

# ProSEM

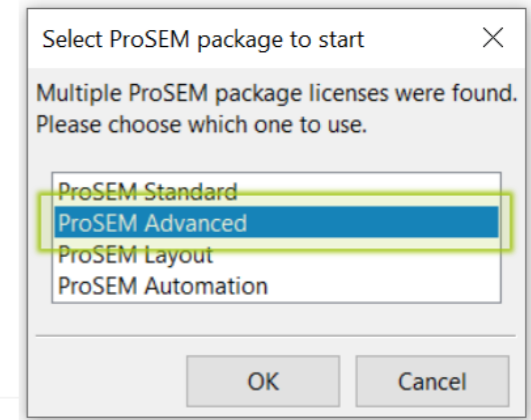
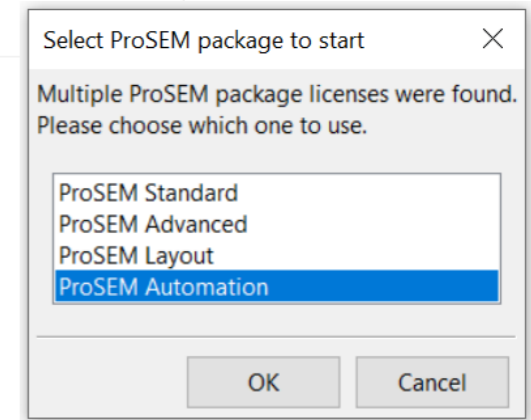
What's New in ProSEM 3.3

## *ProSEM 3.3 Key News*

- General
  - Startup package selection panel: default and re-select
  - Import of images with meta data for Elionix BODEN (EBL) tools
- Edge/ Feature Detection
  - Further clean-up of detection algorithms
  - Improvement of baseline regression
- Layout Integration/ SEM Automation
  - Robustness of layout-to-image registration improved
  - Usability of measurement list
  - Find-similar integrated in metrology jobs
  - Easy definition of large number of images/ measurements

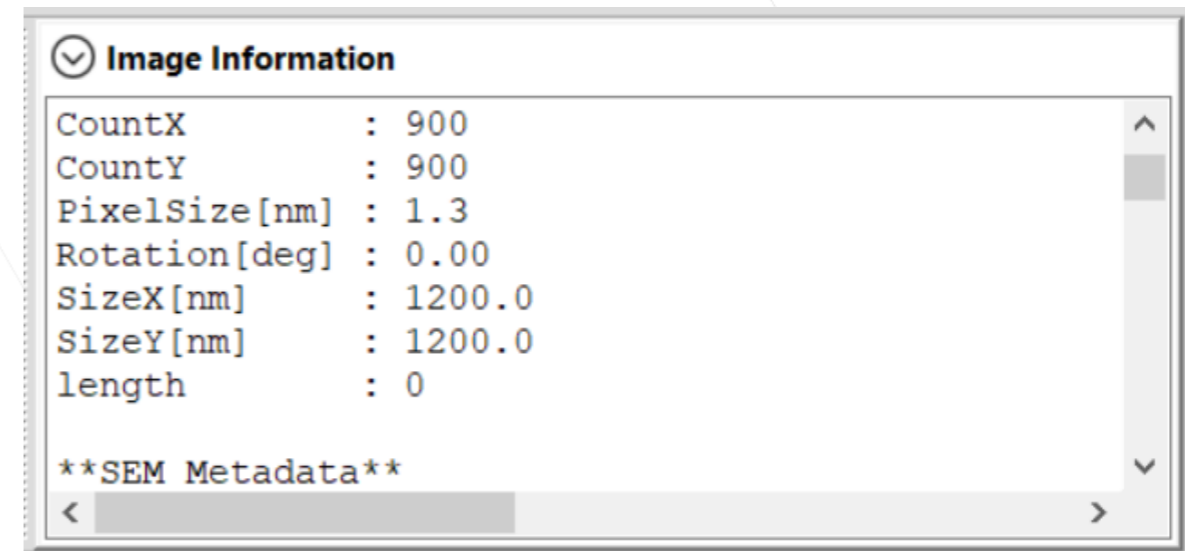
# General

- Selection panel on starting ProSEM
  - Improved convenience during start-up
  - Previously used package is highlighted for re-selection
  - Environment variable can define general default selection (under Windows)



