360 VIRTUAL TOUR

Facilitator Guide

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Frontmatter

This instructional mini-course was created as part of a Master's Degree class on Instructional Design during the University of New Mexico Fall 2016 term.

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Acknowledgements:

Table of Contents

Introduction

This is a project based course where learners will create a product. The product is a 360 virtual tour that can be added to a web page. It is assumed that the majority of learners have not had experience with 360 image capture or 360 virtual tour development. The instructor may need to alter modules if all learners have experience with either the hardware or software used in this course.

Course Structure

This course is broken down by weeks of instruction. Each week has two or more modules that will be covered. It is assumed that each week will have at-least 3 hours of face-to-face class time. The current assumption is that each week will have one (1) class session that is three hours long. The instructor may need to adjust modules if the face-to-face class has a different configuration. It is recommended that module topics be covered in order. However, it is understood that the instructor must have the flexibility to alter module order based on his/her experience and the experience level of the learners.

Computer Access Requirement

This course requires learners to have access to computers (laptops preferred) in and out of class. Failure to have reliable computer access with required software will result in learner failure. The instructor must address this issue either the week before classes start by sending learners an email or by holding classes where computers are available.

Course Summary

Week 1

Module 1A: Project Intro
-Individual Tour
-Group Tour (Humorous)

Module 1B: Selecting the Location

Module 1C: Hands on Instruction of Ricoh Theta S Camera

Week 2

Module 2A: Min Photo Edits Required

Module 2B: Intro to PanoTour Pro Software

Week 3

Module 3A: PanoTour Pro Plug-in/Spots Presentations

Week 4

Module 4A: In-Class Work
-Group Virtual Tour Creation Work In Class

-Instructor meets with each group to give feedback on tour development

Week 5

Module 5A: Group Humorous Virtual Tour Due & Group Presentations In Class

Week 6

Module 6A: In-Class Individual Tour Creation

-Instructor Meets with Each Learner to Provide Feedback on Virtual Tour

Week 7

Individual Virtual Tour Projects Due at Start of Week.

Optional: Individual Presentations

WEEK 1

Module 1A: Introduction to 360 Virtual Tours

In this module the educator will introduce content and outline the next several weeks of instruction. The educator should show learners several examples of 360 virtual tours and explain the value of these tours in comparison to static two dimensional images. The educator should explain how 360 virtual tours can be used to showcase a location or space.

Time needed:

About 60-75 minutes

Items Needed for Module 1:

- Computer with internet access
- Projector (with appropriate connection cables)

Important note:

Many 360 virtual tours require Flash Player or other plug-ins. Test sites to make sure you have what you need to show the 360 virtual tours.

Links to existing 360 virtual tours:

World Trade Center Memorial (360cities.net) http://www.360cities.net/search?utf8=%E2%9C%93&query=world+trade+center+memorial

Guggenheim Museum (360cities.net) http://www.360cities.net/search?utf8=%E2%9C%93&query=guggenheim+museum

Alcatraz (fullscreen360.com) http://www.fullscreen360.com/alcatraz

Module 1A Recommend Sequence:

1) Personal introduction by educator.
2) Have learners introduce themselves.
   - Why are they taking this course?
   - What do they hope to gain from the course?
3) Introduce 360 virtual tours using 360 virtual tour links with a focus on answering the following questions:
   - What are they?
   - What is the value of 360 virtual tours?
   - What advantages do they bring to architects and designers?
   - How 360 virtual tours are superior to location/space showcasing compared to two dimensional images?
   - How 360 virtual images are a means to document historical locations?
   - How are the images created?
     - For this course- Ricoh Theta S camera
     - Briefly discuss other methods
     - What software?
       - Kolor PanoTour Pro (Will be covered week 2)
4) Introduce the course projects.
   - Group 360 virtual tour- Use 360 images and the software to create a humorous tour.
     - The tour needs to tell a story
     - Subject of the story must be in each image- 3 images min and 5 max
     - Subject can be an object, animal, group member(s), movable statue, cardboard cut-out, etc.
     - Optional: (Instructor Choice) If learners have difficulty creating a humorous story they can create some other type of story.
     - Goal is to help learners experiment with the software and gain competence using it to create 360 virtual tours.
     - Due at the beginning of week 5.
   - Individual Project.
     - Location of historical/cultural importance in New Mexico.
     - Research on that location is required. Information found during research will be added to the virtual tour.
     - Minimum of 3 images (max?)
     - Due at the beginning of week 7.

Module 1B: Selecting the location for the individual project

In this module the educator will explain the requirements for selecting the historical/cultural location in New Mexico.

Time needed: About 30 minutes

Items needed for Module 1B: None

Module 1B Recommended sequence:

1) Discussion with learners:

- What is historical or cultural importance?

