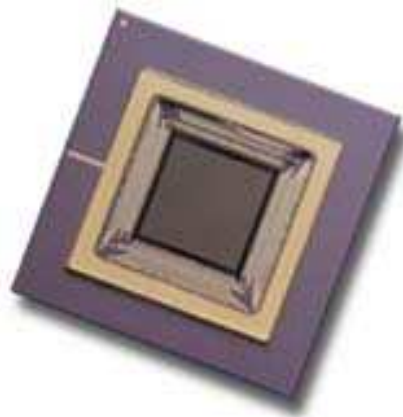


# A proposal for a technology transfer project



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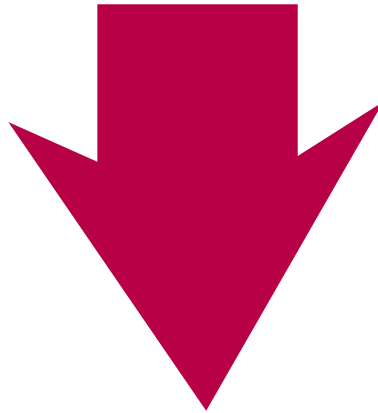
+



MONOCROM-UdG-CNM-

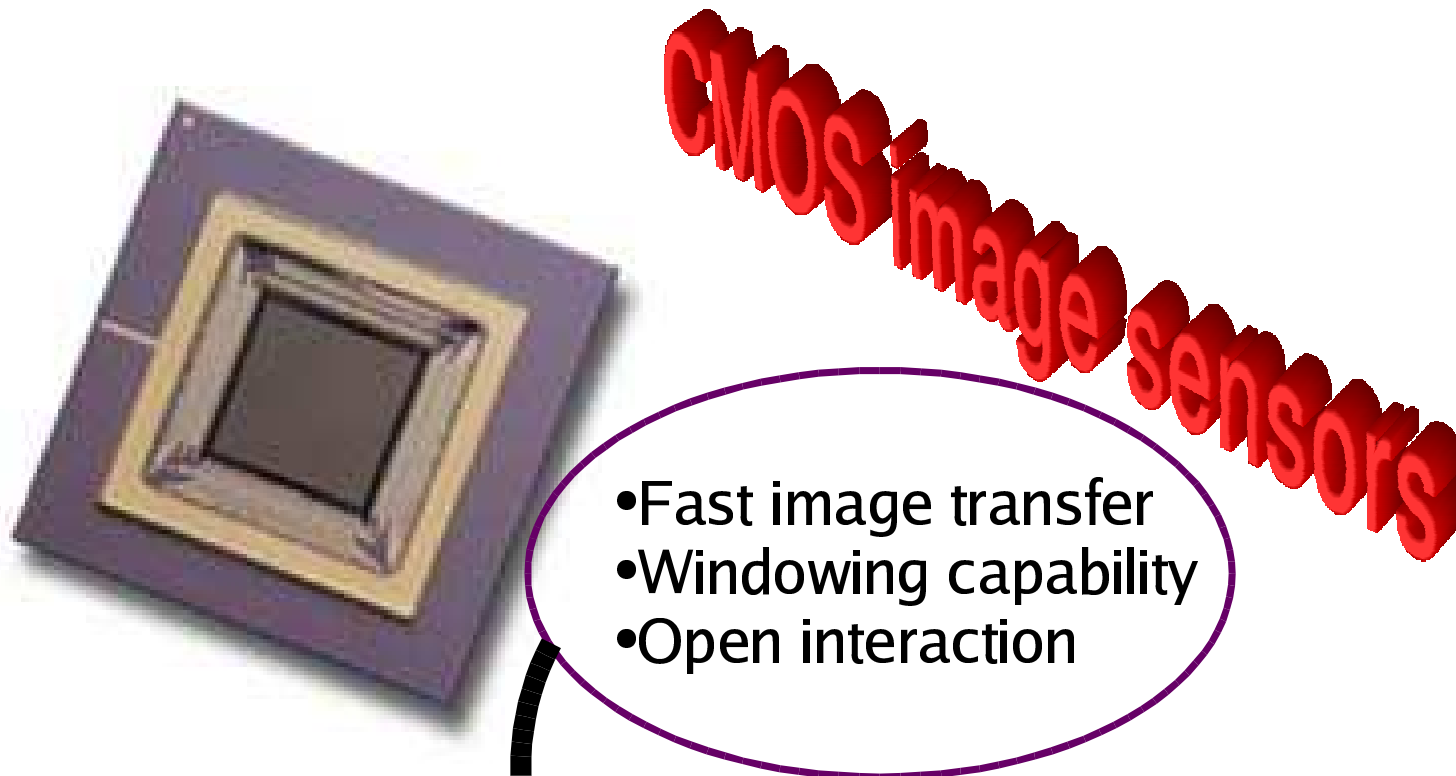
# SCOPE:

To develop an *industrially affordable*,  
*fast* and *accurate* laser 3D scanner.