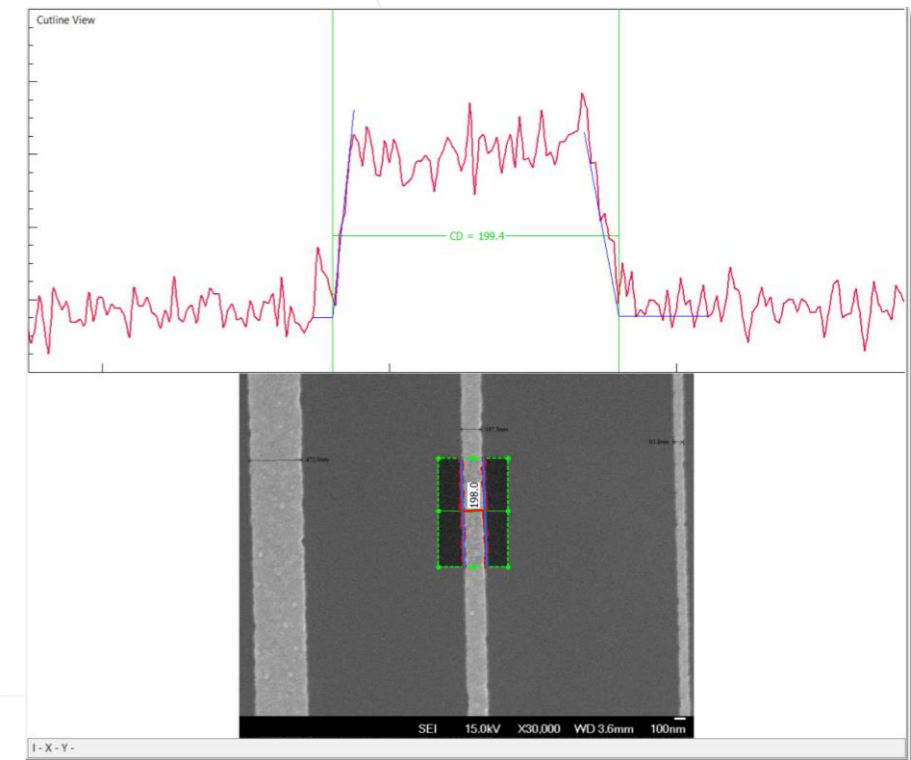
# Support of Image Formats

- Import of images from Elionix BODEN implemented
  - EBL tool with SEM functionality
  - Load images and set pixel size for calibration
  - Includes all provided meta files



