MicroFabSolutions

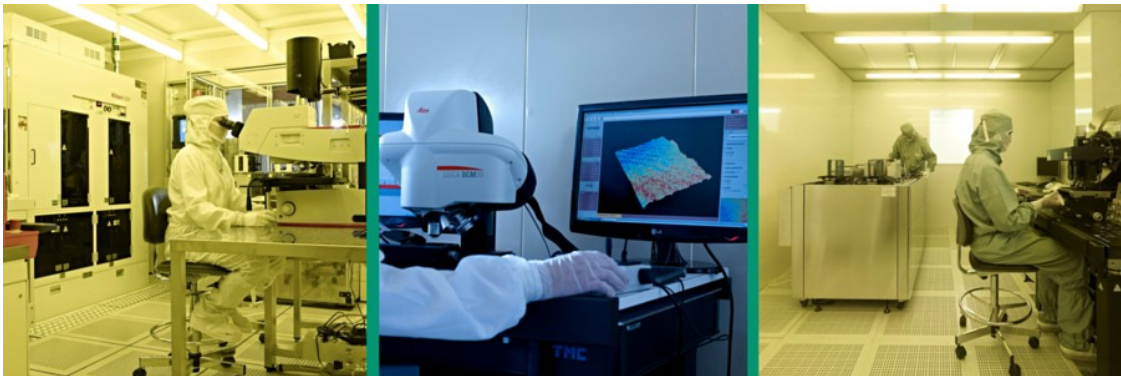*Your partner in the in the field of micro-nano technologies*

AppProcessComposer

FOTO C. BARONI – ARCHIVIO FBK

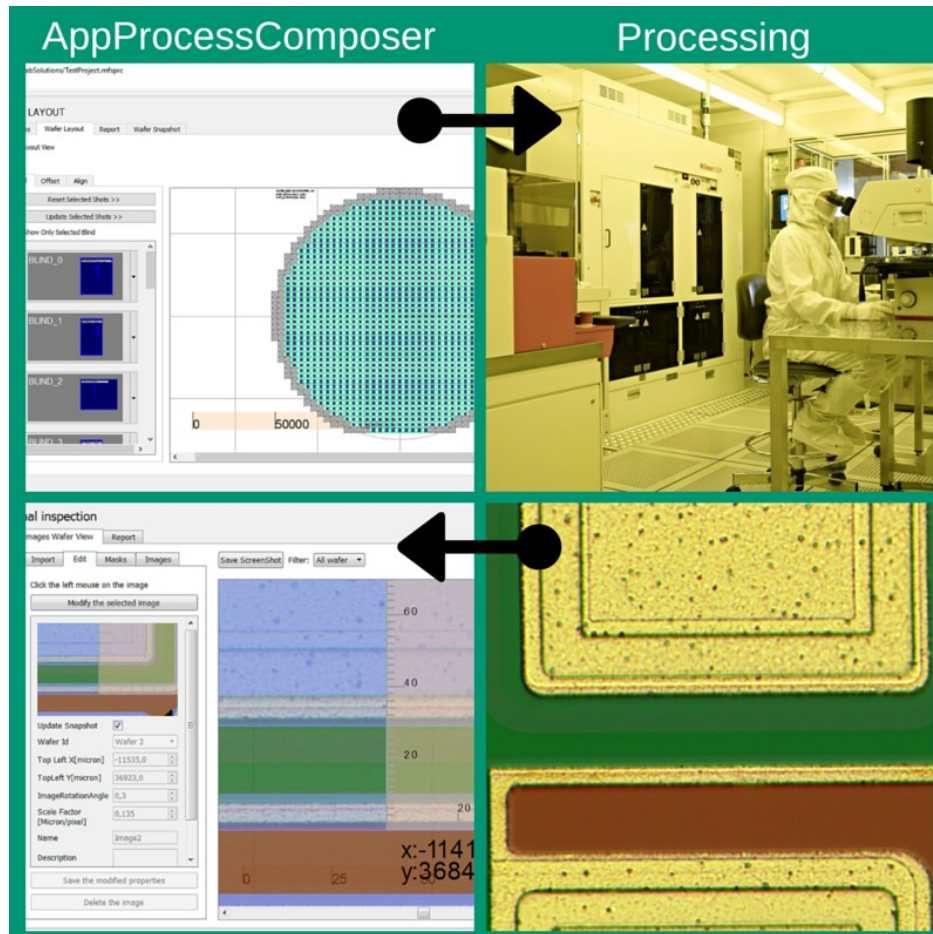MicroFabSolutions s.r.l.

