

The SDL Index Viewer

The Index Viewer shows all definitions of SDL entities in a system and where they are used. The Index Viewer uses cross reference files produced by the Analyzer.

In previous versions of Telelogic Tau, the Message Sequence Chart Editor could also produce listings of definitions and references from an MSC. These older listings are also supported by the Index Viewer.

This chapter contains a reference manual to the Index Viewer; the functionality it provides, its menus, windows and symbols.

Entities and Windows

Definitions and Uses

SDL

The SDL Analyzer has the ability to generate files containing SDL cross references. See the Analyzer command described in [“Set-Xref” on page 2426 in chapter 55, *The SDL Analyzer*](#), and the Organizer’s Analyzer option described in [“Generate a cross reference file” on page 115 in chapter 2, *The Organizer*](#). These files use a textual format that is human readable; the purpose of the Index Viewer is to provide a means to take advantage of this information in the graphical environment. SDL icons are used when displaying the contents of the files in a graphical way.

MSC

In previous versions of Telelogic Tau, the Message Sequence Chart Editor featured the generation of MSC cross references. These entities had properties that were similar to SDL cross references. Where possible, a direct mapping from MSC to the corresponding SDL concept were made. A few concepts were added so that all information of interest could be extracted from an MSC.

MSC icons identify the various MSC entities graphically, and are supported for backward compatibility reasons.

SDL Icons

Each type of SDL entity has a unique name and icon used in the Index Viewer. The different SDL diagram types use the same icon and type name as in the Organizer’s Main window. For other types of entities, the following icons and names are used:

Icon	Name
	OPERATOR
	PACKAGE_INTERFACE
	CHANNEL

Entities and Windows

Icon	Name
	SIGNALROUTE
	GATE
	INPUT
	OUTPUT
	CONNECTION
	CREATE
	TASK
	SIGNAL
	SIGNALLIST
	GENERATOR
	FPAR; PROCESS_PARAM, PROCEDURE_PARAM (actual param.)
	STATE
	NEXTSTATE
	TIMER
	LABEL (in-connector, out-connector)
	INSTANTIATION
	SET
	USE
	INHERITS
	JOIN
	STATE_LIST
	ATLEAST
	DECISION

Icon	Name
	SAVE
	DCL; VARIABLE
	NEWTYPE; SYNTYPE; SORT
	SYNONYM
	RESET
	IMPORT; IMPORT_DEF (i.e. Imported)
	LITERAL
	VIEW; VIEW_DEF (i.e. Viewed)
	REMOTE_PROCEDURE
	REMOTE_VARIABLE
	SIGNALSET
	ACTIVE
	TRANS_OPTION (i.e. transition option)
	EXPORT
	ENAB_COND (i.e. enabling condition)
	CONT_SIGNAL (i.e. continuous signal)
	NUMBER_INST (i.e. number of instances)
	EXPORTED_PROCEDURE
	(PROCEDURE) CALL
	REFERENCE
	FIELD
	Unknown symbol type. Used for diagrams when the type of the diagram for some reason could not be determined.

Entities and Windows

MSC Icons

Each type of MSC entity has a unique name and icon used in the Index Viewer. The MSC diagram uses the same icon as in the Organizer's Main window. For other types of entities, the following icons and names are used:

Icon	Name
	CONDITION
	CREATE of instance
	INPUT of message
	INSTANCE head
	OUTPUT of message
	RESET of timer
	SET of timer
	STOP of process
	TIMEOUT (expire of timer)
	Unknown symbol type. Used for diagrams when the type of the diagram for some reason could not be determined.

Index Viewer Window

All entities defined in the system are listed in alphabetical order in the Index Viewer window. The entities are sorted alphabetically according to either name, or type and name. For each entity, there may be a list of uses of the entity. The general characteristics of the window is described in [chapter 1, *User Interface and Basic Operations*](#).

The Drawing Area

The window contains a list of all definitions of entities in the current SDL system or the current MSC diagram. The first line in the list gives the name of the current cross reference file.

For each entity, the following information is presented:

- An icon identifying the type of entity (see [“SDL Icons” on page 2018](#) and [“MSC Icons” on page 2021](#))
- The name and type of the entity.
- A reference to the diagram the entity definition is located in.
- The number of definitions with an asterisk in front, if more than one definition of the entity exists (in SDL diagrams, it is only states that can have multiple places of definition for one entity).
- The number of cross references found (only for SDL entities; not applicable to MSC entities)

