Single Decision Table Unique Hit Policy

The *Single Decision Table Unique Hit Policy* pattern is useful for modeling simple decisions and can act as a starting point for more complex decision graphs. The *Decision Table* is the most common of the expression types and allows business architects, business analysts and other stakeholders to input and refine the rules that make up the decision. The Hit Policy of *Unique* means that only a single rule is allowed to match and there can be no overlapping rules, formally these are known as disjoint rules. The Hit Policy symbol of "U" (unique) is visible in the top left hand cell of the decision table editor and can be changed from the context menu for that cell.
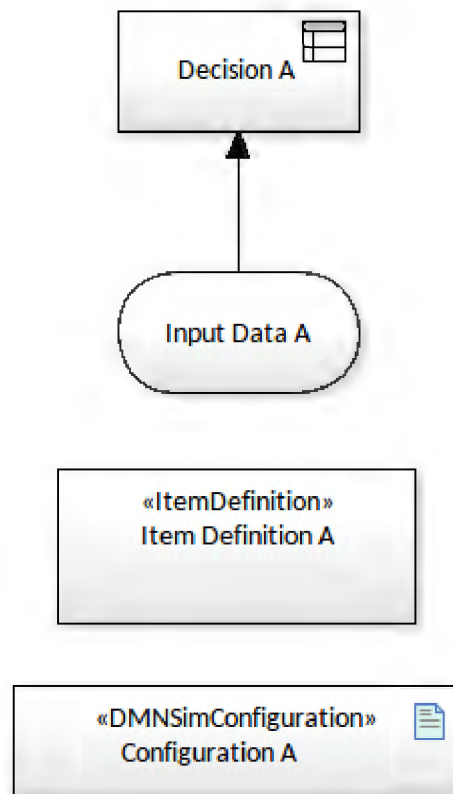

Figure 1. Shows the Decision Requirements Diagram with a single decision and a single Input Data element with its accompanying Item Definition.

Decision A		
U	Input Data A . Component A	Decision A
		Result A, Result B, Result C
1	*>8*	*Result A*
2	*[5..8]*	*Result B*
3	*<5*	*Result C*

Figure 2. Shows the Decision table and a single Input Column and Output column with three Rule rows. Notice the Hit Policy of Unique (U) in the top, left cell of the table.
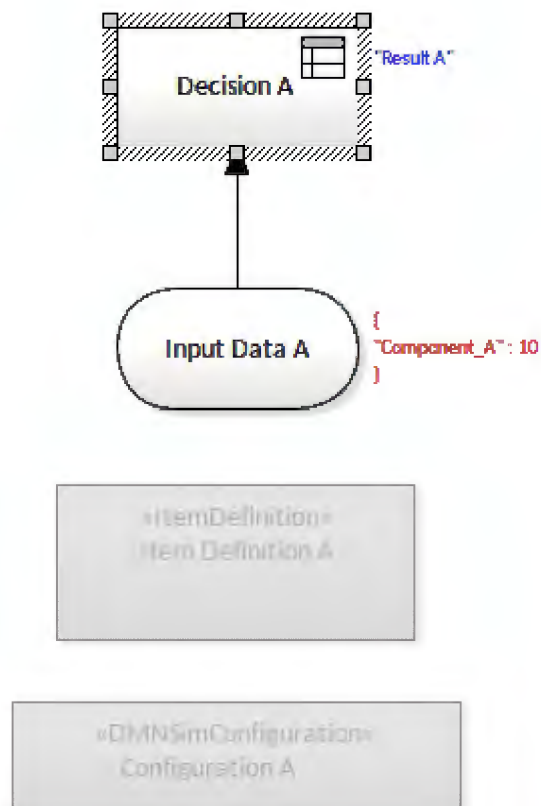

Figure 3. Shows the results of running the simulation. Notice the annotations to the right of the elements showing the data items and the result.

U	Input Data A . Component A	Decision A
	10	Result A
1	>8	Result A
2	[5..8]	Result B
3	<5	Result C

Figure 4. Shows the result with the selected decision table row using the step through simulation option. The rows are formally known as the rules.

Discussion

The purpose of the pattern is to allow a business architect, requirements or business analyst or strategist to model decisions in a business friendly way using a simple and expressive modeling language and a easy to understand table of decisions. As the Decision table is populated the decision model can be simulated (trial execution) using any number of predefined Data Sets and the simulation can be stepped through to see how the rules are applied at any point.

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

· Change the name of the Package and diagram to suit the initiative.

· Change the name of the decision suit the initiative.

· Add notes to the elements to describe their purpose and function.

· Add additional input and output columns to the decision table.

· Add additional Input Data components to match any added input rows.

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

· Use the Simulation window to simulate (trial execution) the decision.

- Add more Decisions to create a hierarchy of decision down to any level if required.
- Create additional Data Sets to act as test and exemplary data for the decision model.

Useful Workspace Layouts DMNSim

Reference

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

DMN Modeling and Simulation

Decision

Building a Decision Model

Decision Model Simulation

Input Data

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

1.1.1 Traceability Window
The Traceability Window automatically displays the relationships that exist between any two elements including Decisions and other model elements including up-process and down-process elements such as Business Drivers. 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.

1.1.2 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 Decisions are related to each other and to discover which elements are missing relationships. For more details see the Relationship Matrix help topic.

1.1.3 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. It is useful to manage sets of decsions such as in a decision library or large project. For more details see the Specification View help topic.

1.1.4 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. Modeling Decisions is best performed with the input from multiple team members and discussions provide a useful mechanism for collaborative development. 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.

1.1.5 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. They are particularly useful with Decision Requirement Diagrams whose business authors and reviewers will appreciate the immediacy of this diagram style. For more details see the Hand Drawn and Whiteboard Mode help topic.

1.1.6 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.

1.1.7 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.

1.1.8 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.

1.1.9 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 or the more general topic on Model Publishing.