

Return to the Moon (02)
Lunar Surface Outposts and Enabling Technologies (4)

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PRINTING A LUNAR BASE

Abstract

In 2009 The European Space Agency awarded a General Study Programme contract called “3D printing building blocks for lunar habitation” to an industrial consortium formed by Foster+Partners, Alta SpA, Monolite Ltd, and Scuola Superiore Sant’Anna. The main objective of the study was to investigate if 3D printing of moon dust is a viable construction technology for possible future lunar colonisation. Each of the companies within the consortium brought in their own expertise and specialism. The research was led by Alta Spa, which is a space engineering company. The Specialist Modeling Group of Foster+Partners provided the overall design concepts and computational modeling. The Perceptual Robotics laboratory (PERCRO) of the Scuola Superiore Sant’Anna delivered the know how for control systems and robotics and Monolite UK which was founded by Enrico Dini the inventor of the D-shape 3D printing process, delivered the printing technology.