# ANZAGG 3D printing meeting20 May 2020Meeting minutes

## Personnel

Meeting Chaired by Leona Holloway

## Introductions

Monash University

* halfway through 3-year project looking at 3D printing for touch readers.
* Focus is on materials for education and O&M
* Aim to produce guidelines by end of project

Statewide Vision Resource Centre (SVRC), Victorian Department of Ed

* mainly designing models for maths & science
* Using OpenSCAD to design models
* Printed and displayed sample models, introduced to schools over last 2-3 months

NSW State Braille and Large Print Services

* Producing resources
* Have connected with syllabus and maths teams to identify best uses
* Mainly producing materials for years 10, 11, 12 such as science, plant cells, anatomy, history resources. Also some Australian iconography, e.g. Sydney Opera House and Uluru.
* Letting teachers know what is available rather than taking requests. Want to produce a guide for teachers so they know what it suitable to request in the future.
* They have done some initial pilot testing and are collating feedback from teachers
* Use Vision360 for modelling and have a very high quality printer

RIDBC

* The Vision Ed team have provided guidance on what is wanted. Requests have been internal
* Have designed many things, e.g. noughts & crosses game, swing cell, tactile dice, braille mnemonics. Some are on Thingiverse but others are half finished and not released.
* Designing a school map with audio - holes for touch sensors connected to a raspberry pi with headphones. The map will be used by a student learning a new school for next year.
* Hope to work more closely with Macquarie University in the future. They are producing a library of fossils and other artefacts otherwise not available to the public - <https://mq.pedestal3d.com/grid>

Sonokids

* 3D printed models to give physical materials alongside apps

BLENNZ

* At the very early stages. They now have 3 3D printers but one has not been used yet.
* Taking a few requests but not yet sure what to use it for.
* BLENNZ have had a strong focus on tactile graphicacy. Emphasis is on real objects if they are available.

South Australia School for Vision Impaired

* Started 3D printing 2 years ago as part of a primary school project for students to create their own models. The students (low vision) used Makers Empire app. The app developers were very open to feedback and have recently introduced text-to-speech function.
* Have been producing maps, geographical items and hiragana characters
* Still in an exploratory phase. The accessible formats team don’t have a 3D printer

## Discussion points

Where to put braille?

* Braille does not print well on the top of objects
* DIAGRAM group are suggesting that braille should not be included because it does not always print well and a model with braille cannot be scaled to different sizes
* One member has been placing braille labels on the underside of some 3D printed maps
* One organisation have had success printing braille on curved surfaces with a high quality printer. Students love it.

Using magnets

* One member has inserted small magnets inside models. Superglue is required to stop the magnets from jumping up onto the print head. Magnets was the best way of connecting two pieces.
* Another member has superglued magnets in indentations at the base of models.

Plateau of Giza

* One member would like a 3D model of the plateau of Giza with all pyramids for demonstrating math problems
* A model is available from [https://www.thingiverse.com/thing:202401](https://www.thingiverse.com/thing%3A202401) but it may not be complete.
* Google earth has 3D data but you can’t extract it legally

## Next steps

Share a list of places to find 3D models

Microsoft Team to be set up for the group.

Monthly meetings.

Next meeting topic: What to print.