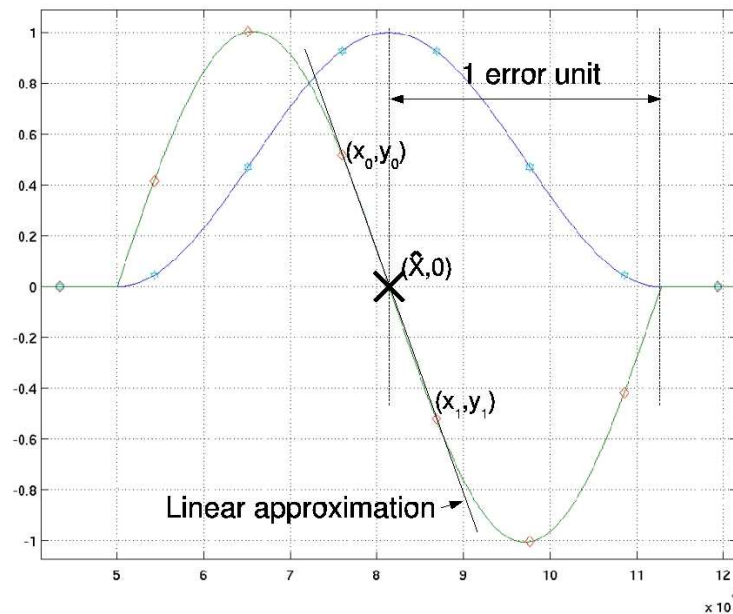
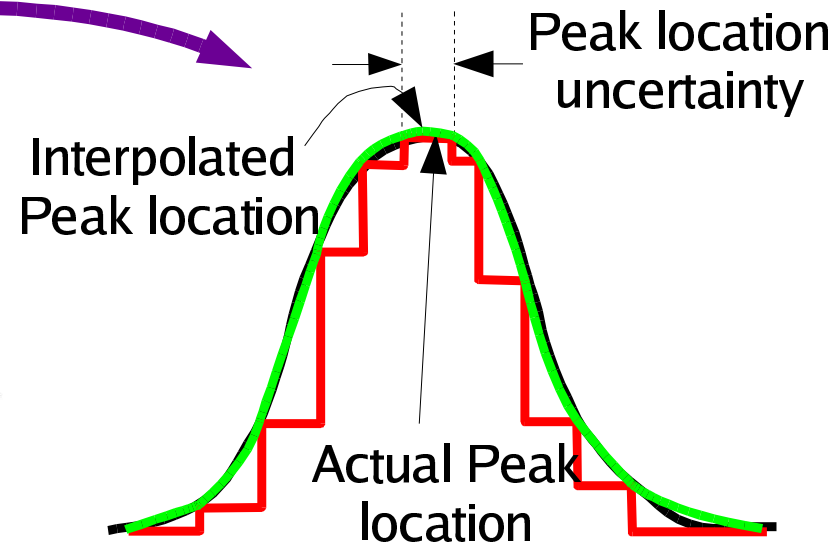
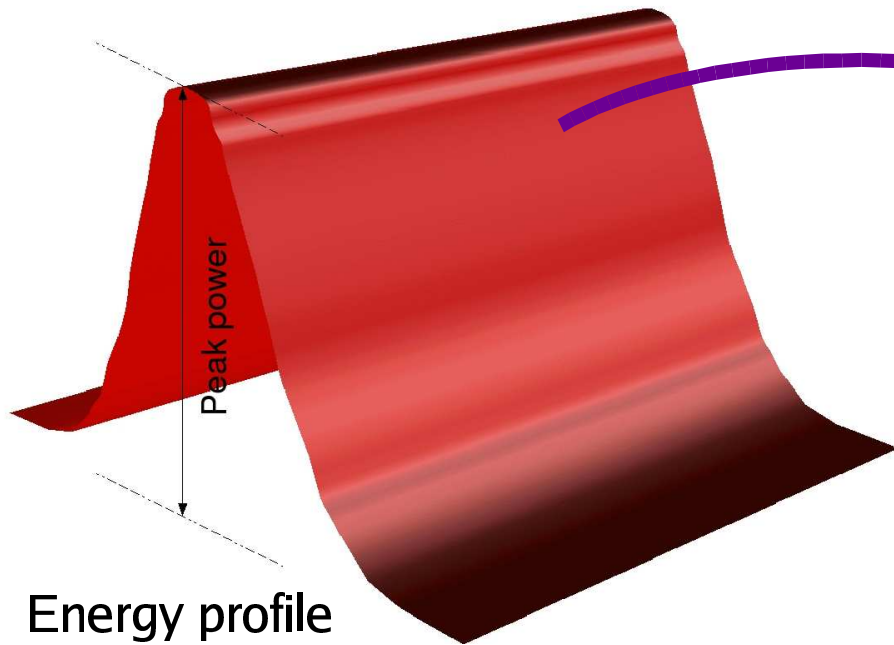
- Speed: Several Range-maps per second (typ. 10-30)
- Accuracy: Industry requirements (typ. 30-50 um)

