

## Reverse engineering and analysis of Heinz Isler's shells

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### Abstract

The methods Heinz Isler used for the design of shell structures are well known. However, the exact geometry of the shells has not been available. Therefore, analysis of the exact geometry was not possible. The authors have obtained the geometry of the models present in the former office of Heinz Isler using 3D scanning in 2011 and presented first result in 2012 [1]. Since then also various build shells have been scanned and the process of reverse engineering has been further developed specifically for this application. Now structural analysis, for example using FEM, is possible and can be presented.

The paper will present an overview of the developments in reverse engineering the geometric data and the structural analysis. Accuracy of the obtained geometry will be discussed, and FEM models can be presented.

### References

- [1] A. Borgart, P. Eigenraam, *Scanning in 3D and analysing the models of Heinz Isler, the preliminary results: Proceedings of the IASS Annual Symposium 2012*, Seoul, Korea, 2012