

**NAME**

makeboxh - expand a cell hierarchically to boxes

**SYNOPSIS**

**makeboxh** [-v] [-cL] [-oM] [-wXl,Xr,Yb,Yt] cell

**OPTIONS**

- cL** select check level 'L' (positive integer value). The check level specifies the level of the lowest cells in the cell hierarchy which are expanded. These are separate cell expansions, which contains all overlaps of the underlying cell levels (default: only the cell on top of the hierarchy is expanded (minimum level = 1)).
- oN** set the size of the active region to 'N' (default: 6 micron).
- v** verbose mode.
- wXl,Xr,Yb,Yt** select a partial expansion window. The window coordinates (integer values) must be specified as one argument (no blanks are allowed). Xl,Xr,Yb,Yt are respectively the left and right X-coordinates, and bottom and top Y-coordinates (default: the expansion window is the cell bounding box).

**DESCRIPTION**

*Makeboxh* takes the internal database description of the cell and converts it to boxes.

*Makeboxh* expands the cell *hierarchically*, i.e. the cell and all lower cells are expanded based on the assumption that the lower cells are already verified. If an expansion window is specified, only the boxes in that window are expanded.

The cell argument is the cell name and must be the last argument. The current working directory must be the project directory. *Makeboxh* creates a special file "exp\_dat", which contains the names of the cells which are expanded.

**AUTHOR**

J. Annevelink S. de Graaf

**FILES**

NELSISPROJECT/.dmrc  
(input file)

NELSISPROJECT/layout/cell/box  
(input file)

NELSISPROJECT/layout/cell/mc  
(input file)

NELSISPROJECT/layout/cell/term  
(input file)

NELSISPROJECT/layout/cell/info  
(in/output file)

NELSISPROJECT/layout/cell/tid  
(output file)

NELSISPROJECT/layout/cell/LC\_bxx  
(output files) LC=LayerCode

NELSISPROJECT/exp\_dat  
(output file)

**SEE ALSO**

T.G.R. van Leuken, J. Liedorp, "An Hierarchial and Technology Independent Design Rule Checker", in "The Integrated Circuit Design Book".  
exp(1ICD), makeboxl(1ICD), makevln(1ICD).