# How to get faster performance:

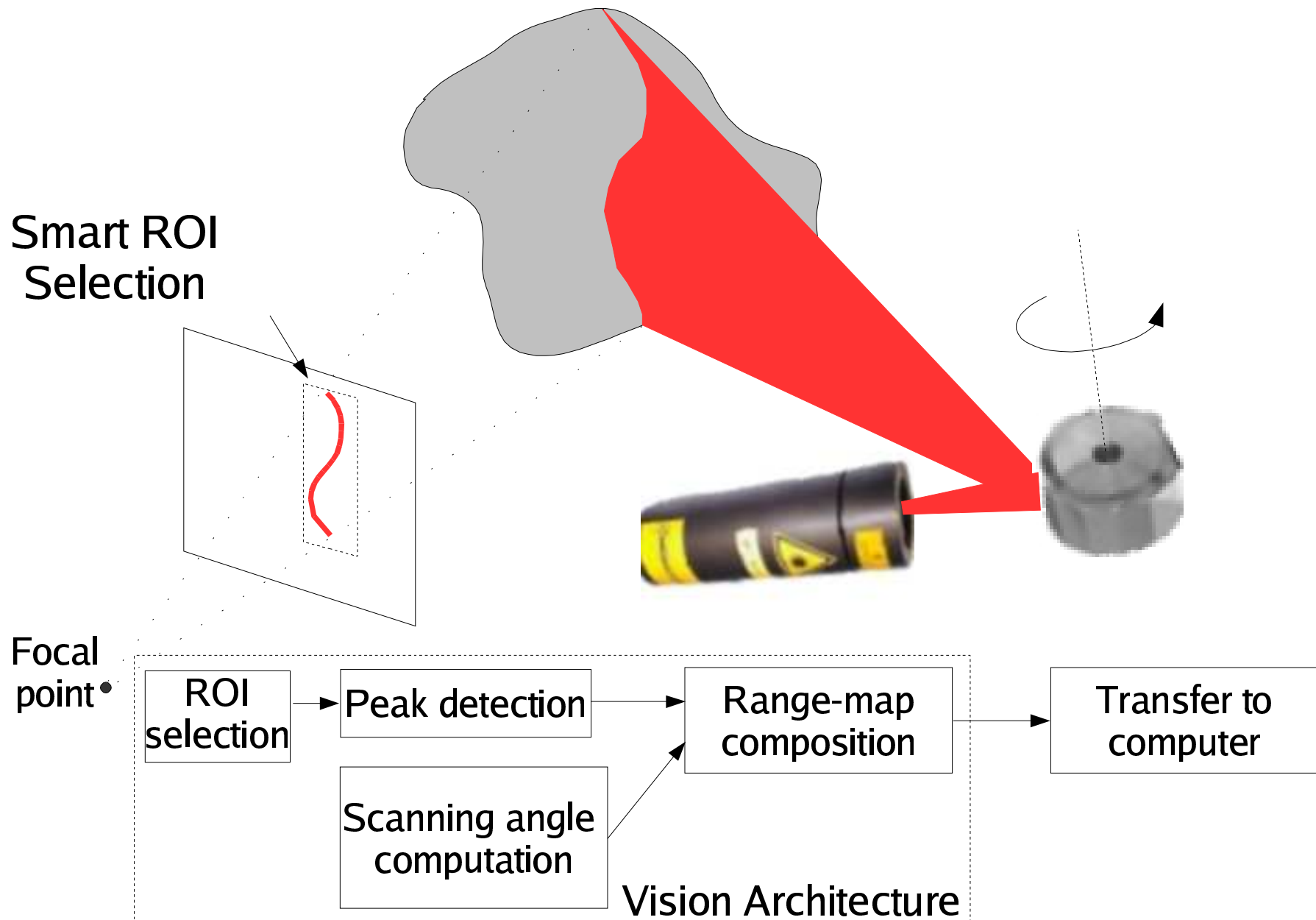


*Specific vision architecture*

