

# It's time to rethink...

## Layout database comparison

### SECURITY

Layout comparison against geometry-based signature file protects intellectual property.

### RELIABILITY

XYALIS geometry-based signature enables fast layout comparison for a reliable exchange mechanisms between design contributors.

### AUTOMATION

Fully scriptable for automation in production mode.

### PORTABILITY

Layout database comparison supports standard layout formats: GDSII, OASIS®, OASIS.MASK.



- Geometry-based signature
- Ultra fast signature comparison
- Intellectual property protection
- High performance XOR
- Layout integrity control
- Error file generation
- Parallelism for unsurpassed performance
- Client/server mode for GUI customization

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

As exchanges of layout descriptions between teams involved in modern integrated circuit (IC) development and production increase in terms of rate, value, and size, it becomes critical to implement a secure, reliable, and efficient information exchange flow between collaborating companies and teams.

Being able to compare the received layout with the reference design is a critical step in a reliable flow. Unfortunately, until now, this is achieved by XORing the files, a time consuming operation which requires access to both files.

Leveraging years of leadership in layout finishing, XYALIS introduces the **geometry-based signature**, which enables a safe and fast traceability process. Tailored to handle the multiplicity of design styles and representation standards specific to electronic design, it speeds up layout comparison, while protecting intellectual property during exchanges.



# Features and Benefits

## ESSENTIAL COMPANION TOOLBOX

XYALIS offers a set of tools dedicated to layout manipulation 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-cores is automatic.

A Mac OSX version is also available.

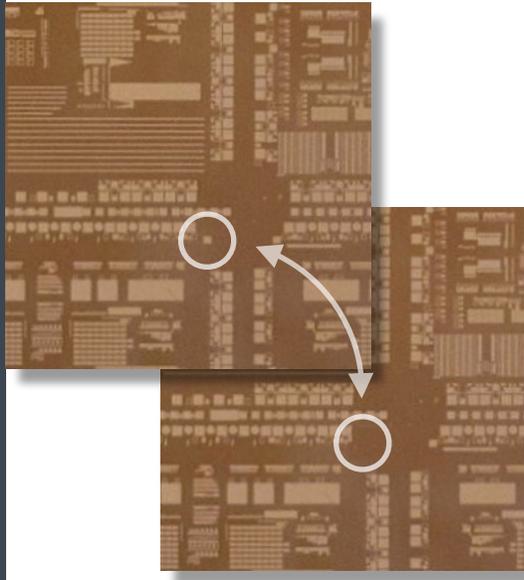
Binaries for other platforms may be provided on request.

## INFORMATION

For more information on products or services please visit

[www.xyalis.com](http://www.xyalis.com)

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- **Geometry-based signature**  
Based on XYALIS' patent, GOTdiff captures the geometry of each layer in the design to generate a unique geometry-based signature file, independent of the layout file format and/or design description strategy.
- **Ultra fast signature comparison**  
GOTdiff performs a fast comparison between two signature files, generating any missing geometry-based signature in the process. In case of mismatch between signatures, GOTdiff optionally performs a XOR between layouts, limiting calculations to areas where differences have been found.
- **Intellectual property protection**  
Limiting the transfer to a geometry-based signature file instead of the full reference design, reduces the risk of unnecessary intellectual property dissemination.
- **High performance XOR**  
GOTdiff benefits from the advanced GDSII & OASIS® TOOL (GOT) data representation engine developed by XYALIS in order to XOR the largest layout files in a minimum computing time with minimum disk and memory requirements. GOTdiff directly works on compressed GDSII and OASIS® files to further improve speed and memory consumption.
- **Layout integrity control**  
Layout file integrity can be validated along the design and manufacturing process by a quick Go/No Go comparison against the reference geometry-based signature file, whenever the database is converted to a different format, or simply read/rewritten by any EDA tool.
- **Error file generation**  
GOTdiff generates GDSII or OASIS® layout files of the differences identified by the XOR operation. Differences can also be saved in a DRC-compliant error file.
- **Heavy parallelism for unsurpassed performance**  
GOTdiff optimizes the size of the computation window to maximize parallel distribution across processors.
- **Client / server mode**  
GOTdiff includes a distant access mechanism based on HTTP sockets, which allows for client/server access from any web interface. This mechanism can also be used to develop a custom graphical user interface.



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