# 3D Scanning: Use Cases, Workflow and Profile Requirements for X3D

## Workshop Proposal for Web3D 2017 Conference

### Organizers

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<u>Summary</u>. Content produced by 3D scanning is growing in importance. Typical workflows exist both for scan refinement and scan applications, but numerous variations create difficulties that might be well served by a common data format and shared metadata conventions using X3D. Overlapping requirements for CAD, 3D Printing and 3D Scanning are closely related.

<u>Background</u>. This workshop continues progress during Web3D 2016 Conference and ongoing efforts by CAD Working Group. Related work: requirements and shared metadata strategies for X3D.

#### Workshop objectives

- Confirm 3D scanning workflow requirements and demonstrate examples for X3D.
- Confirm draft Capabilities and Requirements for 3D Printing, 3D Scanning and CAD.
- Demonstrate and document an example scan during workshop and preceding VR Hackathon.
- Present strategies for cross-domain, cross-specification overlaps in support of JTC-1.

#### Workshop Structure

- Present 3D scanning/printing workflows, examples using X3D. (organizers)
- Present overview of JTC-1 study group goals and activities. (organizers, Mouton)
- Present ISO STEP capabilities and interoperability activities. (Mouton, Brange)
- Additional position presentations by participants.
- Gap analysis, review of likely paths forward, define priority goals and activities. (group)

#### References of Interest

- ISO/IEC aggregation of 20 standards in JTC-1 3D Printing and Scanning Study Group.
- Common Capabilities, X3D Requirements for 3D Printing, 3D Scanning and CAD. (attached)

#### Additional Details

- Intended audience: modelers and graphics practitioners interested in 3D scanning.
- Prerequisites: some interest or knowledge of 3D scanning and X3D graphics.
- Level of difficulty: intermediate, with exposure to advanced topics.
- Intended duration: 2 hours (Monday 5 June is likely best).
- Audio/visual support requirements: single or double projector, network and power.
- Resources will be identified in advance and published as part of workshop materials.