MountainsMap Imaging Topography

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CYCLE OF INNOVATION

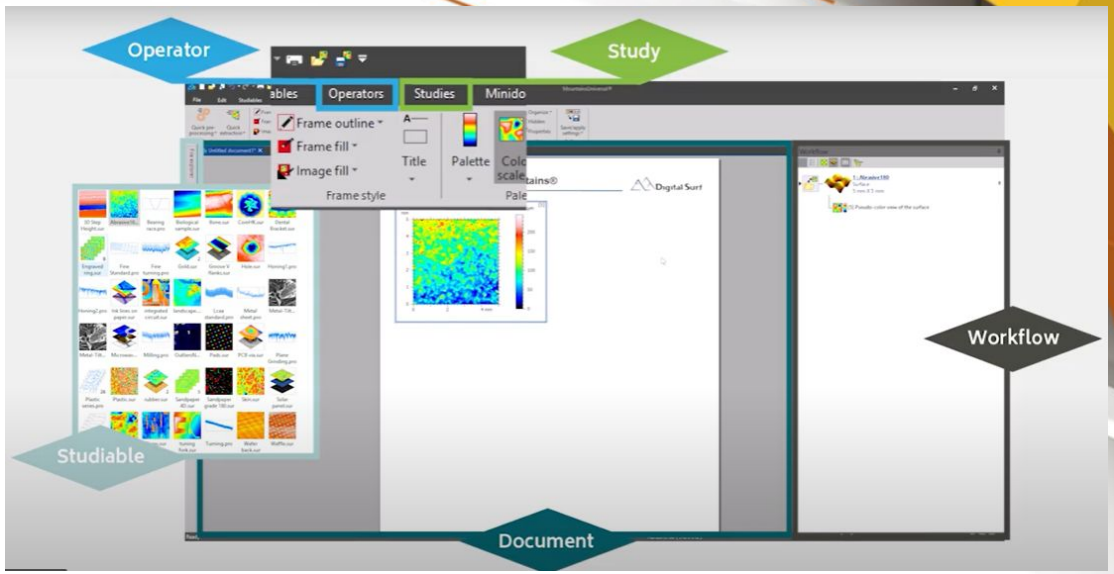
Mountains 8 software

- 5 types of products
  - Mountains Map Premium: High-end surface metrology & analysis software compatible with all profile & real surface measuring instruments
  - Mountains Map Expert:
  - Mountains Map Imaging Topography
  - Mountains Map Topography
  - Mountains Map Profile

MOUNTAINSMAP IMAGING TOPOGRAPHY

- Surface imaging, analysis and metrology software
- Data for the software can get into 2 ways:
  - From the profilometers through usb connection directly
  - By uploading studiables in supported file formats like csv, jpg and etc.