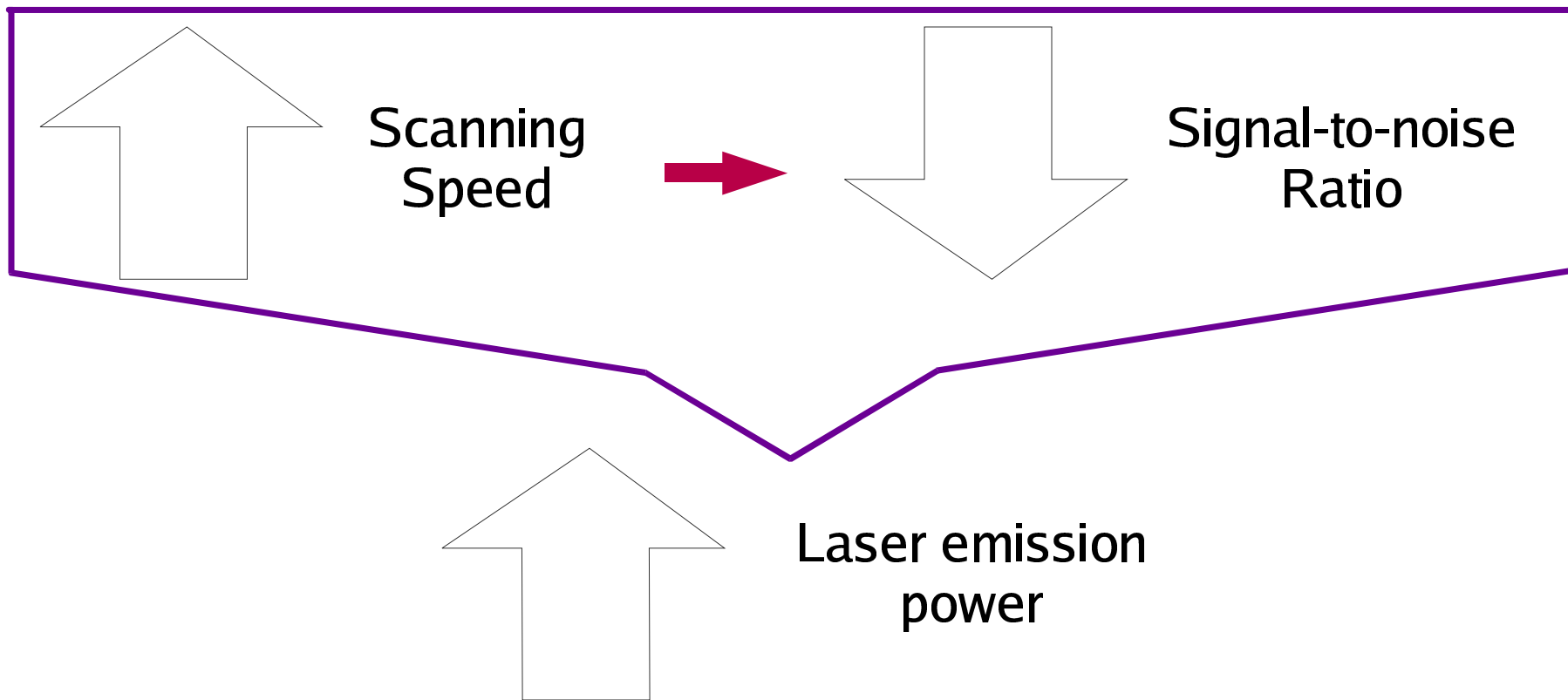
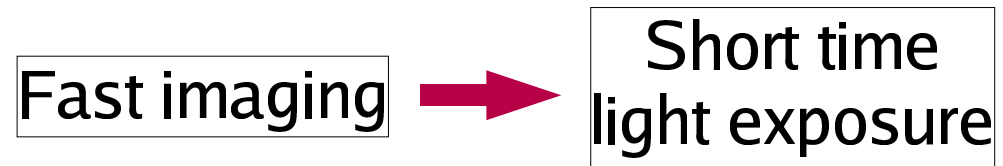
# How to keep accuracy levels:



