MaskViews is a simple to use, yet powerful layout editor that can read, write, create and edit layout files in either GDS2 or Silvaco’s Layout format. MaskViews has numerous features that tightly integrate it into Silvaco’s process and optolithographic tools as well as Silvaco’s 3D parasitic products.

**Features**

- Simple yet intuitive GUI interface
- Imports/Exports standard GDS2 or Silvaco layout formats
- Silvaco layout format allows direct naming of mask layers removing layer technology file requirement
- Tightly coupled to process, optolithographic and parasitic simulation products
- Cutline feature allows export to two dimensional process simulations in Athena
- Cutline feature creates automated meshing for process simulation
- The mask transmittance and phase shift attributes can be specified for either a whole mask layer or for each individual mask feature
- All the usual layout manipulation features such as re-sizing, cut, copy, move rotate

**Applications**

- MaskViews creates cutline cross section files for direct export into Athena 2D Process Simulations
- Each mask layer can be tagged with phase and transmittance data for use in Optolith, Silvaco’s optolithographic module
- MaskViews is tightly coupled with Clever, Silvaco’s full 3D parasitic RC solver, allowing derived layers and automated electrodes created by Clever to be viewed for de-bugging user created technology files
- 2D surface or 1D electrodes can be created or added for use in Clever
- MaskViews can also be used as a stand-alone viewer/editor for GDS2, CIF and Silvaco layout format files
- When files are created or saved in Silvaco Layout format, any arbitrary layer names can be used, making layouts much more clear than GDS2

Any arbitrary shape can be edited.
Benefits

- This highly intuitive tool allows the user to design and modify mask layouts almost immediately, usually without needing to refer to the manual.
- MaskViews has numerous special features, such as automated grid generation for Athena, that tightly integrate this simple but powerful tool into your Silvaco design flow.

In this example, a test mask demonstrates 180° phase shift of the multi-finger test pattern when used with Silvaco’s Optolith.

The mask layout, sent to Athena, can carry the information needed for layout specific automatic based mesh generation.

Cut Line feature allows simulations of arbitrary cutlines.

All mask operations are very simple to execute.