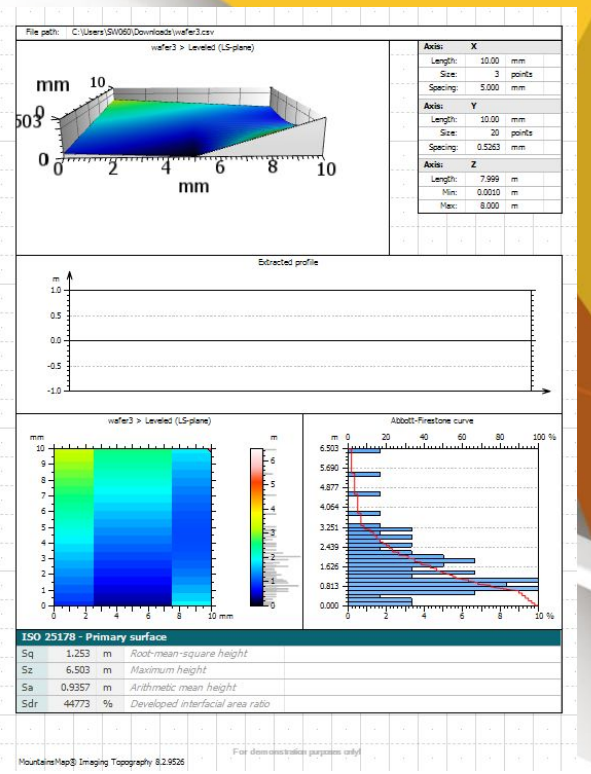
Features of Software

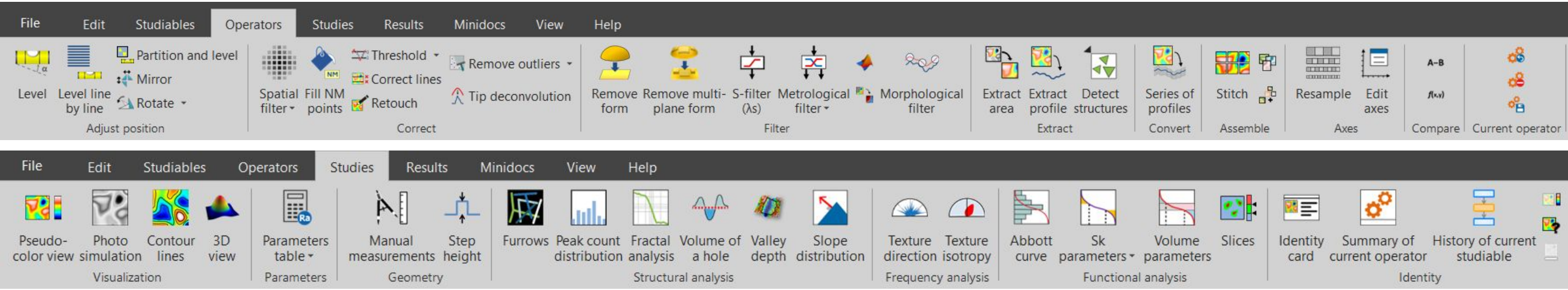


- 5 important things in the software
  - Studiable
    - Profiles: Profilometers
    - Surface data: Profilometers
    - Image data: Microscope
  - Operator: Tool to used to modify studiables
    - All the operator dialog box has 3 sections
      - Original studiable
      - Operator settings
      - Resulting studiable
  - Study: Frame of data with analyzed pattern (not modify the studiable like operator)
  - Document: Studies saved in some sheets
    - Editable
    - Publishable
    - Saveable
    - Usable as template
  - Workflow: Interactive tree which shows relations between studiables, study and operators
    - blue => studiable, orange => operator, black => study

Usage of Software

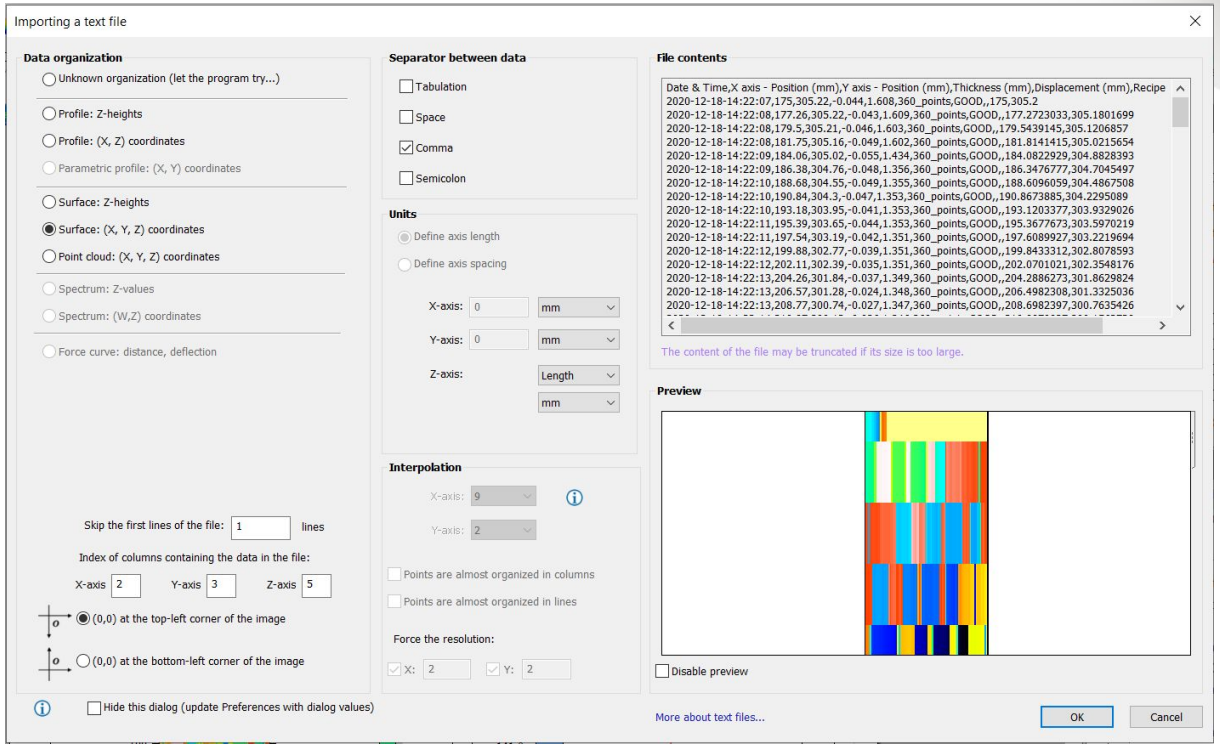
- Change the surface to **3D view**
- Visualize the **contour lines**
- For the inspection, we can extract the particular **surfaces** and **profiles**
- Generate **Parameters table** for many standards (ISO 25178)
- Take **Manual measurements** (distance between two points)
- Save the document as **pdf** for future showcase
- Save the document as **mnt** file for a template





