

It's time to rethink...

Multi Project Wafer Placement

OPTIMIZATION

GOTcross optimizes the placement of multi-chip assemblies with respect to production costs.

SECURITY

Checks are performed at each step of the multi-chip placement flow ensuring error free database and mask order.

RELIABILITY

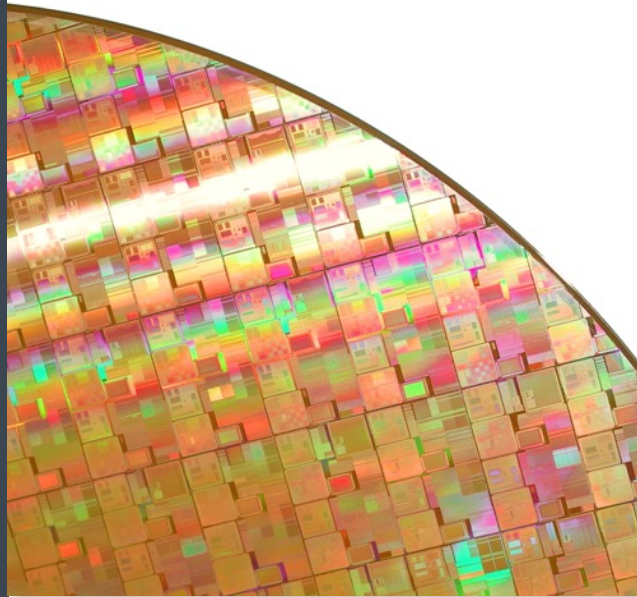
Multi-chip assembly solution has been used in production by leading edge companies for years.

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, MEBES.



Shrinking geometries, new manufacturing paradigms, exploding file sizes...

XYALIS increases the productivity, reliability, repeatability of multi-chip assembly placement with GOTcross, a production aware placement engine which calculates the optimum placement of chips in a multi-chip assembly in order to meet customer specific optimization needs: area, wafer lots, etc...

Multi-chip assemblies also known as Multi Project Wafers, Shuttles, or Pizza Masks are becoming more prevalent in order to share mask costs between projects and are now used for manufacturing test chips, prototypes, and low production chips.

- Manufacturing and production requirements
- Customized optimization criteria
- Optimized customer deliveries
- Extended capabilities with GOTmuch
- Mask manufacturability verification
- Automatic documentation and database merging
- Essential companion toolbox

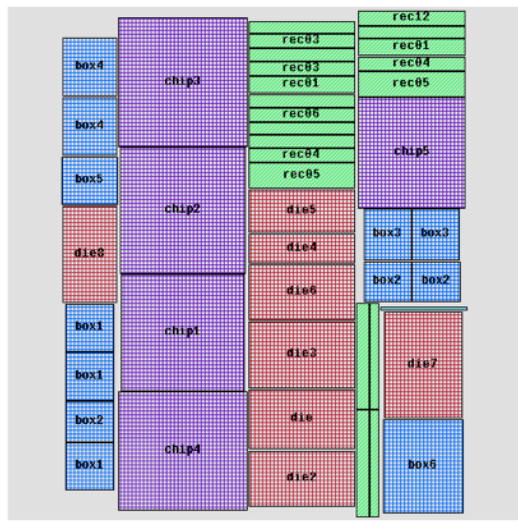
GOTcross is an advanced placement engine dedicated to multi-chip assemblies and their specific requirements in terms of deliverability, chip packaging, and expected production outcome.

GOTcross optimizes the placement solution in order to meet specific customer criteria with respect to area minimization, cut set minimization, or customer delivery optimization.

GOTcross handles the largest designs with maximum performance and minimum memory requirements thanks to the new GDSII & OASIS (GOT) data representation engine tailored to leverage native OASIS.MASK optimizations.



Features and Benefits



ESSENTIAL COMPANION TOOLBOX

XYALIS offers a set of tools dedicated to Mask Data Preparation (frame generation, mask set creation) and manipulation of large layout databases that can process even the largest GDSII and OASIS files, with the highest processing speed and the 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-cores 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

- **Manufacturing and production requirements**
Unlike general purpose placement engines, GOTcross is tailored for multi-chip assemblies and takes into account packaging requirements: saw line width, guard rings, and margins, as well as production requirements, allowing customers to define expected production outputs for some or all chips.
- **Customized optimization criteria**
As multi-chip assemblies are used for different purposes (test chips, low production chips...) GOTcross offers different optimization criteria: minimum area, minimum number of cut sets, optimized customer deliveries... Customers select pre-defined optimization modes or create their own in order to best reflect their needs.

- **Optimized customer deliveries**
Often multi-chip assemblies include chips from different customers or design groups, with different packaging requirements... that need to be retrieved independently after manufacturing. GOTcross optimizes the delivery of such chips by minimizing the number of cut sets necessary to saw them.
- **Extend capabilities with XYALIS GOTmuch**
GOTcross can be used in standalone mode or within GOTmuch, a graphical multi-chip assembly editor for result visualization, manual tuning, and automatic insertion of dummy fill between chips in order to avoid Chemical Mechanical Polishing (CMP) issues.
- **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 with no problem by any mask shop and manufacturing processing and inspection tool.
- **Automatic documentation and database merging**
User documentation is generated by the click of a button. Format is customized through a plug-in mechanism. Final layout data is generated as a single or multiple files to offer the best trade-off between job deck complexity and file size.



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