

3D capture of scale models

Problem statement

The Department of Science, Information Technology and Innovation (DSITI) is seeking a solution to create 3D virtual models of real world architectural models. The 3D virtual model may be accessed through an interactive visualization product where the viewer can explore the virtual model from any angle, at any scale and in different simulated light conditions.

Overview of the problem

The Queensland State Archives (QSA) is struggling to find where a 3D virtual product has been directly developed from a complex small scale 3D object such as an architectural model, artist's Marquette, theatre set model etc.





Opportunity for applicants

The Testing Within Government (TWiG) Program aims to help Small to Medium Enterprises (SMEs) to improve the positioning of their products for government and large enterprise markets by working collaboratively with Queensland Government on a range of problems.

Applicants are invited to propose ICT solutions to these problems, and if selected, receive funding to test their product in collaboration with Queensland Government.

Being selected as part of the program will offer the opportunity to develop knowledge, skills and experience improving the potential to access broader commercial opportunities in Queensland, Australia and abroad.

At the end of the program, the applicants will have an opportunity to showcase their products and their TWiG program experience to a wide group of government representatives, which could lead to a procurement activity in Queensland Government.

Why is it important

The architectural models held at QSA are very popular, particularly with architectural students but are a major challenge to make accessible as they are highly fragile and hard to move.

The ability to generate a virtual experience of an object better preserves the original item while opening up infinite possibilities on how the virtual model could be used. A virtual model can be accessed from anywhere not just at QSA, Runcorn. Apart from use as a reference item, a 3D visualisation product could be adapted and integrated with images of other collection items (ours or from anywhere in the world), even superimposed in real time and the real world.

Problem context

The customer

General public, including university students, architects, designers and urban planners. To find further information regarding QSA, please visit <https://www.qld.gov.au/dsiti/qsas/>

How the problem is currently being solved

Due to current equipment and software, file size issues and in-house skills, QSA staff have only dabbled with rudimentary 360 degree digital capture which isn't immersive or interactive.

Technical constraints

- Offered as a service
- Accessible on-line on a range of devices/platforms
- Accessible in areas of low bandwidth (e.g. in rural and regional areas)
- Possible integration with other platforms

Benefits sought

- Open up the QSA collection to all Queenslanders and people worldwide
- Provide an enhanced experience for users
- Ability to overlay other vision, images or text
- Broader market and sector interest and uptake in an innovative solution to a problem
- Better preservation of models