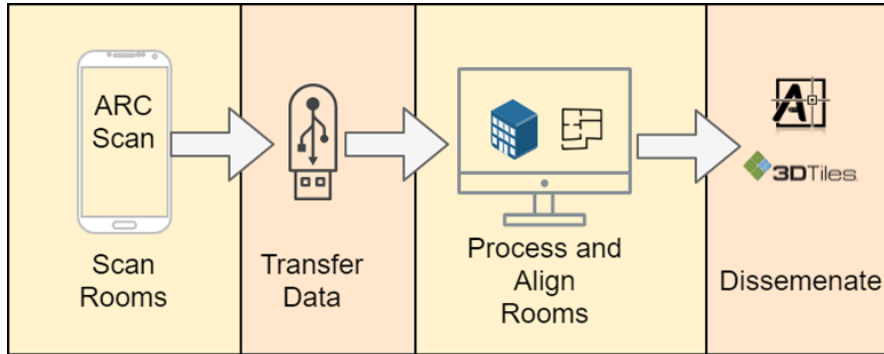ArcScan is a mobile application that enables a user with an iOS device to scan the interior of a building to produce a 3D representation across multiple rooms and floors.

Problem:
- The appreciable amount of scanning to make a 3D model is expensive and/or cost prohibitive for all but the most significant or most sensitive projects.

- Other solutions require expensive and bulky hardware.

- Data for 3D model generation is difficult to find and expensive.

Our Solution:

- Captures and previews a 3D model while preserving the raw data for a more accurate 3D reconstruction

- Data is stored on the mobile device locally while surveying

- Data is securely transferred from the mobile device via a USB drive

ArcScan (Human Geography 3D Street View - Phase II SBIR)

Features:
- Improved 3D generation via image-data to create building meshes.

- Ability for large-scale mesh conversion and texturing

- Interior scanning application (iPhone/iPad) allows real-time user feedback to help determine completeness of the scan.

- Ability to merge scans from different devices and convert collected data into lightweight, spatially accurate meshes via plane-detection, plane-decimation, and texturing techniques.

Potential Application(s):
- Site survey
- Real estate advertising
- Modeling and simulation
- Video game generation

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