ReCap 360 Pro 2017
What's New & Advanced Topics

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Class Summary

In this class we'll:
- Learn about & practice new features of ReCap 360 Pro 2017
- Revisit some things you might have missed
- Cover some advanced topics, based on community feedback

Key learning objectives

At the end of this class, you will be able to:

- Learn how to use ReCap 360 Pro to create a textured mesh from a point cloud selection.
- Learn how to use ReCap 360 Pro to register UAV or handheld scan data to a project.
- Learn how to use ReCap OEM tools to automate reality-computing workflows.
- Learn how to handle common pitfalls in advanced ReCap workflows.

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What's New?

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- 03/2016 (3.0.0): Mesh Creation
- 04/2016 (3.0.1): ReCap OEM
- 06/2016 (3.0.2): Unassigned Region
- 10/2016 (3.1.0): CAD Import, Registration
- 11/2016 (3.1.1): CAD Import 2, Video updates

Lab Outline

- Exercise 1: **Mesh Creation** + Limit Box updates
- Exercise 2: **CAD Import** + Image Export
- Exercise 3: **Expanded Registration** + Video
- Exercise 4: **ReCap OEM**, UCS, Region Tools

Lab Format

- Demo + Practice
  - See 'Tasks' in Handout
  - Timed blocks for each task
- Feel free to explore, but
  - Assistants will focus on current exercise/task
- Ask questions!
- **Data: C:\Datasets\RC20768-L**

Exercise 1: Mesh Creation

Exercise 1: Mesh Creation (Notes)

- Requires project to be published to A360
  - Publish can be private/unshared
  - Feel free to publish the Example 1 project to your account (bandwidth not guaranteed ☺)
  - Most of the exercise can be completed without actually connecting to the cloud service
- External app required to view/edit mesh
  - ReMake, 3DSMax, etc

Exercise 1: Mesh Creation (Tasks)

- Load 'Exercise 1.rcp' and enter 3D view
- Use Limit Box 'Pick' Tool to isolate statue
- Select + Clip unwanted points
- Submit mesh request

Exercise 2: CAD Import

Exercise 2: CAD Import (Notes)

- Works with coordinated NWD files
  - NWD can be created from most Autodesk formats using Navisworks Manage
- 3.1.0: Basic Viewing
- 3.1.1: Lighting, UCS, misc. fixes
- Bonus features: High-res image export, Intensity Mode in RealView

Exercise 2: CAD Import (Tasks)

- Load 'Exercise 2.nwd' in NW Manage 2017
- Move/Rotate CAD data as desired
- Launch ReCap & load 'Exercise 2.rcp'
- Attach 'Exercise 2.nwd' and view in RealView
- Switch to Intensity Mode
- Create View States (Intensity / RGB)
- Export high-res image(s)

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Exercise 3: Expanded Registration

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Exercise 3: Expanded Registration (Notes)

- Support for registering 'unstructured' data
  - UAV, Handheld, Vehicle
- Requires a structured (tripod) network
  - 'Free' registration not supported yet
- Bonus features:
  - View Customization
  - Video Export

Exercise 3: Expanded Registration (Tasks)

- Load 'Exercise 3.rcp'
- Import 'HandheldScan001.dp'
- Stitch the point cloud to the scan group
- Review results and enter 3D view
- Pick background preset & create View State
- Pick custom background & create View State
- Create ordered View State Group
- Preview your video
- Export your video

Exercise 4: Advanced Topics

Exercise 4: Advanced Topics (Notes)

- ReCap OEM ('DeCap') allows for automation of project creation & annotation
- Demo & practice of UCS creation for visual alignment
- Tour of new Region Tools for data organization

Exercise 4: Advanced Topics (Tasks)

- Use DeCap.exe to create a project from the Example 4 raw scans
- Create a UCS using the 'Update Origin' tool
- Use the selection tools to create regions
- Configure region visibility
- Export a group of Regions to Unified RCS

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ReCap @ AU

- Booth **#2033**

- Product Announcement:
  TONIGHT 5pm
  Palazzo Ballroom K