# Laser scanning:



# Laser scanning:

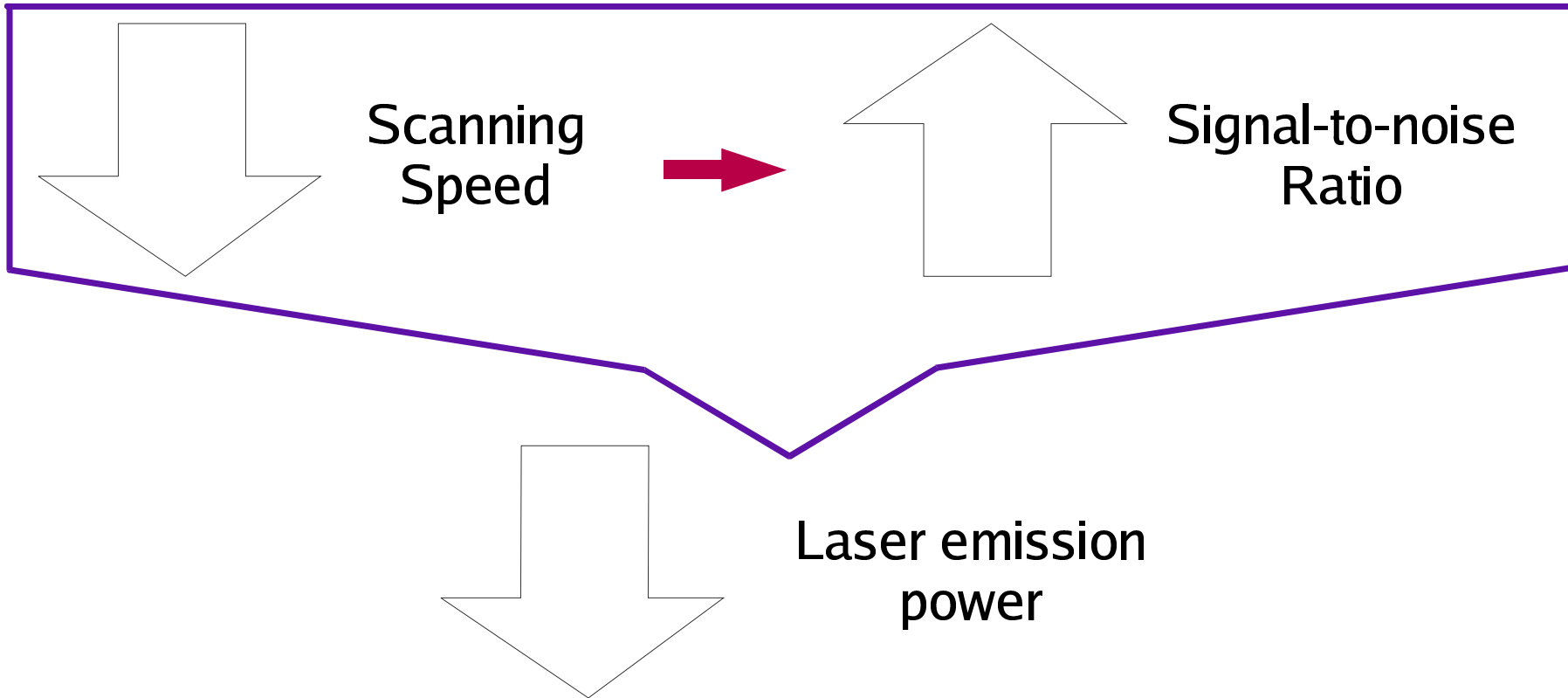


# Laser scanning:

