Starter Timing Diagram

The *Starter Timing Diagram* pattern creates elements and a Timing diagram that shows the discrete state changes in a Class as a result of events occurring over time. A time line defines a time scale on the x-axis and discrete states on the y-axis. Durations are displayed indicating the time the Class remains in a given state.
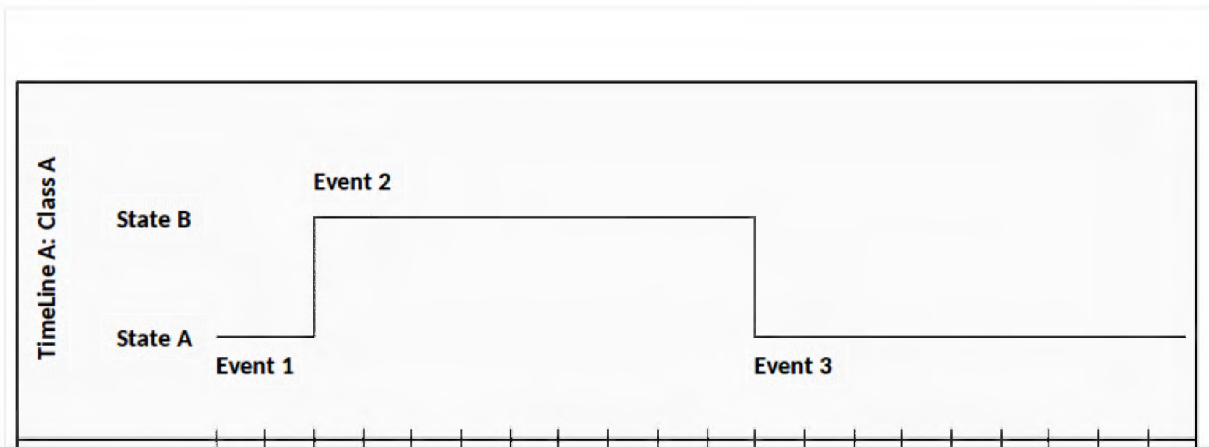

Figure 1. Shows a Timing diagram using Value Lifelines to represent the discrete states a class can assume.

Discussion

The purpose is to show how a Class (or other Classifier) changes state over time using a defined time scale. This allows an analyst to create a visual representation of the discrete states a Class transitions between relative to a defined time scale.

It is typically used during analysis or implementation to analyze a complex timing problem or to represent State changes that need to be analyzed with respect to a defined time scale. It can be used when defining or analyzing communication protocols, server responses, software components business or system processes or other entities where actual time values are critical to the analysis. This is in contra distinction to a state machine that shows the sequence of transitions between states but does not show these relative to a time scale.

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

- · Change the name of the Diagram to suit the initiative.
- · Change the name of the Class to suit the initiative.
- · Rename the States and add others to model the important states the Class can assume.
- · Change the time scale of the diagram.

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

- · Add timing constraints, duration constraints and observations to any of the transitions.
- · Trace the Class to other elements in the model.
- · Create documentation using the Document Generator.

Useful Workspace Layouts Core | Core Modeling

Reference

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

Timing Diagram

State Lifeline

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

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.

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.

Diagram Legends

The Diagram Legend facility is useful for manually or automatically changing the appearance of elements and connectors on a diagram. A legend can be added from the Common Toolbox and configured to codify the fill and line color and line thickness. This is a powerful way to add meaning and expression to a diagram and is particularly expressive when applied automatically based on element or connector properties. It can be used with a number of specialized diagrams such as roadmaps to create a powerful visualization. For more details see the Diagram Legends 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.