

# It's time to rethink...

## ...mask data preparation

### EASE OF USE

XYALIS offers the most user friendly mask data preparation solution with dedicated tools for each specific need that fit in any existing flow.

### SECURITY

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

### RELIABILITY

XYALIS mask data preparation solution has 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

XYALIS Mask Data Preparation solution supports standard layout and job deck formats: GDSII, OASIS®, OASIS.MASK, MALY, MEBES.



- Frame generation
- Multi-chip assembly
- Mask and field edition with step plan optimization
- Mask manufacturability verification
- Correct by design SEMI-P10 mask ordering
- Automatic documentation and database merging
- Essential companion toolbox



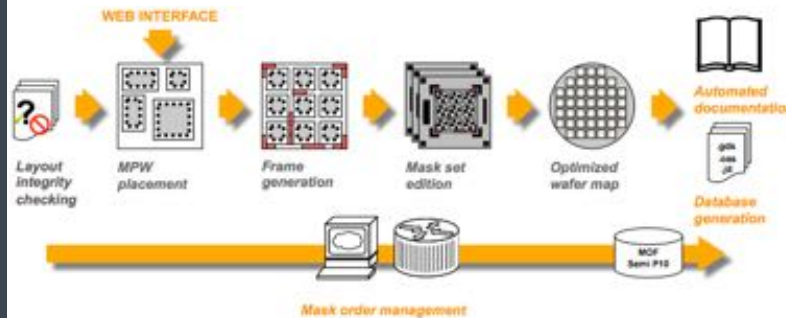
Shrinking geometries, new manufacturing paradigms, exploding file sizes... It's time to rethink everything.

XYALIS increases the productivity, reliability, and repeatability of mask data preparation with an intuitive, fully integrated set of dedicated tools that handle the largest designs with maximum performance and minimum memory requirements thanks to the new GDSII & OASIS® (GOT) engine.

XYALIS tightly integrated Mask Data Preparation suite automates the repetitive and time consuming tasks between design and manufacturing: frame generation, multi-chip assembly, mask set layout, step plan optimization, wafer level dummy fill, mask manufacturability verification and an enterprise-wide mask data management system for an error-free SEMI-P10 compliant mask order process.



# Features and Benefits



## ESSENTIAL COMPANION TOOLBOX

XYALIS offers a set of tools dedicated to manipulation of large layout databases that can process the largest GDSII and OASIS® database, with the highest processing speed and lowest memory requirement, and provide a safe transfer to silicon for the most complex SOC designs.

## SYSTEM REQUIREMENTS

Runs on any Linux workstation with RedHat 6 or above. Management of multi-core 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](http://www.xyalis.com) or e-mail [sales@xyalis.com](mailto:sales@xyalis.com)

- **Mask and field assembly**

To speed up the creation of complete mask sets GOTmask automates the generation of final mask layouts according to user-defined templates, supporting any scale of mask as well as front and back-side masks, Multi-Layer Reticules, and Multi Field Masks. A special full wafer mask (1X) flow offers the possibility to mix different chips, including very large scale dies and provides wafer-wide dummy fill. Stitching process is also fully supported.

- **Step plan optimization**

Step plans and wafer maps are automatically calculated and optimized according to various criteria: minimal number of photo shots, maximum number of usable dies, and take into account all forbidden areas on the wafer.

- **Mask manufacturability verification**

A design database analyzer combined with an assembly rule checker warrants that the generated mask data is free from error. Special checks are carried out to ensure that the final mask set database can be handled without problem by any mask shop and manufacturing processing and inspection tool.

- **Error free SEMI-P10 compliant mask order process**

An enterprise-wide photomask information database manages all data related to mask data preparation throughout the life of the projects and provides customers with an error-free, 100% SEMI-P10 compliant mask order process warranting interoperability between mask suppliers.

- **Automatic documentation and database merging**

User documentation is generated by the click of a button. Format can be customized through a plug-in mechanism.

- **TCL scripting and SQL connection**

Fully scriptable using TCL. Built-in universal SQL connector to any DB.

- **Frame generation**

GOTframe optimizes the placement of process and mask specific items into scribe lines while minimizing the scribe line width and field area. GOTframe works for both regular arrays of dies and multi-chip assemblies.

- **Multi chip assembly**

GOTmuch provides an intuitive framework to build multi-chip assemblies while GOTcross dedicated placement engine takes into account specific optimization criteria: silicon area, number of cut sets, number of wafers necessary for production delivery... Field-wide dummy fill inserts customer-defined dummy tiles into empty areas in the assembly to guarantee higher manufacturing yield...



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