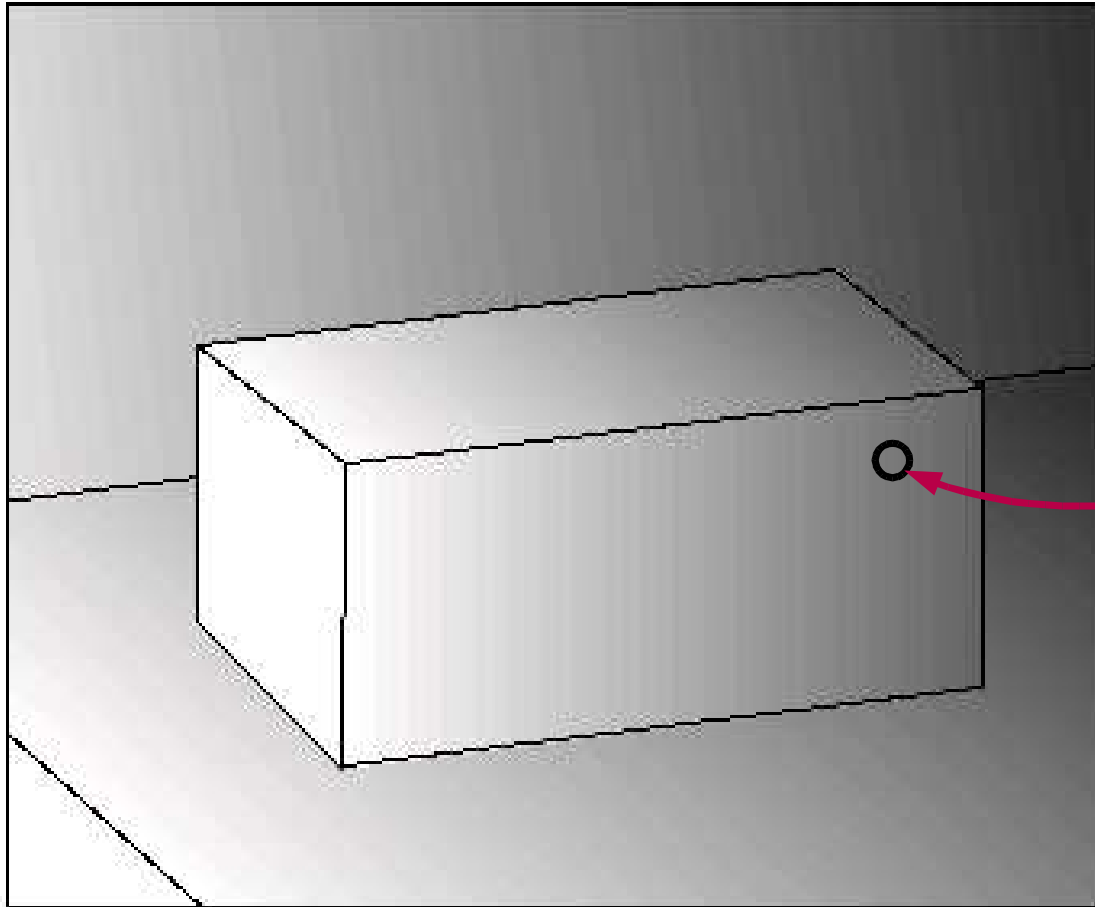
Fast imaging



Short time  
light exposure



