Starter Composite Structure Diagram

The *Starter Composite Structure Diagram* pattern describes the internal structure of a Component by the use of Parts which represent the Components from which it is composed. Ports and Interfaces are connected with delegation connectors and Information Flows which show how Information Items flow from Component to Component via specified Interfaces.

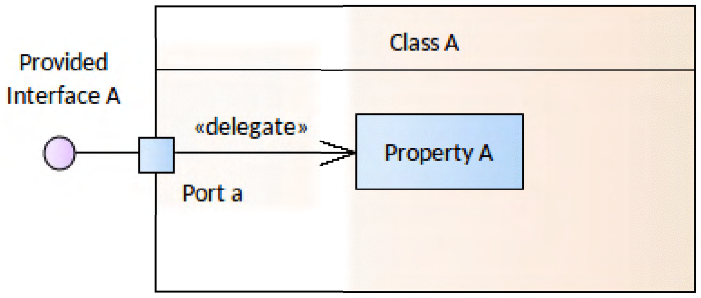

Figure 1. Showing parts that represent the Components from which the Component is composed and the Information Items that flow through the Interfaces and Ports connecting the Component's Parts.

Discussion

The purpose of the pattern is to allow Designers and Architects to describe the composition of a Component and how the parts (other Components) are 'wired' together to carry out the work for of the component. Information Flows, which act as conduits, carry Information Items connect the Interfaces showing information and other payloads move from Component to Component.

The pattern is typically used in the design or implementation phase to show how a composite or complex Component delivers value by describing the interaction of its parts (other Components).

It can be used to break down a hierarchy of Components showing how information is produced and consumed by the logical parts of a system.

The following is a list of some things you may want to do when working with this pattern.

- Change the hierarchy by adding or removing Components.
- Change the names of the Components, Parts and Interfaces to suit your initiative.
- Change and create additional operations in the Interface elements.

Add attributes to the Classes to describe properties of the concepts.

The following is a list of some of the next steps available when applying the pattern.

- Create additional hierarchies and composite structure diagrams to represent the interaction of the parts.
- Create one or more Sequence diagrams to show the time ordering of messages between the components.
- Create documentation of the Components for other audiences.

Useful Workspace Layouts Core | Core Modeling, Wide View

Reference

The following help topics will assist you learn about how to work with this pattern.

Composite Structure Diagram

Component Diagram

Parts

Information Flow

The following are some of the tools that will be helpful when working with this pattern.

Traceability Window

The Traceability Window automatically displays the relationships that exist between Use Cases and other model elements including up-process and down-process elements. The traceability tree view can be conveniently expanded to see deeper relationships and elements displayed in the window can be located in all diagrams in which they appear. For more details see the Traceability Window help topic.

Relationship Matrix

The Relationship Matrix provides a spreadsheet like view of two groups of elements and the relationships that exist between them. It can be a used as a powerful analysis mechanism to visually indicate how elements are related to each other and to discover which elements are missing relationships. For more details see the Relationship Matrix help topic.

Specification View

The Specification View can be used as a way of working with any element type in a spreadsheet or word process view. It is particularly useful when there are a large number of elements as is typically the case when describing a system of any appreciable size. For more details see the Specification View help topic.

Element Discussions

The Element Discussion facility is a fully featured collaboration tool allowing modelers and model viewers and reviewers to communicate with each other directly inside the repository. Modelers using the full client or occasional viewers using WebEA can both post and reply to discussions and communicate and engage in chat. For more details see the Element Discussions help topic.

Hand Drawn and Whiteboard Diagrams

The Hand Drawn and Whiteboard Mode are display options available for any diagram that changes a system-drawn diagram to appear as though it was drawn by hand and, optionally, hand drawn on a whiteboard. It is a powerful device to engage an audience by presenting the diagram in a rough and more immediate style giving the impression that it is just a sketch that can be changed. For more details see the Hand Drawn and Whiteboard Mode help topic.

Diagram Layout

The Diagram Layout tool allows you to layout an entire diagram, selected elements or sections of a diagram to make it more visually appealing or meaningful to a particular audience. There are a wide range of layout types to choose from and some types have filters that can be applied. For more details see the Diagram Layout help topic.

Pan and Zoom

The Pan and Zoom facility is one of the tools that can be used to navigate around a large diagram. Often the resolution of a diagram must be reduced to ensure it is wholly visible but by using the Pan and Zoom window you can leave the diagram at a readable

resolution and pan around to areas of interest zooming in when necessary. For more details see the Pan and Zoom help topic.

Alternate and Images for Diagram Elements

Most standard elements allow an alternate image to be defined for an element that will be used in place of the graphical notation for the element either on a selected diagram or as a default on all diagrams. For more details see the Using the Image Manager help topic.

Document Generator

The Document Generator is a powerful facility in Enterprise Architect that allows a Database Engineer or other stakeholder to create high quality corporate or technical documentation directly from the model, suitable for internal or external audiences. For more details see the Documentation help topic.