Status of PSI bump placer

- Manual bump bonder
- Why automation
- First concept
- Actual design
- Outlook
Old bump bonder

- Positioning of sensor
- Rotation of chip
- Prism allows view chip and sensor.
Old bonder – new bonder

- 1-3 hours for trained person (16 chips).
- Always looking through microscope.
- Around every 10\textsuperscript{th} module has a displaced chip.
- 30 min (4 chips).
- Image is on monitor.
- Pattern recognition allows higher grade of automation. No operator needed after start.

Only with automation \textasciitilde800 CMS pixel modules can be produced within 2 years
First concept
Placing of glas structures
Force test
Second concept
Placing with new bonder

Accuracy ~ 5 µm
Outlook

- Calibration of motor stages.
- Start bonding