VR-assisted Architectural Design in a Heritage Site: the 
Sagrada Família Case Study

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Virtual Reality (VR) simulations have long been proposed to allow 
users to explore both yet-to-built buildings in architectural 
design, and ancient, remote or disappeared buildings in cultural 
heritage. In this paper we describe an on-going VR project on 
an UNESCO World Heritage Site that simultaneously addresses 
both scenarios: supporting architects in the task of designing 
the remaining parts of a large unfinished building, and simulating 
existing parts that define the environment that new designs 
must conform to. The main challenge for the team of architects 
is to advance towards the project completion being faithful to 
the original Gaudí’s project, since many plans, drawings and plaster models were lost. We analyze the main requirements 
for 
collaborative architectural design in such a unique scenario, describe the main technical challenges, and discuss the lessons 
learned after one year of use of the system.

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