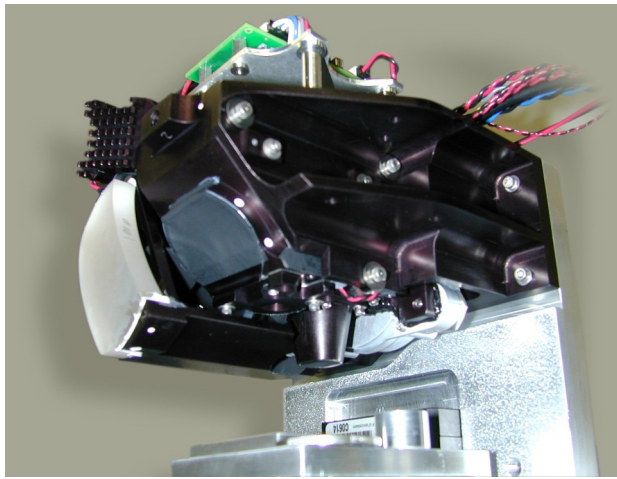
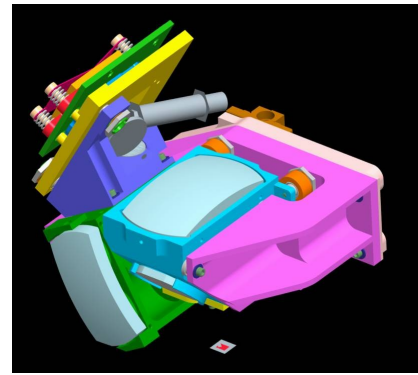


# 3D MICROSCOPE

INO has developed a high precision 3D sensor based on Moiré phase-shift techniques. The optical system consists of a pattern projector, a microscope and an illumination system. The pattern projector together with the microscope allows the measurement of the topography of the inspected surface. The acquisition of the 3D data is performed using a multi-resolution approach. Moreover, a HDR (High Dynamic Range) mode is also available in order to increase the sensor's dynamic range. The 3D microscope has been developed for aeronautical applications. Several algorithms have been developed and integrated in a software library.



OEM 3D phase-shift microscope



CAD Model

## ADVANTAGES

- Non destructive testing (NDT): without contact
- Designed to inspect metallic surfaces
- Very compact

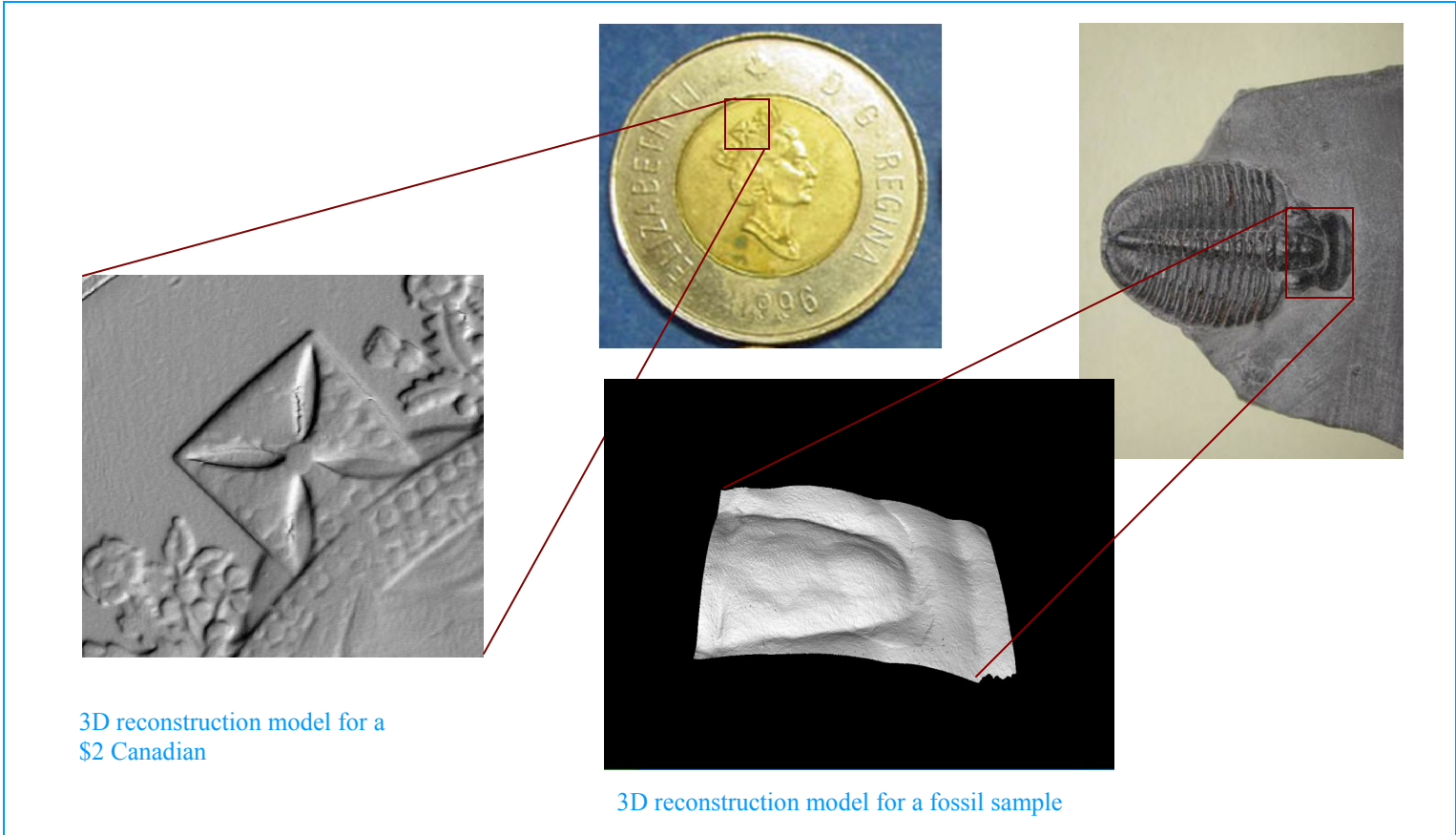
## KEY APPLICATIONS

- Metrology (fills the gap)
- Inspection of precision parts ( blades, molds)
- MEMs inspection
- Surface finish inspection
- Forensic applications
- Spatial exploration (rocks, fossils)

INO IS VERY FLEXIBLE IN ITS OFFER

> PROTOTYPING    > SHORT RUN PRODUCTION    > TECHNOLOGICAL TRANSFER

# 3D Microscope: Some Results



## TYPICAL SPECIFICATIONS

- Optimized for best available detail level resolutions and high accuracy
- 1 camera with 5 mega pixels
- High Dynamic Range (HDR)

PARAMETERS	INO's 3D Microscope
Depth of field	± 125 µm
FOV on sample	5.7 x 4.3 mm <sup>2</sup>
Resolution	Vertical: 1 µm Horizontal: 5 µm
Working distance	25 mm
Maximum object height	15 mm
Weight	1.6 kg

## FOR MORE INFORMATION CONTACT

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