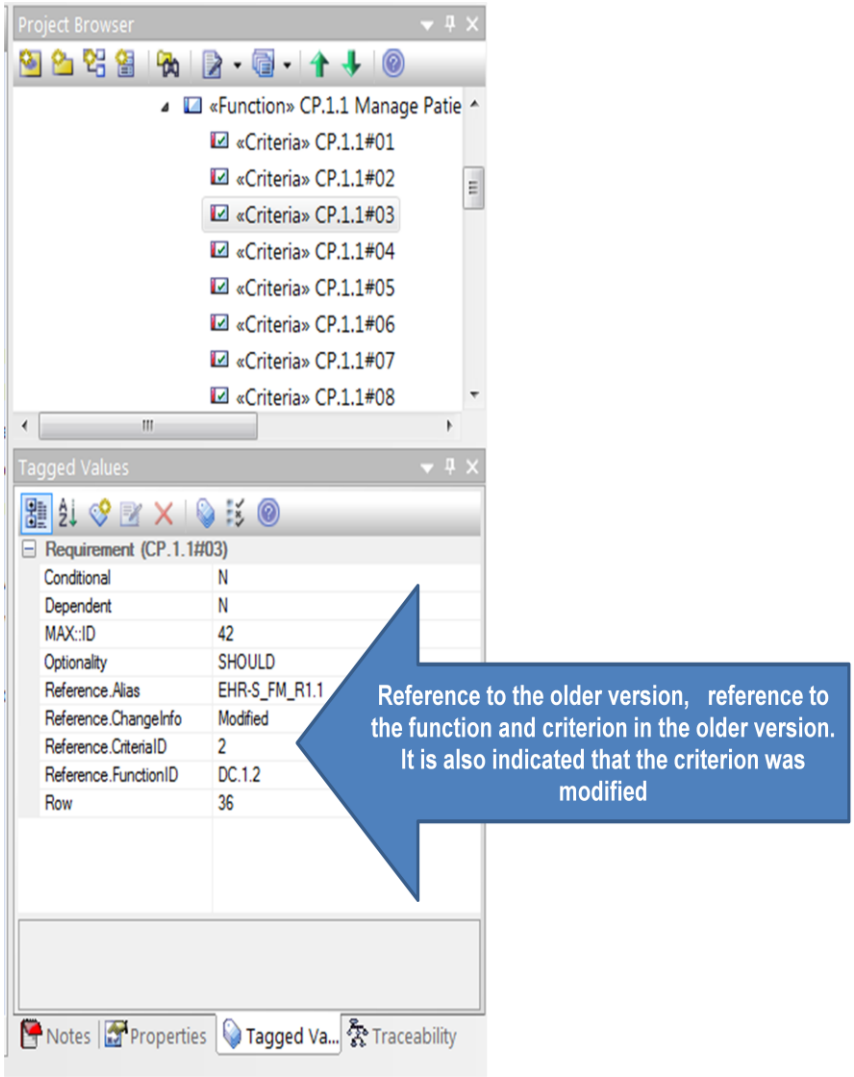

Figure 13. References for a function and criterion to an older version of the functional Model.