Index Viewer Window

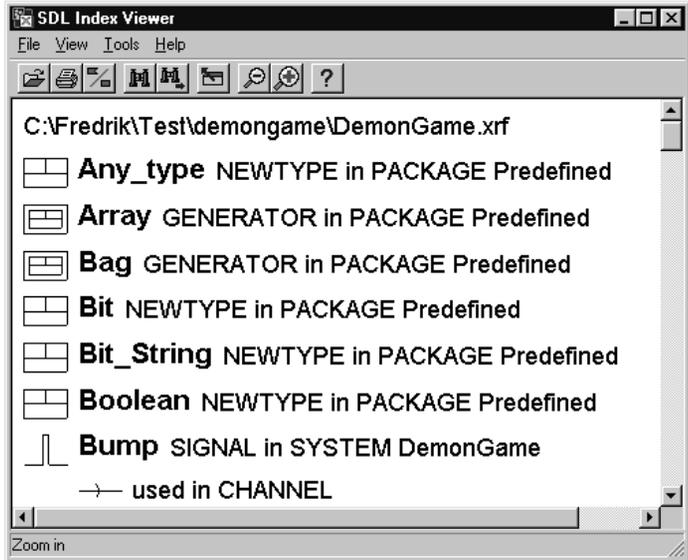


Figure 437: The Index Viewer window

To double click on a defined entity in the window is the same operation as *Show Definition* in the *Tools* menu (see “[Show Definition](#)” on page 2029). If there are several definitions associated with the entity, one of them is selected. If you double click again, another definition is selected. The list of definitions associated with the entity is traversed in a circular pattern.

To double click on a use in the window is the same operation as *Show Use* in the *Tools* menu (see “[Show Use](#)” on page 2030). If there are several uses associated with the symbol, one of them is selected. If you double click again, another use is selected. The list of uses associated with the reference symbol is traversed in a circular pattern.

Fast Search

There is a fast search operation available when the Index Viewer drawing area has the input focus. Just start typing on the keyboard, and the list of entities will be searched from the top. The first matching entity will be selected.

Note that the fast search operation will only match if what you type matches the beginning of the text for an entity. For instance: If you type “Ga”, you will find the entity *Game_On* if the entities are sorted with name first, while you will not find it if you type “On”. The normal *Search* operation does not have this restriction.

The search string used by the fast search operation will be reset whenever any other operation than the fast search operation is performed. For instance, if you have typed “Ga” and the index viewer has found the entity *Game_On*, and you select another entity and start typing again, then the search string used for the search operation will not contain the initial “Ga” characters (and the fast search operation will start searching from the top of the list).

It is possible to use the delete character to correct any spelling mistakes. You can see what you have typed in the message area. Matched characters are shown in non-capital letters, while unmatched are shown in capital letters.

The Menu Bar

File Menu

The *File* menu contains the following menu choices:

- Open
(See “Open” on page 9 in chapter 1, *User Interface and Basic Operations*.)
- Print
(See “Printing from the SDL Suite” on page 307 in chapter 5, *Printing Documents and Diagrams*.)
- Exit
(See “Exit” on page 15 in chapter 1, *User Interface and Basic Operations*.)

View Menu

The *View* menu contains the following menu choices:

- Window Options
- Index Options
- Filter Types

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- [Filter Uses](#)
- [Filter Diagrams](#)
- [Set Scale](#)

Window Options

Sets options for which parts of the Main window to show. The dialog controls whether to show the tool bar and the status bar.

Index Options

Determines the appearance of each entity in the window.

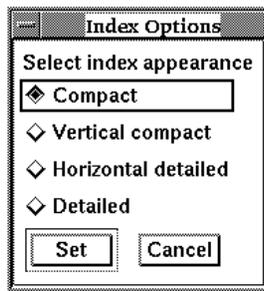


Figure 438: The Index Options dialog

The following alternatives are available:

- Compact:

↶ T timer in process Demon ↷ 3 uses

- Vertical Compact:

↶ T timer in process Demon
↷ 3 uses

- Horizontal Detailed:

↶ T timer in process Demon ↷ used in input ↷ used in set * 2

- Detailed:

- ↶ T timer in process Demon
- ↶ used in input
- ↶ used in set * 2

Filter Types

Determines which entity types to show/hide in the entity list. A dialog is opened with a sorted list of all entity types found in the current cross reference file:

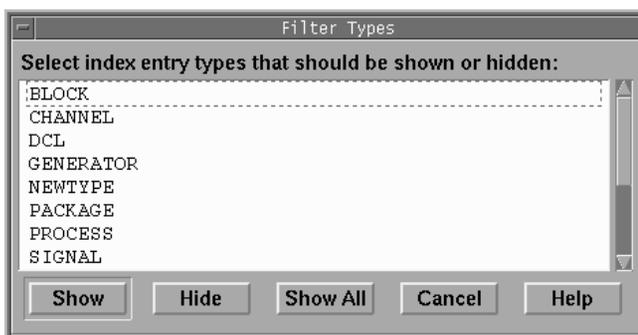


Figure 439: The Filter Types dialog

The figure shows some entity types for an SDL system. See [“MSC Icons” on page 2021](#) for a list of MSC entities.

- *Show*
Shows entities in the Index Viewer window that have a type that is selected in the dialog. Entities with other types are hidden.
- *Hide*
Hides entities in the Index Viewer window that have a type that is selected in the dialog. Entities with other types are shown.
- *Show All*
Shows entities of all types in the Index Viewer window.

An SDT preference, *FilterTypes* can be set to an initial list of entities to show or hide whenever the Index Viewer is opened. Another SDT preference, *ShowSelectedTypes*, determines if the mentioned types should

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be shown or hidden. See “[FilterTypes](#)” on page 276 in chapter 3, *The Preference Manager*.

