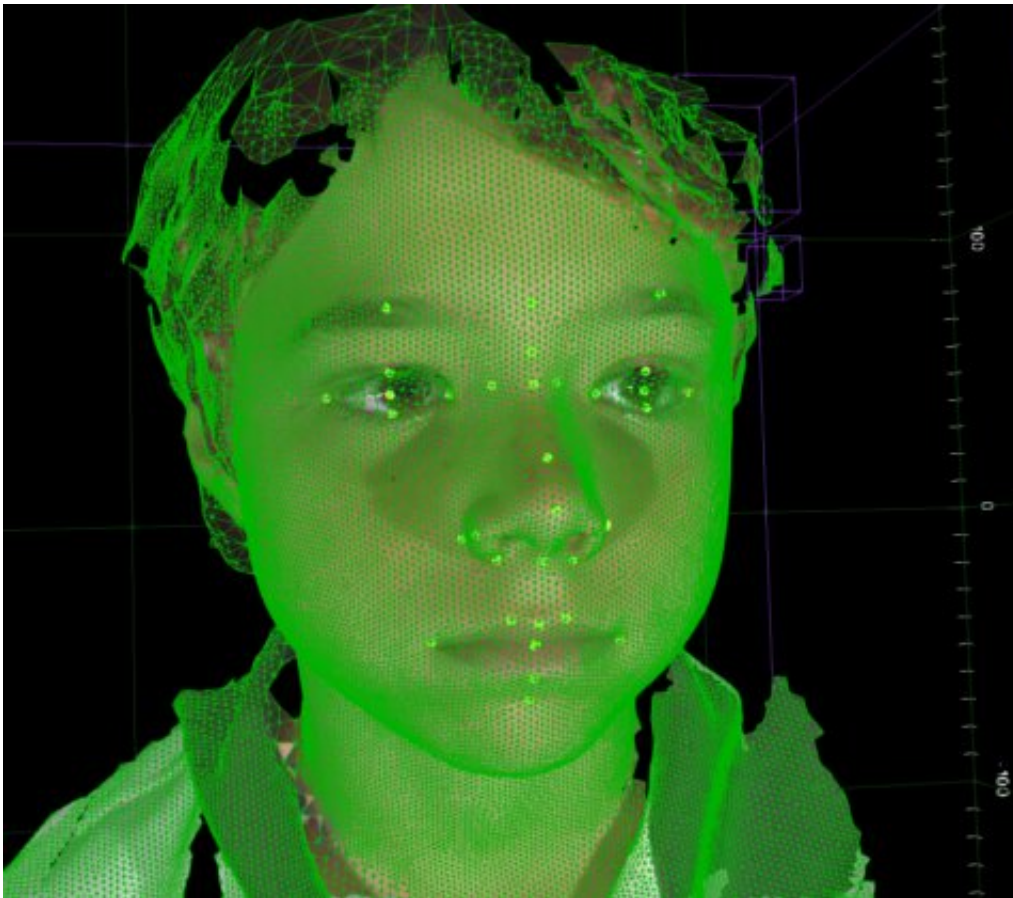


3-D technology finds tiny medical clues in children's faces

March 25 2019



Credit: Curtin University

The Cliniface project aims to assist clinical diagnosis, drug treatment monitoring and clinical trials by using accurate and reliable 3-D facial image visualisation and analysis methods.

Research Fellow Dr. Richard Palmer, from the Discipline of Spatial Sciences at Curtin's School of Earth and Planetary Sciences, said rare diseases were estimated to affect about 63,000 children in Western Australia alone and obtaining an early and accurate [diagnosis](#) was an unmet need.

"The shape and growth of the face is a window into a person's health and this technology is especially suited to younger patients where conditions can be discovered through tell-tale variations in the development of facial features," Dr. Palmer said.

"This technology unobtrusively takes highly [accurate measurements](#) from a 3-D image of a face and analyses them in seconds to help detect latent medical issues.

"Assessing whether a face has grown in a way that might be due to an underlying rare condition in childhood is when this tool is most useful, meaning it speeds up the diagnosis and resulting medical intervention."

Cliniface project manager Dr. Petra Helmholz, also from the Discipline of Spatial Sciences at Curtin's School of Earth and Planetary Sciences, said the Cliniface project was also seeking to unlock the power of 3-D facial images of Indigenous children and newborns to enable a more efficient diagnosis of [rare diseases](#).

"The project has already attracted considerable interest from clinicians and institutes in Australia and overseas including in the US, Europe and India," Dr. Helmholz said.

"The latest version of the Cliniface application was recently released and includes new facial measurements that allows clinicians to generate PDF reports for clinicians highlighting which facial traits of potential medical relevance have been detected."

The application is free and open source and can be downloaded for both Windows and Linux from the Cliniface [website](#).

Provided by Curtin University

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