MinutesANZAGG 3D Printing Meeting  
15 June 2020

# 1. Roll call

Meeting chaired by Leona Holloway

13 members present from Monash University, SonoKids, NSW Department of Education, Victorian Department of Education, BLENNZ, RIDBC, ACT Department of Education

# 2. Introductions

Brief self-introductions from first-time attendees – Karen Gilligan and Yin Yin Htay.

# 3. When should 3D printing be used for VI students in schools?

Some initial ideas were shared in a Google doc.

The NSW Department of Ed are producing two documents on when to use 3D prints and how to teach using 3D models. While their 3D printer is high-end, the design considerations for touch readers are similar.

One member has been experimenting with scale and with applying textures after printing is complete.

Wendy Voorn (Netherlands) advised that the best way to educate teachers is to train up a super-user at each school who can then help share knowledge. They have also produced a set of sample models for each school that demonstrate the different uses for 3D printing. ACTION: Leona to ask for access to these sample models.

The DIAGRAM group have extended their decision-making tree to include 3D printing. It should be publicly available very soon.

ACTIONS:

* All to read over this section and add any additional thoughts by Sunday 21 June.
* Leona to add some images.
* Leona to publish through the ANZAGG web page at <http://printdisability.org/about-us/accessible-graphics/>.

# 4. Draft guidelines for 3D printing for accessibility

## 4.1 Where to find models

As discussed above.

## 4.2 Where to print models

New section has been created on where to print models if you do not have access to your own printer.

The NSW STEM system means that 3D printers are available for schools to loan.

SVRC has some loan machines but they are all in use.

## 4.3 3D model selection or design by BLV people

How can blind or low vision people can be more involved in the design or creation process?

Ideally, we should be giving good descriptions when uploading our models for the public so that blind users can make a well-informed decision about whether it will suit their needs.

ShapeShift can be used in combination with OpenSCAD to preview 3D designs by touch before printing. A high degree of technical expertise is required to set this up.

Low-tech solutions should also be considered, e.g. using modelling clay or >ego to create suggested models for 3D printing.

It is extremely valuable to have blind adults test models as part of the design process.

## 4.4 Labelling

One member is testing [**https://touchsee.me/**](https://touchsee.me/)for 3D printable labels. Another member has used it but printed the braille top-down, resulting in rough braille.

# 5. Other business

## 5.1 International collaboration

Wendy Voorn (Netherlands) is keen to work with us. ACTION: Leona to invite her to join our Microsoft Team.

Jim Allen from the Texas School for the Blind and Vision Impaired is the Chair of the DIAGRAM 3D working group. He asked whether he could attend our next meeting? Agreed.

## 5.2 New Models

A member showed a model of the Arctic Circle they designed with removable polar ice caps that have melted. We discussed designing models so that they can be re-used for a variety of different teaching purposes.

A member showed a [braille writer finger guide](https://www.youmagine.com/designs/braille-writer-finger-guide) that she has printed. This was designed by Jim Allan and has quickly proved to be very popular.

Two members have both been producing lots of [braille swing cells](https://www.thingiverse.com/thing:2704904).

# 6. Next meeting

Meetings to be held monthly, alternating between Monday and Wednesday at 11.30am AEST.

Next meeting proposed for Wednesday 15 July 2020. Jim Allan will be a special guest.