Title: cRefer Custom Variable

Product: Allegro Design Entry HDL

Summary: Use Custom Variable for intelligent plotting of cross-referenced Schematics.

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1 Design Entry HDL Custom Variables

Custom variables are special variables, which are supported by Design Entry HDL. You can use these variables for intelligent plotting of cross-referenced schematics. For example, using these variables you can place page information such as ‘This is page 1 of 24’ on the cross-referenced schematics. You can also use custom variables to store information such as the company name and author name.

1.1 Adding CRefer Custom Variables

There are 7 variables, which are specifically useful for CRefer. For example, the CREF_TO_LIST variable defines where the pages for the block are located in the cross-referenced flattened design. Similarly, the CREF_FROM_LIST variable defines where the pages are coming from in a design.

Note: CRefer specific custom variables will be substituted when you run CRefer with the Generate Flattened Schematic check box selected.

1.2 The list of available CRefer variables:

<table>
<thead>
<tr>
<th>Variable Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CREF_TO_LIST</td>
<td>Defines where the pages for the blocks are located in the cross-referenced flattened design.</td>
</tr>
<tr>
<td>CREF_FROM_LIST</td>
<td>Defines where the pages in a flattened design came from in the original design.</td>
</tr>
<tr>
<td>CREF_ORIG_DESIGN_NAME</td>
<td>Defines the original design name</td>
</tr>
<tr>
<td>CREF_ORIG_PAGE</td>
<td>Defines the original page number</td>
</tr>
<tr>
<td>CREF_ORIG_VIEW</td>
<td>Defines the name of the original view</td>
</tr>
<tr>
<td>TOTAL_DESIGN_SHEETS</td>
<td>Lists the total number of pages in the Design Entry HDL schematic</td>
</tr>
<tr>
<td>CURRENT_DESIGN_SHEET</td>
<td>Lists the sheet number of the current page in the schematic</td>
</tr>
</tbody>
</table>
1.3 Example [multiple Block Instantiation - Root Drawing]

The Sample design has one page at the top level (TOP). The TOP page contains two identical blocks TOP_DOWN (multiple instantiations) of one page schematic represented by page 2 and page 3. On each page 2 and page 3 additional blocks have been placed BLOCK1 (multiple instantiations). After cross-referencing, the design will consist of five pages, where Page 1 corresponds to the block TOP, pages 2 and 3 correspond to the block TOP_DOWN, and pages 4 to 6 correspond to the block BLOCK1.

Under the symbol on page 1 for block TOP_DOWN is annotated a property:

`CREF_TO_List = Page 2`
`CREF_FROM_List =`

1.4 Example [hierarchical block - lower level Drawing]
While on the Symbol border of Symbol BLOCK1 is annotated another property:

\[
\text{CREF\_FROM\_List} = 1C5 - I1
\]

Where I1 is the instance name (for block TOP\_DOWN) and 1C5 is the cross-reference for the hierarchical symbol.

**Note:** For replicated and read-only blocks, CRefer calculates the value of the CREF\_TO\_LIST and CREF\_FROM\_LIST custom variables and annotates them to the cref.opf file as CDS\_CREF\_TO\_LIST and CDS\_CREF\_FROM\_LIST variables, respectively.