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MFS

AppProcessComposer is the software that simplifies and speeds the creation, control and managing phases of a lithography step in fabrication process.
It helps you in design-to-manufacturing process.

The software is

- a **GDSII file viewer**: you can load a gdsII file without dimension limit. The file is converted in the application format and could be displaied very quickly.

- a **reticle composer tool**: you can load the gds files of the device layers and easily place them on the reticle area. The simplest and faster way to prepare the request for mask shop.

- a **wafer layout composer tool**: you can simply create the stepper process file, the process program file used in the Nikon Step-and-Repeat System.

- a **wafer inspection tool**: you can control the final device dimensions and the quality of process thanks to a comparision of the mask layout dimensions and the pictures of the resulting structure in a dedicated viewer.

The gdsII file is loaded in a database in order to permit the handling of very large files. The viewer loads into the pc memory only a optimized data representation of the area selected.
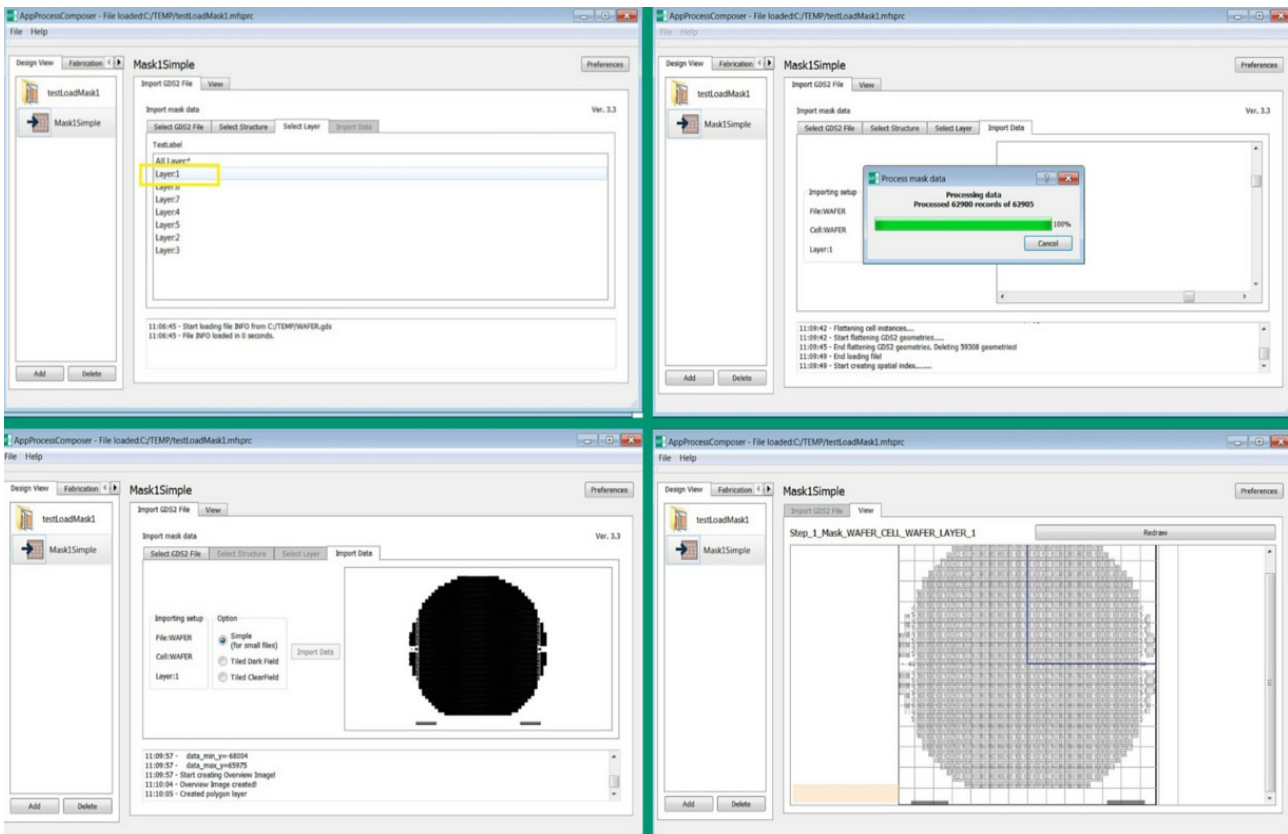
The gds II file is imported and the software creates a multiscale visualization format. When the full wafer is displaied the software shows a simplified version of the data and when a particulare is zoomed it loads the original vector data.

