

## NxCompare - Cross Format Layout/Mask Data Equivalence Checking, Boolean and Geometry Operations

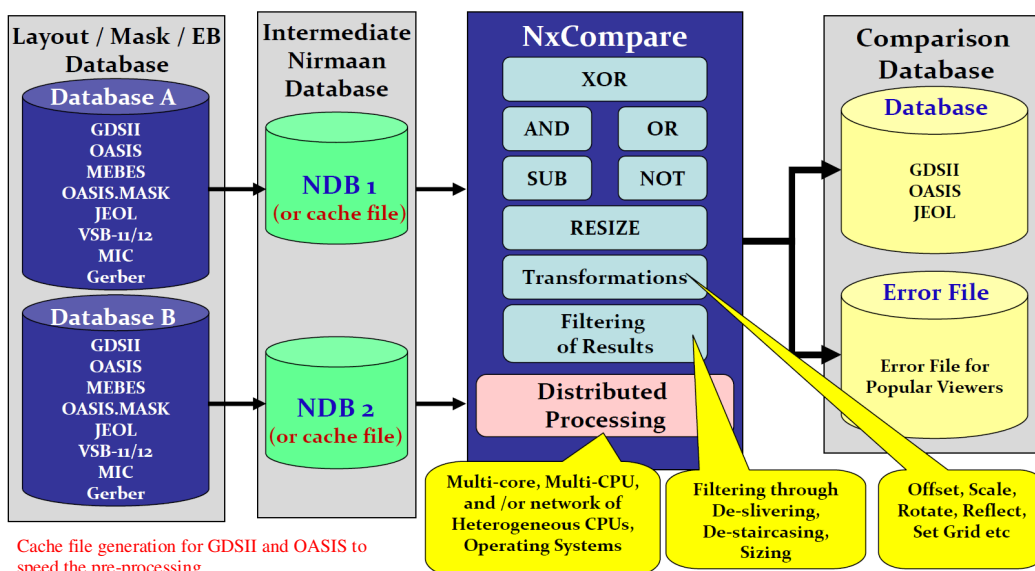
NxCompare is a fast and versatile comparison tool that can be used to compare any two Layout or Mask databases (Layout vs Layout, Layout vs Mask or Mask vs Mask). NxCompare is a distributed processing application based on SoftJin's proven and widely deployed Nirmaan software development platform. NxCompare also includes high performance Boolean, resizing and other geometrical operations.

### Key Features

- **Unlimited Data handling capacity**
  - Can handle equivalent of hundreds of GBs of GDSII data
  - No restrictions on design hierarchy – handles a mix of flat and hierarchical designs
- **Fast turn-around time using distributed processing on inexpensive compute grids**
  - Compares multiple GBs per minute of GDSII equivalent data
  - Scales nicely for larger size data
- **Cross format comparison support for multiple layout and mask data standards**
  - Layout data formats - GDSII, OASIS
  - E-beam formats - MEBES, OASIS.MASK, VSB-11/12 and JEOL
  - MIC, Gerber
  - Customized EBDW formats
  - Bitmap data (image data)
- **Advanced set of user control option**
  - Built-in Boolean functions required for layout equivalence checking of geometrical layers
  - User defined tolerance limit to filter out nuisance errors
  - De-staircasing function to filter out differences caused due to approximation of all-angle geometries in pre-fracture data
  - Scaling, rotation, translation, mirroring and tone reversal
  - Full-chip, Window-specific, Cell-specific, Layer-specific equivalence checking
  - TCL scripting allows quick customization and integration in to existing design and verification flows
- **Supports multiple error database formats for popular Viewers to efficiently navigate and view and analyze the differences**

### Key Benefits

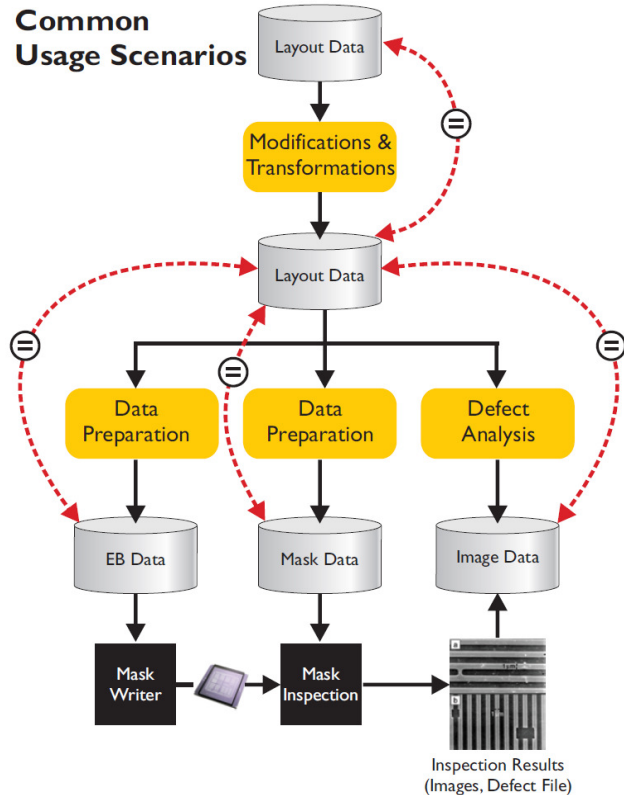
- Better price and performance compared to standard DRC tools for comparison of large, cross-format layout/mask databases
- Supports all major industry standard Layout and Mask data standards
- Very fast turnaround time for large, cross format databases
- Leverages distributed computing as well as multi-core infrastructure
- Includes high performance Boolean and re-sizing functions
- Affordable distributed computing on low cost Linux machines (32/64 bit)



## Use Scenarios

NxCompare could be used very effectively in a variety of use scenarios including:

- **Quick equivalence checking of layout databases in the back-end design flow by allowing layout comparisons at different levels of abstractions**
  - Full-chip, Window-specific, Cell-specific, Layer-specific comparison
- **Data Verification and Analysis in the Mask Data Flow**
  - Independent verification of fracturing results (in formats for Mask Writer or Mask Inspection) with original layout data (in GDSII/OASIS formats). De-slivering and de-staircasing allow separating the expected differences from unexpected differences
  - Comparing EB data after re-fracturing / format conversion
  - Overlaying and Comparison of Mask Inspection / SEM image data with original Layout
- **Comparison of split data files with merged / original data**
  - PSM data, Double patterning
- **Qualification / regression testing of new post-layout tools and internally developed tools and utilities**
- **Comparing geometrical databases from different sources**
  - Databases generated by different tools
  - Databases in different data formats
  - Databases in different versions of similar data



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### About SoftJin

SoftJin Technologies develops Innovative and Customized Automation software for Electronic Design and Manufacturing. SoftJin offers several Software Products that address the challenges associated with IC Manufacturing at advanced process nodes including Post Layout Analysis, Optimizations and Mask Data Preparation. SoftJin's software products also serve as embedded components, Analysis and productivity enhancement tools for Lithography and Inspection equipments. See more details at [www.softjin.com](http://www.softjin.com)