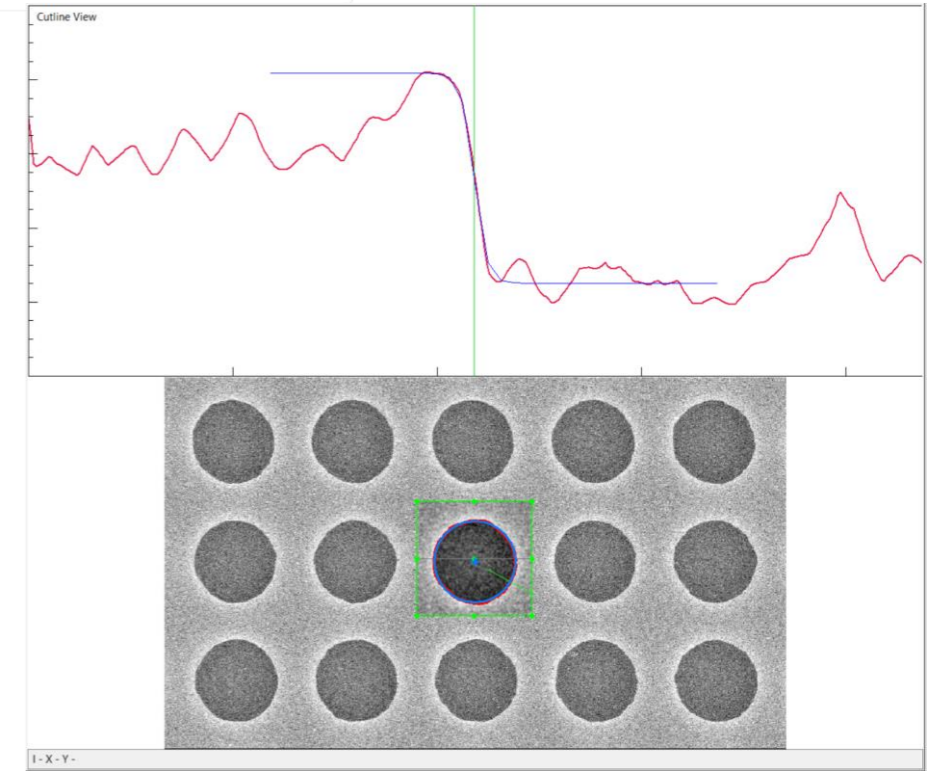
# Edge/ Feature Detection

- General algorithm topics
    - Automatic selection Canny vs. Slope Analysis refined
    - Quality/ reliability of Slope Analysis
    - Regression to Baseline: initial sigmoidal fit added
- Improves the robustness of the detection



# Two-pass Detection for Shapes

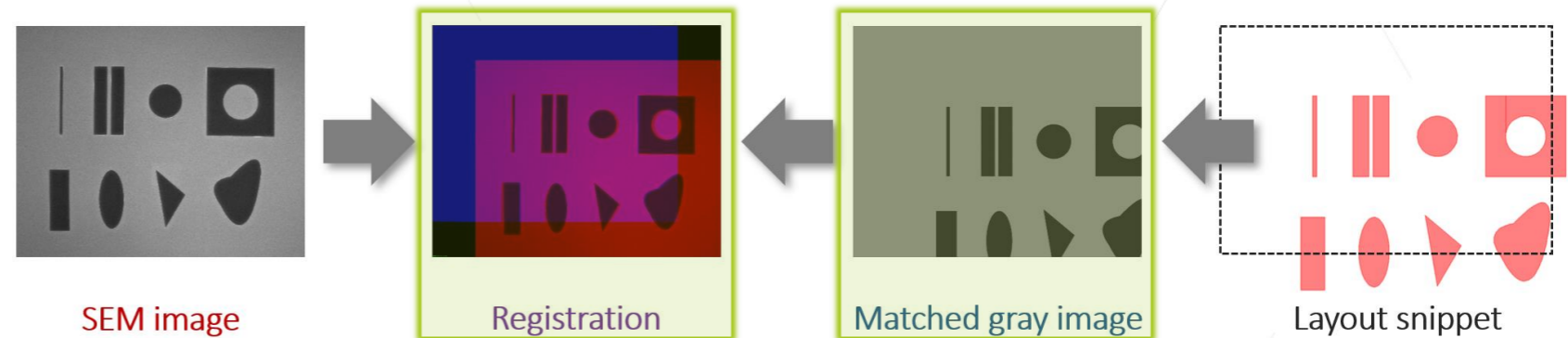
- Slanted cutline for 2-pass detection (fitted shapes)
  - Length of cutline increased
  - Better display of edge profile and fit