Filter Uses

Determines which uses to show/hide. The dialog works in the same way as the dialog for *Filter Types*. The associated SDT preferences are named *FilterUses* and *ShowSelectedUses*.

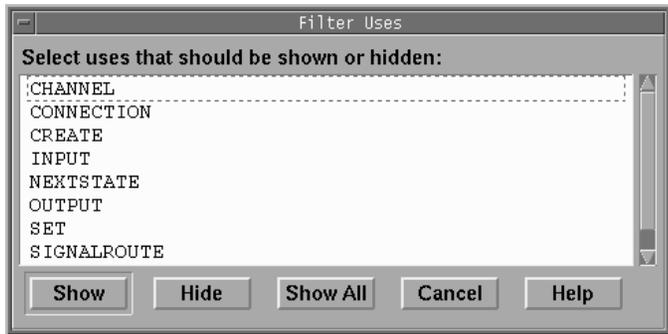


Figure 440: The Filter Uses dialog

Filter Diagrams

Hide/show entities based on which diagram they are defined in. The dialog works in the same way as the dialog for *Filter Types*. The most common use of this operation is to hide definitions from the SDL predefined package. The associated SDT preferences are named *FilterDiagrams* and *ShowSelectedDiagrams*.

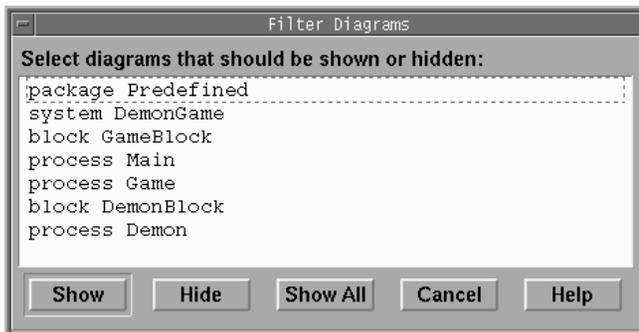


Figure 441: The Filter Diagrams dialog

Set Scale

Issues a dialog where the scale for the Tree window may be set.

Tools Menu

The Tools menu contains the following menu choices:

- Show Organizer
(See “Show Organizer” on page 15 in chapter 1, *User Interface and Basic Operations*.)
- Search
- Search Again
- Show Definition
- Show Use

Search

Searches for a visible text in the entity list shown in the Main window.

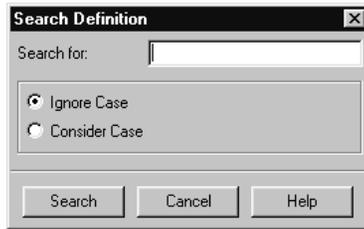


Figure 442: The Search dialog

- *Search for*

Specifies the text string to search for. As a special case, a GR Reference obtained from for instance an editor may also be specified.
- *Ignore Case, Consider Case*

These options toggles between a case insensitive and a case sensitive search.
- *Search*

Starts the search and closes the dialog. The first symbol containing the text is selected. The search starts from the selected symbol, if any, or from the first symbol in the first tree.

If the search reaches the end of the trees, you are asked whether to continue the search from the first tree.

If the text cannot be found among the visible information, you are informed in a confirmation dialog.

Search Again

Searches again for the same text as in the latest search. The behavior is the same as described in [“Search” on page 2028](#).

Show Definition

Opens an editor containing the specified definition of the entity selected in the entity list. The diagram symbol containing the definition becomes selected in the editor.

The name and behavior of this menu choice depends on the number of existing definitions for the selected entity:

- If only one definition exists, that definition is shown in the editor.
- If more than one definition exists, a separate menu choice is available for the first 9 definitions: *Show Definition 1*, *Show Definition 2*, etc. The specified definition is shown in the editor.
- If more than 9 definitions exist, an additional menu choice *Show Definition...* is available. This menu choice opens a dialog in which the number of the definition can be specified.

Show Use

Opens an editor, showing the selected use of an entity. The Show Use operation works in the same way as the *Show Definition* operation.

Popup Menus

The following tables lists the menu choices in the window's popup menus and a reference to the corresponding menu choice in the menu bar.

On the Window Background

<i>Search</i>	<u>"Search" on page 2028.</u>
<i>Search Again</i>	<u>"Search Again" on page 2029.</u>

On an Entity in the Window

<i>Search</i>	<u>"Search" on page 2028.</u>
<i>Search Again</i>	<u>"Search Again" on page 2029.</u>
<i>Show Definition</i>	<u>"Show Definition" on page 2029.</u> The same menu choice variations apply.

Keyboard Accelerators

Apart from the general keyboard accelerators, the following accelerator can be used in the main window:

Accelerator	Reference to corresponding command
Ctrl+E	<u>“Show Definition” on page 2029</u>

Quick Buttons

The following quick button is special to the Index Viewer window. The general quick buttons are described in [“General Quick-Buttons” on page 24 in chapter 1, *User Interface and Basic Operations*](#).



Toggle Order

Switches the entity sort order between *name* and *type and name*.

