

It's time to rethink...

Layout Manipulation Tools

SECURITY

Checks are performed at each step of the mask data preparation flow ensuring error free database and mask order.

RELIABILITY

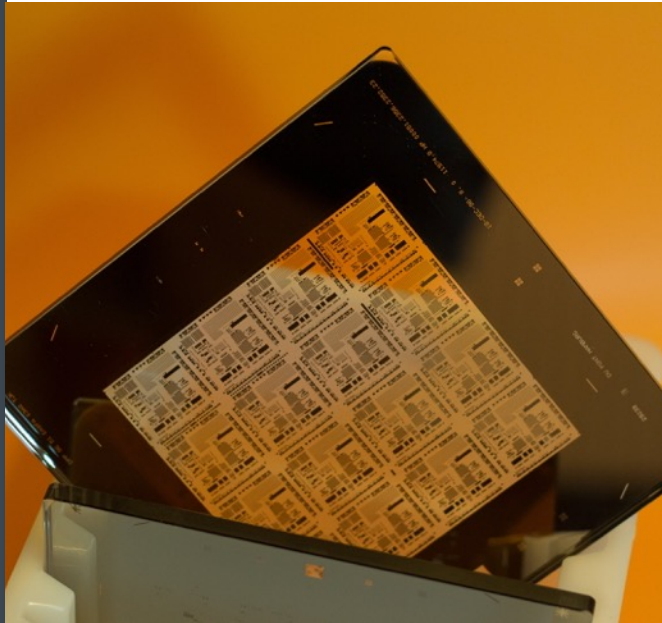
Layout manipulation tools have been used in production by leading edge companies for years.

AUTOMATION

Integrated Mask Data Preparation solution is scriptable for full automation in production mode.

PORTABILITY

Layout manipulation tools support standard layout and job deck formats: GDSII, OASIS, OASIS.MASK, MEBES.



- Layout database analysis and integrity checking
- Mask manufacturability verification
- Layout database merging
- Layout database viewing
- Layer conversion
- Cell extraction and replacement
- Label and barcode creation

Shrinking geometries, new manufacturing paradigms, exploding file sizes... It's time to rethink everything.

XYALIS increases the productivity, reliability, and repeatability of the layout finishing process with a redesigned Layout Manipulation Toolbox that handles the largest designs with maximum performance and minimum memory requirements thanks to the new GDSII & OASIS TOOL (GOT) data representation engine tailored to leverage native OASIS.MASK optimizations.

XYALIS offers a software suite dedicated to the manipulation and update of large layout databases, such as consistency and integrity checking, database merging, format translation, database viewing, cell replacement, and layer conversion.

XYALIS layout manipulation suite processes even the largest GDSII or OASIS files with the highest computing speed and the lowest memory requirements and provides a safe transfer to silicon for most complex SOC designs. It is recommended in every tape-out sign-off flow.



Features and Benefits

SYSTEM REQUIREMENTS

Runs on any Linux workstation with RedHat 6 or above.

Management of multi-cores or multi CPU is automatic.

A Mac OSX version is also available.

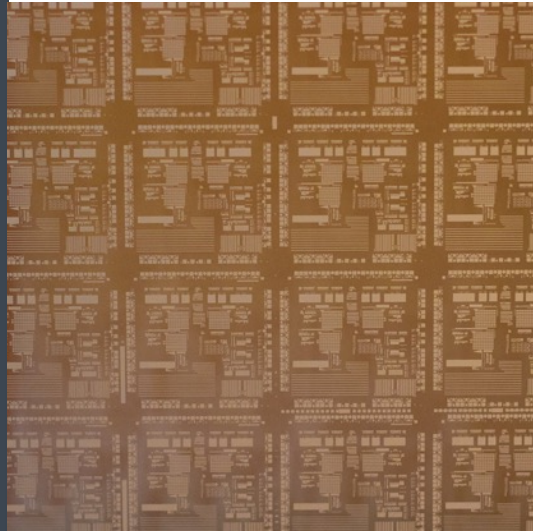
Binaries for other platforms may be provided on request.

INFORMATION

For more information on products or services please visit

www.xyalis.com

or e-mail sales@xyalis.com



- **Layout database integrity checking**
GOTcheck performs critical input control during tape-out sign-off: flagging missing cells, multiple cell definitions, multiple top-cells, corrupted databases, and non-standard GDSII, OASIS, and MEBES constructs, so design and mask data preparation engineers can identify problems early in the flow, before they become catastrophic failures.
- **Layout database analysis**
GOTcheck also extracts information from layout files: layers, cells, bounding boxes..., and generates custom reports, in text or .csv format for automatic post-processing.
- **Mask manufacturability verification**
GOTcheck identifies problematic geometries, such as non-manufacturable angles, reentrant polygons, folded paths, etc... before hand-off to the mask shop. It is fast enough to be incorporated in any design and mask data preparation flow.

- **Layout database merging**
During design and mask data preparation it is necessary to merge layout databases: chip layout with dummy fill layout, array of chips with manufacturing items, multi-chip assemblies... GOTmerge combines GDSII and OASIS layout files into a single database, applying geometric transformations, consolidating units, and resolving name conflicts.
- **Layout database viewing**
Interactive GOTviewer enables design and process engineers to view, share, and annotate the largest GDSII, OASIS or MEBES files.
GOTfig captures instant snapshots of any portion of an optimized OASIS.MASK or MEBES / JobDeck database.
- **Layer conversion**
GOTlayer enables the conversion of layers and polygons in a GDSII or OASIS file. It translates the elements of a GDSII or OASIS file from a layer to another, removes all geometries in a layer or set of layers, and flattens a database.
- **Cell extraction and replacement**
GOTreplace extracts any cell and its full hierarchy from a GDSII or OASIS file and optionally replaces it with another cell. All calls to the old cell are deleted or replaced with calls to the new cell. GOTreplace can be used to update a multi-chip assembly or to rebuild ROM code.
- **Label and barcode creation**
GOTlabel automates the creation of chip and photomask labels and barcodes used to build frames and mask sets.



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