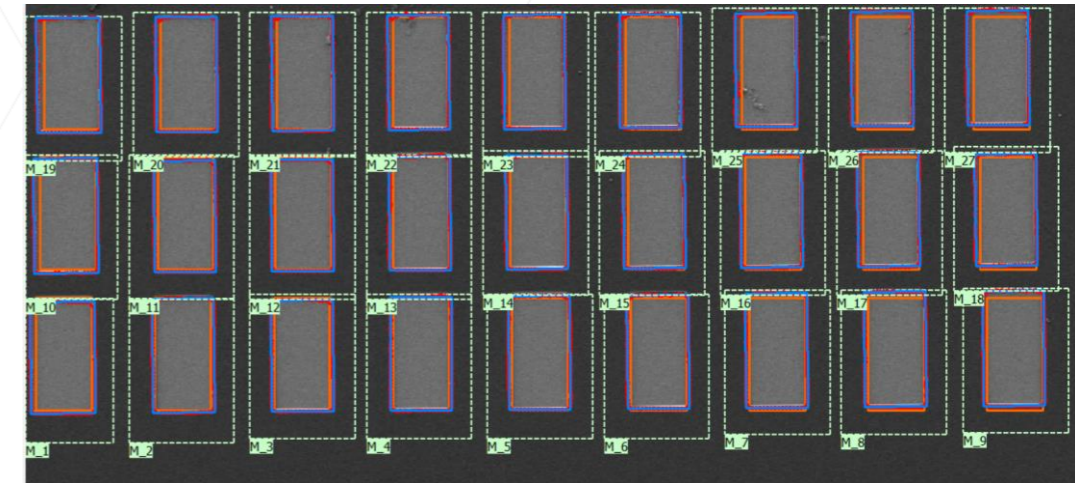
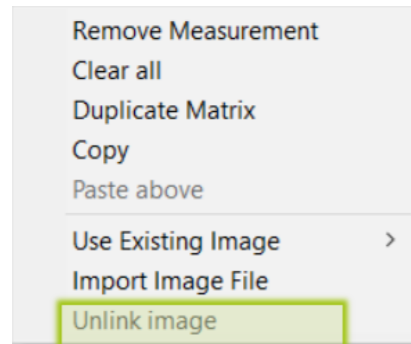
# Layout/ Automation

Layout or Automation Package

- Layout-to-Image registration
    - New architecture and algorithms
    - Alignment based on checking different edge/ image characteristics
    - Prepared for scaling and rotation correction
- Improved robustness/quality



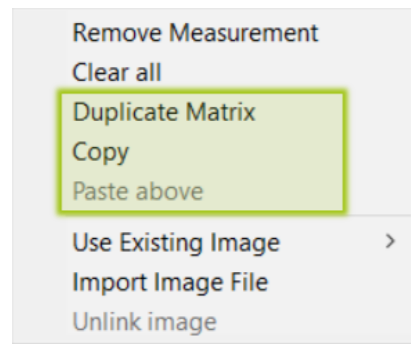
- Various improvements
  - Results directly stored on image/ tree and in table
  - Find-Similar can be applied to images (afterwards)
  - Better handling of “exceptions”, e.g. change layout
  - Possibility to delete image links/ measurements to change measurement or link different image



Alignment Measurements Measurement Info Pick Data Info								
Shift Left-Click into the layout to create a measurement ROI.								
Center X [um]	Center Y [um]	Width [um]	Height [um]	Feature Type	Array/Grating	Layer	Status	Key / File
-893.620	-894.240	18.760	25.700	Rectangles	<input checked="" type="checkbox"/>	CM	measured	ProSem_test_44
					<input type="checkbox"/>			

# Large Metrology Jobs

- Extended functionality in context menu
    - Copy/ paste of metrology entries in table
    - Create a large matrix of metrology items regular in X/Y
- Useful for large number of images/ measurements