# How a rangemap looks like:

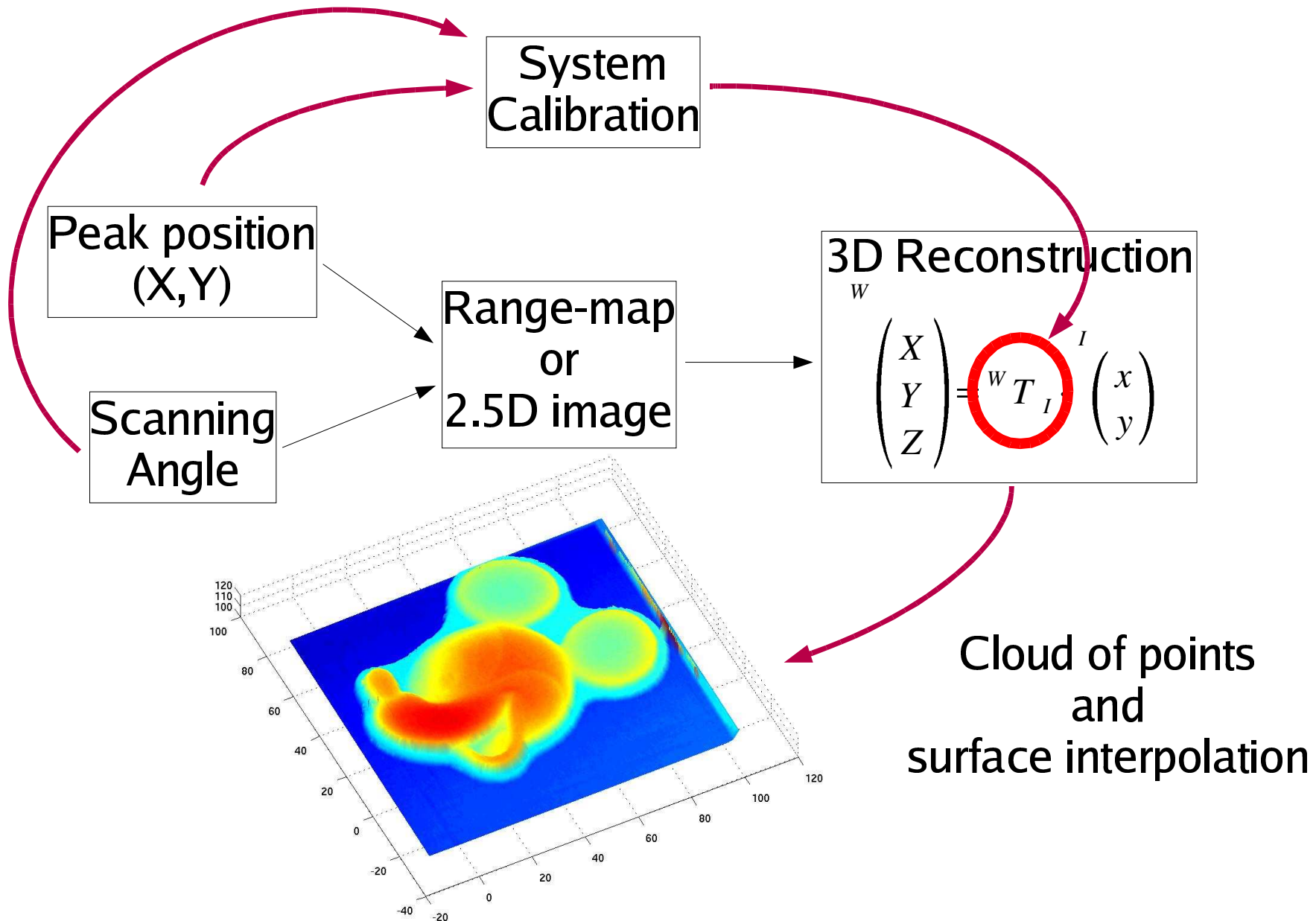


Each “point” of the  
Range-map encodes:

