Chapter

19 *SDT References*

This chapter contains a reference to the syntax used by the SDL suite when referring to entities managed by the SDL suite.

Through these references, the SDL suite environment provides a means to:

- **Obtain a graphical trace back from Analyzer diagnostics to the source SDL diagrams**
- **Trace simulations in graphical mode**
- **Obtain a trace back from generated MSCs to the source SDL diagrams**
- **Navigate between SDL type diagrams, cross-reference diagrams, coverage charts and the source SDL diagrams**
- **Navigate between the generated PR or C files and the source SDL diagrams.**

General

The concept “GR reference”, introduced in the SDT 2.X tool family, has been extended in order to support references to virtually all entities that are managed in an SDT 3.X environment (or will be managed in future versions):

- SDL diagrams
- SDL pages
- SDL symbols
- Text within an SDL symbol
- SDL Overview diagrams
- SDL/PR files
- OM, SC, MSC, HMSC diagrams
- OM, SC, HMSC pages
- OM, SC, MSC, HMSC symbols
- Text within an MSC symbol
- Text within an OM symbol[1]
- Cross-reference files
- Coverage files
- C files
- ASN.1 files
- Other ASCII text files

The term *GR reference* has been replaced by the term *SDT reference*. It is possible to retrieve SDT references from the SDL suite tools using commands such as *Show GR Reference* in the SDL Editor, and to show the source that matches a reference using commands such as *Go To Source* in the Organizer.

1. This refers to the text in the name compartment in class definition and class instance symbols. Text in the operation and attributes compartments are not possible to refer to in this version.

Syntax

Below follows the syntax for an SDT reference:

```
<SDT_Reference> ::=
  '#SDTREF' '('
  ( <SDT_GR_Ref> | <SDT_Textfile_Ref>
  | <SDT_MSC_Ref> | <SDT_HMSC_Ref> | <SDT_OM_Ref>
  | <SDT_SC_Ref> )
  ')'

<SDT_GR_Ref> ::=
   'SDL' ',' <FileName>
   [ '(' <PageName> ')' ]
   [ ',' <ObjectId> [ <Object_Coordinates> ]
   [ ',' <LineNumber> [ ',' <Column> ] ] ]

<SDT_Textfile_Ref> ::=
  'TEXT' ',' <FileName>
   [ ',' <LineNumber> [ ',' <Column> ] ]

<SDT_MSC_Ref> ::=
   'MSC' ',' <FileName>
   [ ',' <ObjectId>
   [ ',' <LineNumber> [ ',' <Column> ] ] ]

<SDT_HMSC_Ref> ::=
   'HMSC' ',' <FileName>
   [ '(' <PageName> ')' ]
   [ ',' <ObjectId> [ <Object_Coordinates> ]
   [ ',' <LineNumber> [ ',' <Column> ] ] ]

<SDT_OM_Ref> ::=
   'OM' ',' <FileName>
   [ '(' <PageName> ')' ]
   [ ',' <ObjectId> [ <Object_Coordinates> ]
   [ ',' <LineNumber> [ ',' <Column> ] ] ]

<SDT_SC_Ref> ::=
   'SC' ',' <FileName>
   [ '(' <PageName> ')' ]
   [ ',' <ObjectId> [ <Object_Coordinates> ]
   [ ',' <LineNumber> [ ',' <Column> ] ] ]

<FileName> ::=
  File name

<PageName> ::=
  name of a page according to SDT 3.X rules

<ObjectId> ::=
  integer, unique id for object
```

```
<Object_Coordinates> =
  '(' <x-coord> ',' <y-coord> ')'

<x-coord> ::=
   x coordinates in mm from upper left corner
<y-coord> ::=
   y coordinates in mm from upper left corner

<LineNumber> ::=
   line number within symbol or file

<Column> ::=
   column within the line
```

Examples

Below follow some examples of SDT references.

Example 151: SDL graphical references ––––––––––––––––––––––

Reference	Explanation
`#SDTREF(SDL,test.sbk)`	SDL diagram.
`#SDTREF(SDL,test.sbk(P1))`	SDL page
`#SDTREF(SDL,test.sbk(P1),10)`	SDL symbol
`#SDTREF(SDL,test.sbk,10)`	SDL symbol
`#SDTREF(SDL,test.sbk(P1),10(30,130))`	SDL symbol
`#SDTREF(SDL,test.sbk(P1),10,5)`	Line within symbol
`#SDTREF(SDL,test.sbk(P1),10(30,130),5)`	Line within symbol
`#SDTREF(SDL,test.sbk(P1),10,5,15)`	Column at line within symbol

Example 152: MSC graphical references ––––––––––––––––––––––

Reference	Explanation
`#SDTREF(MSC,test.msc)`	MSC
`#SDTREF(MSC,test.msc,10)`	Symbol in MSC
`#SDTREF(MSC,test.msc,10,5)`	Line within symbol
`#SDTREF(MSC,test.msc,10,5,15)`	Column at line within symbol

Example 153: OM graphical references ––––––––––––––––––––––––

Reference	Explanation
`#SDTREF(OM,test.som)`	OM diagram.
`#SDTREF(OM,test.som(P1))`	OM page
`#SDTREF(OM,test.som(P1),10)`	OM symbol
`#SDTREF(OM,test.som,10(30,130))`	OM symbol
`#SDTREF(OM,test.som,10,5)`	Line within symbol
`#SDTREF(OM,test.som(P1),10(30,130),5)`	Line within symbol
`#SDTREF(OM,test.som(P1),10,5,15)`	Column at line within symbol

Example 154: Textual references ––––––––––––––––––––––––––

Reference	Explanation
`#SDTREF(TEXT,test.pr)`	Text file
`#SDTREF(TEXT,test.pr,10)`	Line in text file
`#SDTREF(TEXT,test.pr,10,15)`	Column at line within file

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