Nanyang Technological University
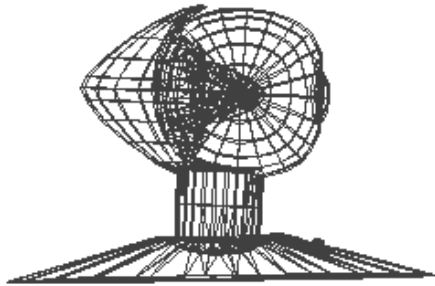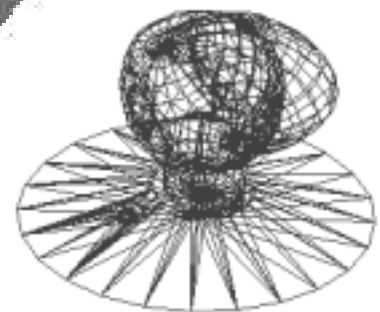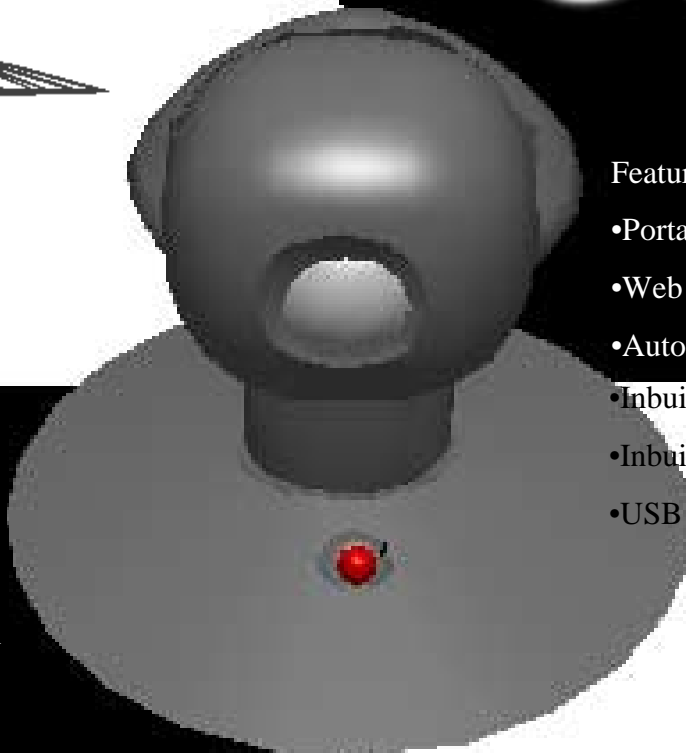## Network Technology Research Centre

3D Shape Measurement Using Optical Gratings

G-CAM

Features:

- Portable
- Web Enabled
- Auto Height Adjustment
- Inbuilt Light Micro-projector
- Inbuilt Ambient Light Sensor
- USB based, Plug-&-Play

Applications:

- Customized Shopping
- 3D Gaming
- Security Authentication

Image Processing PC

Projector

Camera

Object

The inbuilt micro-projector in the G-CAM is for projecting a laser beam of grating lines with known geometry onto an object. The inbuilt CCD camera then captures the distorted grating lines on the object surface. Using our unique technique of geometric calculation, the 3D coordinates of the object can easily be generated for different applications.

Sample of Texture Mapping & Wire Frame

GAI