



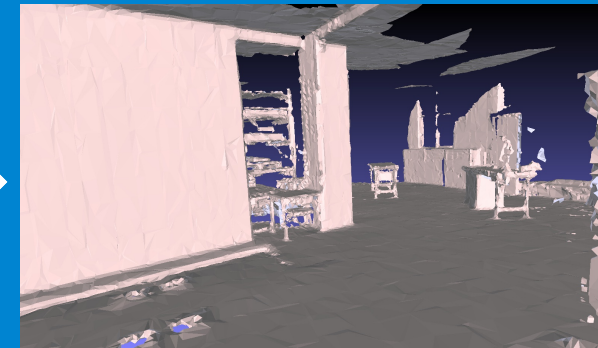
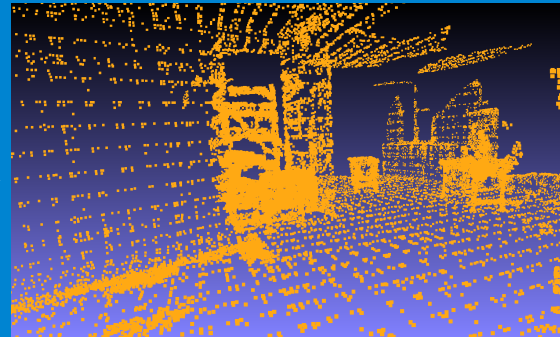
Computer  
Graphics  
Charles  
University



# Photo3D

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# Photo3D



Captured photos  
(HoloLens)



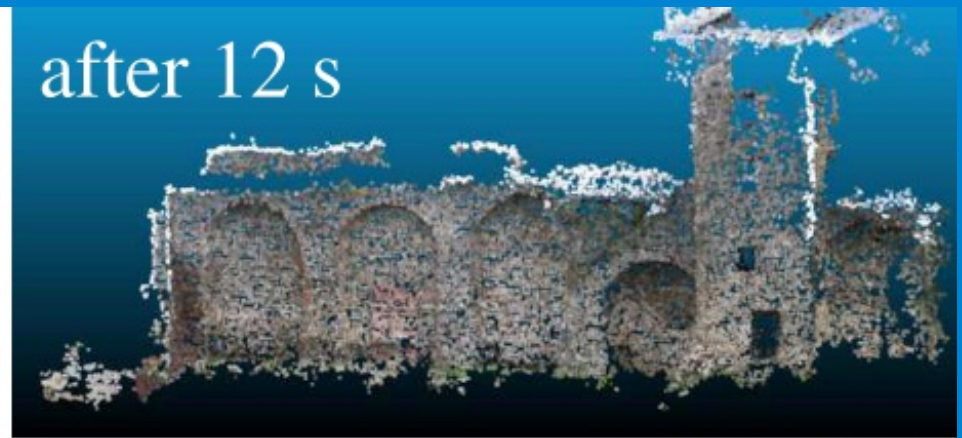
Sparse point cloud

Reconstructed  
3D mesh

„Structure From Motion“ + „Multi-view Stereo“

# Progressive reconstruction

# Photo3D



# Photo3D



## Technology – HoloLens

Microsoft HoloLens 1/2

DirectX 11.1 (12 for HL2)

C++

Windows 10 UWP

## Server

Dedicated reconstruction server

Progressive reconstruction

C++

3<sup>rd</sup> party libraries

COLMAP, MVE, ZeroMQ (net)

Point-cloud libraries, OpenCV ...



# Photo3D

## SW project

Team of 4-6 developers (we already have 3)

9 months: 2019/20 (till Jun-Sep 2020)

## Real HW for testing

CGG MFF UK (1 piece of HoloLens 1)

Pocket Virtuality (lab in CIIRC ČVUT)



Visual Studio 2019, C++, Win10 UWP (HL),  
Mixed Reality Toolkit

HoloLens emulator for common PC (Win10)

GIT repository