The time to do it depending on the file dimension and complexity and CPU speed.

The software steps are:

1. upload the structures of the selected level from GDS file

2. perform the file flattening (replaces references with physic items)

3. save the polygons in database

4. create the simplify full scale view

AppProcessComposer–Stepper Reticle Layout Composer

The tool offers a simple placement method to compose your reticle reducing mask-making cycle time.

Starting from the layer gds files of your device you can easily obtain the final reticle layout for mask shop with a drag end drop system.

With the graphical representation of the final mask you can start to prepare and simulate the wafer layout before buying the physical mask.
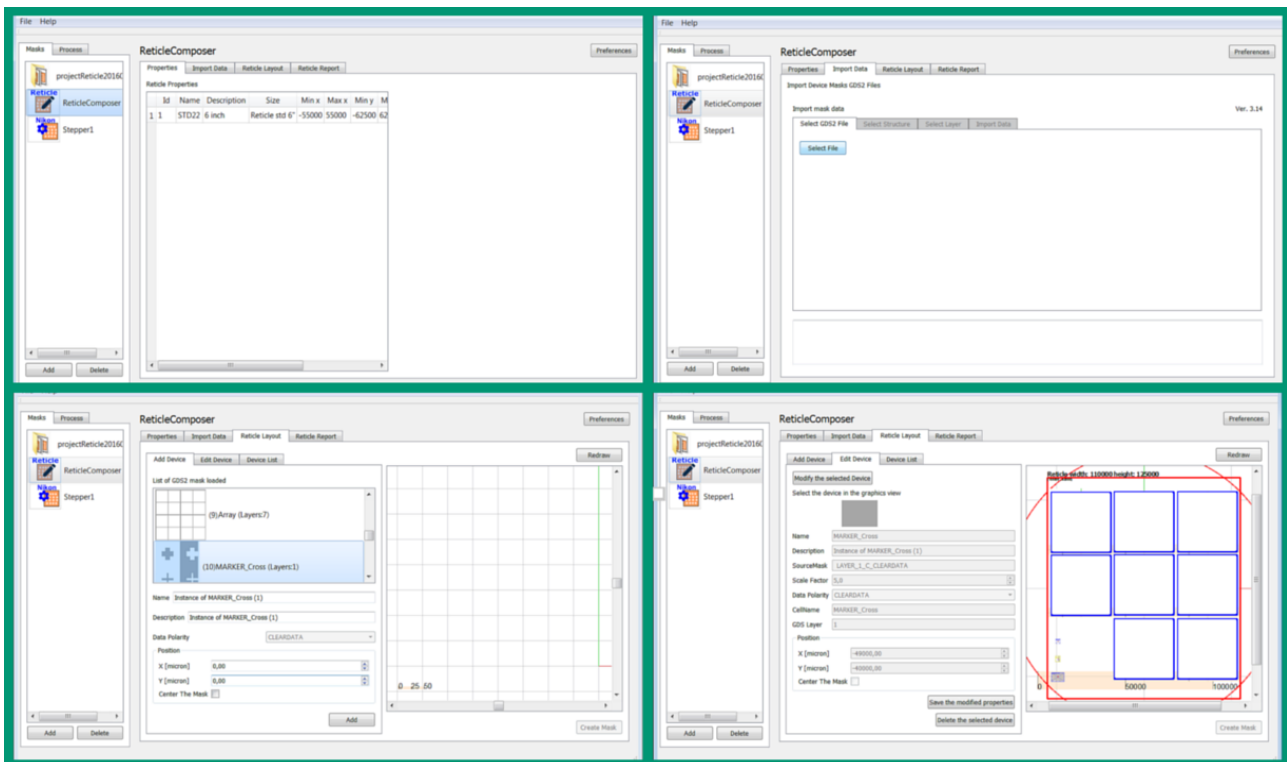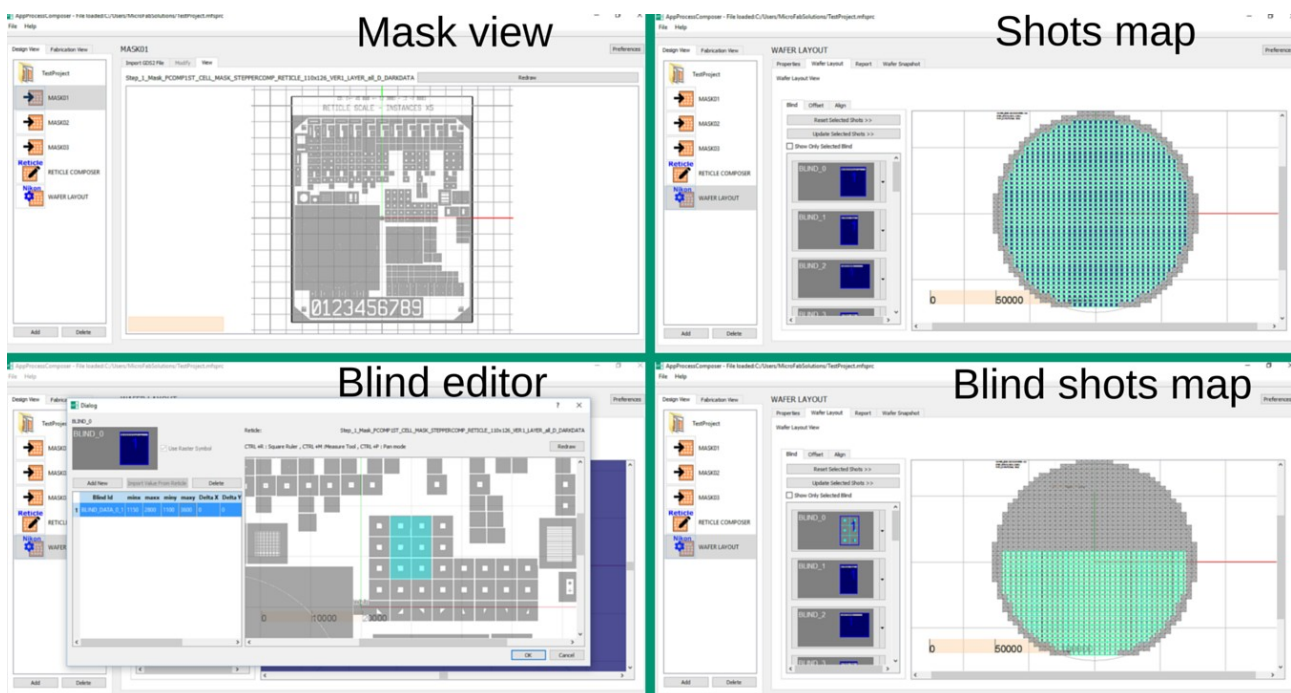
AppProcessComposer–Wafer Layout Composer

The Wafer Layout Composer offers the possibility to create the stepper-Nikon process program shot map in a very simple way.

The steps are:

- define the shots x-y distance on the wafers and the general wafer data

- select the reticle to be use

- define the reticle blinds (specify the borders of the pattern exposure area on the reticle)

- define which shot is to be exposed with which reticle bilnd setting

AppProcessComposer–Wafer Inspection

The aim of this tool is the possibilità to control the final geometry dimensions with respect to the reticle/mask layout.

You can overlap device pictures and desired layers from gds file or stepper program. In the graphical area measurements are possible and a report can be downloaded.