Duplicate Matrix

repeat -X 0

repeat +X 1

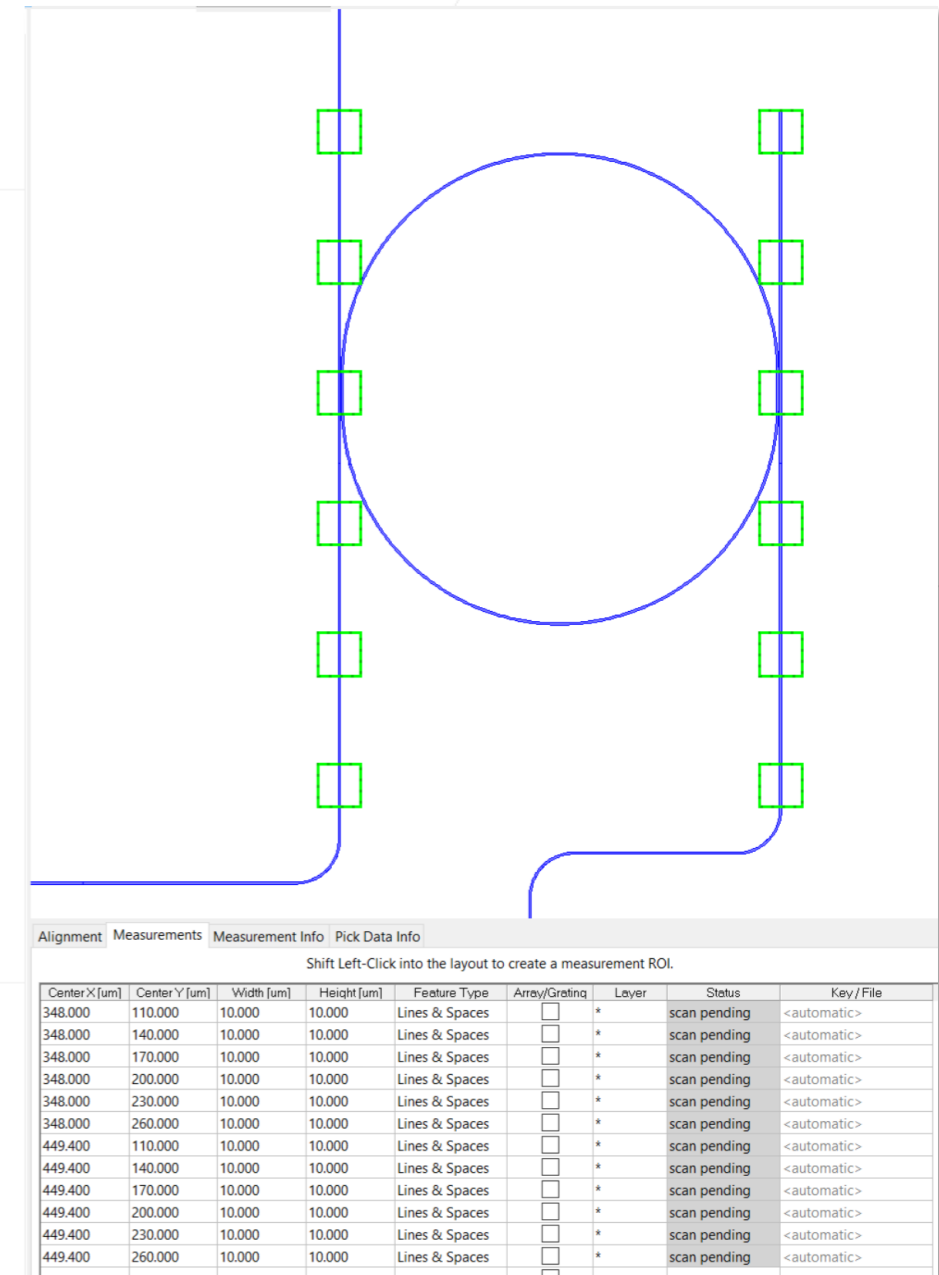
X pitch in um 101.400

repeat -Y 0

repeat +Y 5

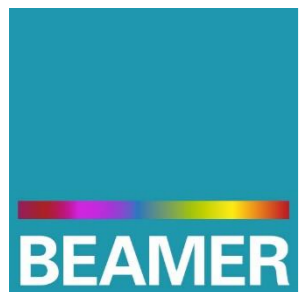
Y pitch in um 30.000

OK Cancel



# Thank You!

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