

Octave / MATLAB Toolbox for GDS II Stream Format

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This software is in the Public Domain, with the exception
of the functions for Boolean set operations.

New versions of the toolbox can be downloaded from:

<https://sites.google.com/site/ulfgri/numerical/gdsii-toolbox>

These functions are particularly useful when a layout is the result
of a computation. MATLAB / Octave can then be used as a macro language
for writing the layout.

Functions

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Toolbox functions are grouped into the following directories:

Basic:

Contains the low level functions for reading and writing
of files in GDS II stream format and defines objects and
methods for working with GDS II layouts.

Elements:

Contains functions that return gds_element objects.

Structures:

Contains functions that return gds_structure objects

Boolean:

The GDS II toolbox contains a method that performs boolean
set operations on boundary elements. This is described in more
detail in the file: README-Boolean / README-Boolean.pdf

Misc:

Functions that don't return gds_* objects.

Scripts:

Command line scripts for Octave that can be run directly
from the shell prompt in a Linux / Unix environment.

Compiling

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This software contains several MEX functions, which must be
compiled with a C compiler (and a C++ compiler for the Clipper
library), before the library can be used. The C compiler must be
sufficiently C99 conformant; the LCC compiler that is included with
earlier versions of MATLAB will not compile many of the mex functions
(see the MATLAB documentation for compiling external functions).

For Octave, the mex functions are compiled by executing

```
$ ./makemex-octave
```

at the shell prompt. In MATLAB the mex functions can be compiled by
changing to the ./gdsii directory and running

```
>> makemex
```

at the MATLAB command prompt.

Useful Stuff

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Very good viewer and editor for GDS II files: <http://www.klayout.de>

Help

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If you find a bug in the software, please send a message to
ulf.griesmann@nist.gov or ulfgri@gmail.com and I will try to fix it.