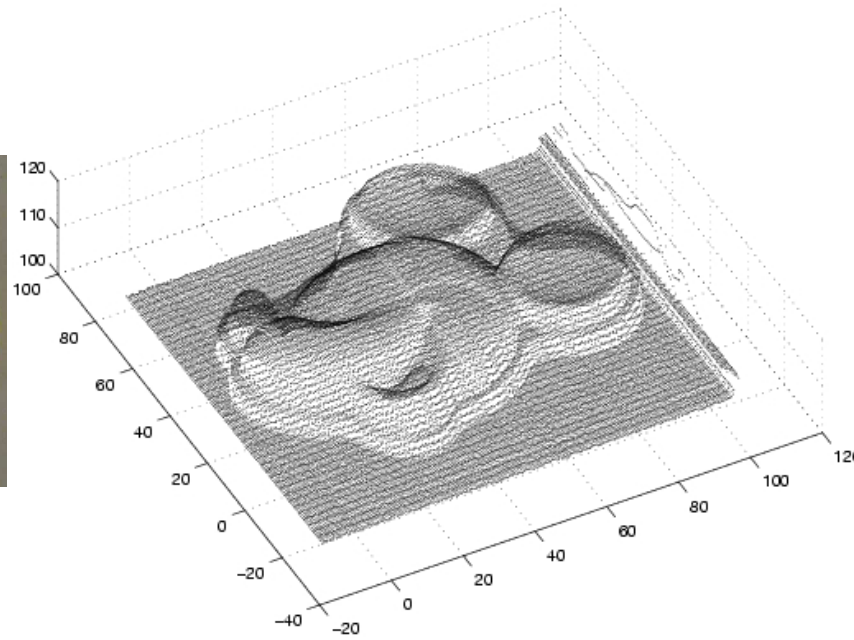
- X,Y position
- Scanning angle



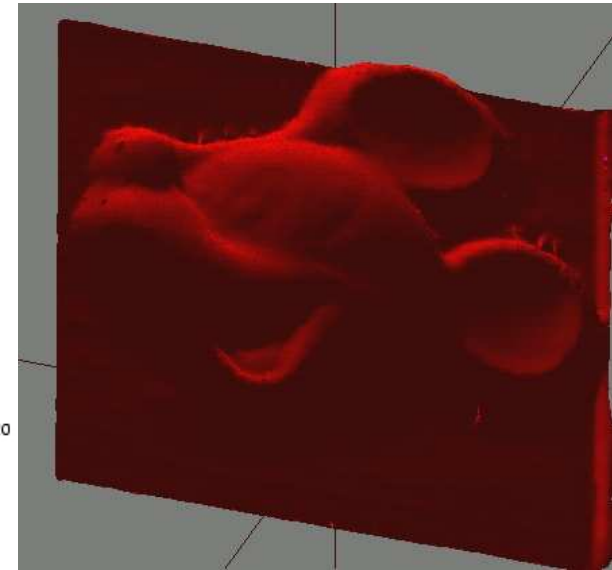
# From 2.5D to 3D:



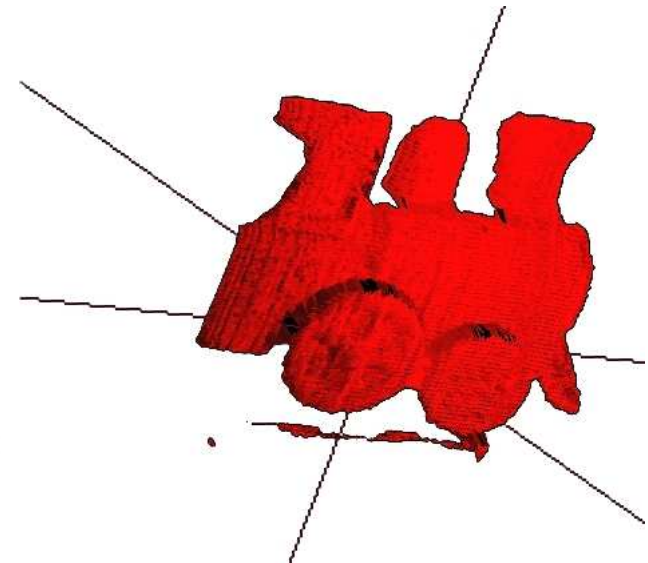
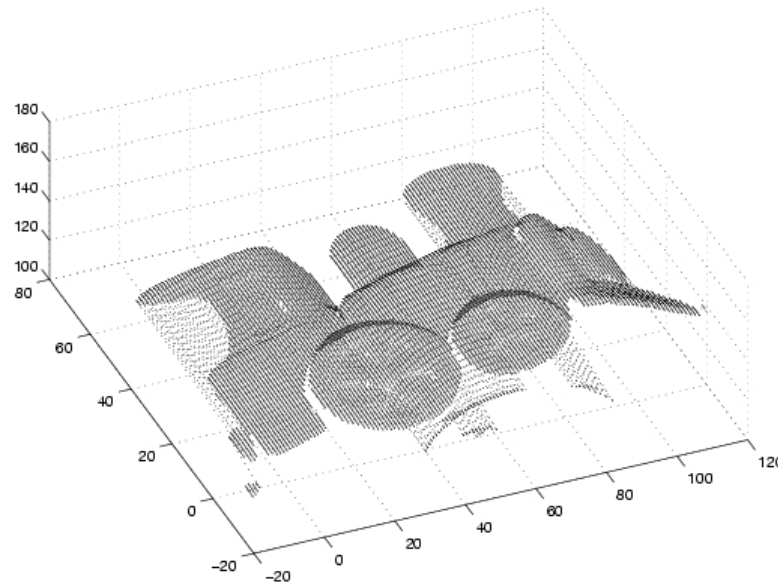
# Our expertise:



Cloud of points



Surface Interpolation



# Our expertise:



- Computer Vision Hardware (analog and digital)
- Computer Vision Architectures (FPGA-based digital designs)

