ANZAGG 3D Meeting Minutes

19 July 2023

# 1. Roll call with self-introductions

Meeting chaired by Leona Holloway, Monash University

10 people in attendance from Monash University, NSW Department of Education, Victorian Department of Education, ACT Department of Education, Tact-Ed, See3D

# 2. Icebreaker: What have you been designing/printing in the last month?

Tried converting a photographic image into a 3D relief using [Image to Lithopane](https://3dp.rocks/lithophane/). Unsurprisingly, the result came out looking good visually but was very difficult to interpret by touch.

Printing models from BLPS NSW, including the [mummy in a sarcophagus](https://www.thingiverse.com/thing:6090239) and the [arctic ice shelves](https://www.thingiverse.com/thing:6090079).

Working on a tactile globe, as the only globe available (from APH) is very expensive and large. They have a new rotator for creating copies from a mould but need to exaggerate the tactile features on the original 3D print and find a way of being more accurate with adding the correct volume. The aim is to be able to sell the globe for less than $50. It will include the equator and meridian lines. The BLPS [3D printed model of the globe](https://www.thingiverse.com/thing:6090075) has been one of the most popular requests.

Saw the [Tactonom](https://www.tactonom.com/en/tactonom-reader-en/) at the NFB Convention. They were demonstrating its use providing audio labels for 3D models.

# 3. Guest speaker: Matt Gesualdi, Tact-Ed, Colorado USA

Matt Gesualdi from [Tact-Ed](https://tact-ed.org/) in Denver Colorado spoke about his experience creating 3D models for people who are blind or visually impaired, with a focus on how to convey scale.

## 3.1 Presentation

Matt first began designing architectural models 20 years ago for industrial design. He later started working with the Colorado Centre for the Blind.

When making models for touch access, there are several key design considerations:

* resistance to touch (durability)
* easy to clean
* what materials to use. 3D printed textures like the brick texture are not helpful, but you can add different materials and finishes after printing.
* how much detail to include

Matt prefers to model large scale items that you could not otherwise access through touch, such as buildings or a globe.

Method for developing a new model:

* design can be based on photographs
* touch testing is essential. Matt pays particular attention to:
  + what breaks off
  + what gets more attention (hot spots). This usually indicates that they could not tell what it was and were curious.
  + what gets ignored
* revision. Everything gets corrected multiple times.

For his Masters Degree in Education, Matt explore how to convey scale using tactile models. He used a stepwise progression:

1. a dog at real scale
2. a scaled down house with figures and the dog from (1)
3. the same house and figures at a much smaller scale
4. the small scale house in a football stadium
5. Denver Colorado and metro area, with a dot for the football stadium
6. A relief map of the state with a 3D city map from (5) on top

## 3.2 Discussion

Requests for a copy of the paper on conveying scale.

Paintings by blind people can include perspective, which suggests that perspective is understood innately. Ann Cunningham teaches perspective to people who are blind or have low vision.

3D printing gives accuracy not possible through handmaking, but it is not a complete end product. You also need to add texture, colour, context, etc.

# 4. Other business

## 4.1 ANZAGG guidelines on designing 3D prints

Leona is still working on ANZAGG 3D printing guidelines:

* Design considerations
* Slicing and Printing a 3D Model for use by Touch Readers

## 4.2 Any other business

The New York Public Library is hosting an Accessible Technology Conference in October. The conference is open to all community members and is free to presenters and participants alike. Our conference team commits to a fully accessible conference, including providing accessible conference materials, hybrid participation, and other access needs. Proposals are open until July 31.

<https://www.nypl.org/blog/2023/07/17/upcoming-nypls-accessible-technology-conference-2023>

# 5. Next Meeting

Next meeting is scheduled for Wednesday 16 August.