

## Standard Operating Procedure for the use of the DAVID-Laserscanner

### I Purpose and Application

- a. This SOP is for the procedures relating to the use of the DAVID Laserscanner to scan an object and create a 3D model on a computer.

### II Hazards

- a. Beam and Non-beam Hazards – Optical, Electrical and Overheating Hazards
- b. Analysis and Control – Safety Goggles must be worn to prevent optical hazards, current electrical testing certification for electrical hazards, time limits for overheating hazards.

### III Controls

- a. Access controls – The door to the room should be kept locked, and warning sign displayed
- b. Beam controls – The beam should be unplugged from the mains when not in use, beam head should be covered
- c. Electrical controls – Ensure current electrical certification, use of circuit breakers
- d. Eye protection types – goggles OD6 @ 450-515nm
- e. Other controls – none needed

### IV Operating Procedures

- a. Initial preparation of environment
  - i. Closed door will be locked
  - ii. Warning sign on door: “Laser in Operation”
  - iii. Identification of all personnel present
- b. Personnel protection requirement acknowledged by persons present
- c. Target area – Enclosed
- d. Set up object to be scanned
  - i. Construct calibration boards
  - ii. Open up David Laserscanner software
  - iii. Set up and calibrate camera
  - iv. Place object to be scanned in front of calibration panels
- e. Prepare for scanning
  - i. Verbal warning about commencement of scanning
  - ii. Turn on laser at mains supply
- f. Scan the object
  - i. Hold laser long distance above object
  - ii. Turn on laser
  - iii. Sweep laser slowly and evenly over object, ensuring laser line is visible to the camera on the object and on the calibration panels either side of the object
    1. A very slow movement that sweeps over the object once is better than frequent up and down strokes

- g. Shut down procedures
  - i. Switch off the laser
  - ii. Unplug from the mains supply
  - iii. Dismantle calibration panels
- h. Special procedures
  - i. Emergency procedures
    1. For a life-threatening emergency, dial 000 for emergency response. Contact Supervisor, and Health & Safety Officer. Inform Health and Safety Office that you need to contact the Laser Safety Officer immediately
    2. Non life-threatening emergencies notify your Supervisor and the H & S Officer. The appropriate medical attention should be sought if warranted by the Supervisor or HS Officer for the persons exposed to the hazard
    3. The HS Officer will begin an investigation into the circumstances of the event. The laser shall remain out of service pending the results of the investigation and completion of any corrective actions if needed. The Laser Safety Officer may only return the laser to service following approval
    4. The Laser Safety Officer shall secure the equipment to ensure no further incidents can occur
  - i. Contact details
    - i. Supervisor: Derek Abbott +61 (0)8 8313 5748
    - ii. Health & Safety Officer: Stephen Guest +61 (0)8 8313 5467
    - iii. Laser Safety Officer: Alban O'Brien +61 (0)8 8313 5301