Load a studiable

- CSV, XML and DAT are the some of the file formats which can be supported by Mountains Map Imaging Topography
- Data can be loaded as profile or surface
- Can be skipped particular number of first lines (here, it's one)
- Need to provide X, Y and Z by providing the column positions in the loading data
- We can view the data in File contents section
- Preview of the studiable also can be seen in right down corner section



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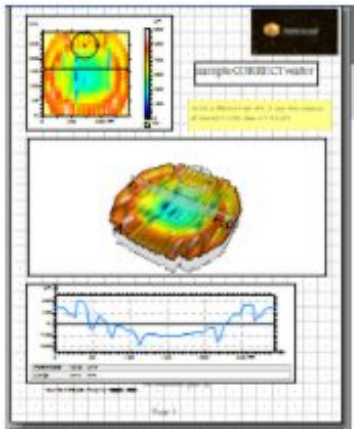
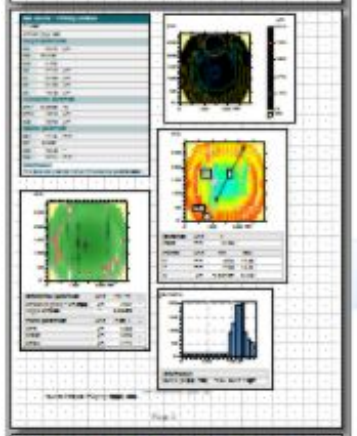
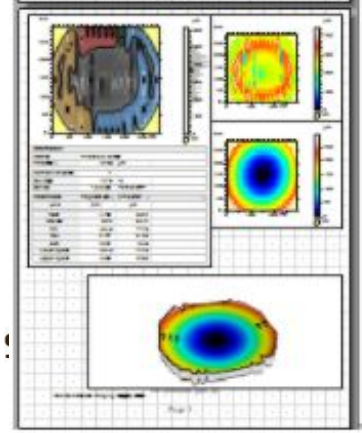
Document sheet of sample study







Workflow

1 : sampleCORRECTwafer
- [1] Pseudo-color view of the surface
- [2] 3D view of the surface
- [9] Parameters table
- [10] Contour lines
- [11] Manual measurements
- [12] Step height calculations
- [13] Particle analysis
- [14] Peak count distribution
- Remove form
  - 2 : Form removed (LS-poly 2)
    - [15] Pseudo-color view of the surface
  - 3 : Form alone (LS-poly 2)
    - [16] Pseudo-color view of the surface
    - [17] 3D view of the surface
- Remove form
  - 4 : Form removed (LS-poly 4)
  - 5 : Form alone (LS-poly 4)
- Remove form
  - 6 : Form removed (LS-sphere, R=29284 mm)

Workflow

- [19] Pseudo-color view of the surface
- [20] 3D view of the surface
- Extract profile
  - 8 : Extracted profile
    - [23] Profile curve
- Extract area
  - 9 : Extracted area
- Remove outliers
  - 10 : Outliers removed
    - [24] Pseudo-color view of the surface
    - [25] 3D view of the surface
    - Remove form
      - 11 : Form removed (LS-sphere, R=34539 mm)
        - [26] Pseudo-color view of the surface
      - **12 : Form alone (LS-sphere, R=34539 mm)**
        - [27] Pseudo-color view of the surface
        - [28] 3D view of the surface
        - Extract profile
          - 13 : Extracted profile
            - [29] Profile curve

REFERENCES

- Video tutorials for Mountains® analysis software users
- MountainsMap® 8 | key features
- MountainsMap Imaging Topography

THANK YOU

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