- How do you determine that a location has historical/cultural importance?

2) Discuss Week 1 homework:

- Identify a location that you would like to use for your individual project.

- The location must be in New Mexico and able to be photographed without trespassing. You may need to get permission to take pictures.

- Provide one citation that supports why this location is of historical/cultural importance.

- Complete the form and submit to the instructor for approval.

  - Homework on page 33 of this guide.

  - Homework on page 17 in the Learner's Guide

Module 1C: Introduction to the Ricoh Theta S Camera

In this module the educator provides hand-on instruction with the Theta S camera and explains its features.

Time Needed for Module 1C: About 75 minutes

Items needed for Module 1C: Ricoh Theta S camera. After demonstration of how to use it may be best to leave the classroom and have hands on training outdoors or another nearby location that is visually interesting if possible.

Module 1C Recommended sequence:

1) Care of the camera

- Protect lens and body
- Do not submit to wet weather, etc...

2) Using a tripod or monopod to take images
3) On-camera controls

- Power
- Turning on wi-fi
- Selecting image or video mode
- Taking a manual image or video

4) Linking Theta S to a mobile device

- Downloading the mobile device app (Links provided in learner guide)
- Connecting mobile device to camera wi-fi
- Theta S wi-fi passwords
- App controls and navigation
- Accessing the user guide in the app (**Very useful guide)
- Using the camera in auto mode
- Using the camera in manual mode
- Transferring images/videos to mobile device
- Transferring images using cord

5) Learners practice taking images and experiment with settings

Last 15-30 minutes of class on Week 1:

1) Review homework and tasks for next week:
- Location selection Homework (Learner's Guide Page 17)
- Download Theta S app and computer software
- Download trial version of Kolor Panotour Pro Software (Must be Pro version not lower level)
    - Links are listed on page 21 of this guide and on page 5 of the Learner's Guide
- If possible, have learners bring laptops to class every week. Instructor may need to find computers for learners that do not have laptops.

2) Form groups of 2-4 learners. (Ideal number has not been identified at this time. My recommendation is to try for groups of 3 and adjust number based on feedback/outcomes the first one or two times running this course.)
- Groups can use the last few minutes to discuss ideas on the group project, share contact info, and figure out how/when they will meet outside of class.

WEEK 2

Due at the beginning of Week 2:

- Location selection homework (Will be given back with comments at the beginning of Week 3)

- Learners should have a trial version of Kolor PanoTour Pro on a computer

- Learners should have the Ricoh Theta S mobile device app installed.

Start of class task: Camera Check Out Schedule

Time Needed: About 10 minutes

Develop a plan for groups to check out the Theta S cameras. Groups will limited to 48 hours with the camera so all groups can capture images for the group project.

Sample calendar is located on page 34 of this guide.

Module 2A: Minimum Photo Edits Required

In this module the educator will cover the required minimum edits required of the 360 images captured using the Theta S camera. Learners are expected to figure this out as a team and the expectation is that learners enter the course with prior knowledge on how to do this using software such as Adobe Photoshop. If learners need help/ instruction on this software they will need to use self-directed learning to figure out how to make these edits. Links to tutorial videos and other resources are provided in the learner's guide.

Time Needed: About 30 minutes

Items needed for this module: Computer with sample before/after images and a projector. (Page 36)

Educator/Learner Resource Links:
> These links are on page 22 of this guide.
> These links are in the Learner's Guide on page 18.

Module 2A Recommended Sequence:
1) Explain minimum edits needed using the before/after demo images
- Removal of camera tripod or monopod
- Removal of camera tripod or monopod shadows
- Exposure (May not always be needed)
  - Since the Theta S images are JPEGs images that are too under or over exposed may need to be re-shot. Editing may not work enough.

Key points:
- Review images before leaving the location using the mobile device app
- Where to gain access to Photoshop on UNM campus
- Point out tutorial video links in Learner's Guide

Module 2B: Into to PanoTour Pro Software

In this module the educator will provide a hands-on intro to the PanoTour Pro software. The goal of this module is to get learners familiar with the software so they may begin to experiment with it and learn how to create a 360 virtual tour. The educator will briefly describe each of the elements that can be added to the virtual tour.

Time Needed: About 90 minutes

Items needed for this module:

Educator computer with projector. Demo images on page 37 of this guide. Demo images are on page 19 of the Learner's Guide. If possible, learners should have computers with the software in class so they can follow along. Learners should plan to bring their laptops to every class starting this week. Learners will need 2-3 demo 360 images for in-class practice. May need to arrange for laptops/computers from a UNM source.

Link to Kolor PanoTour Pro Online User Guide: http://www.kolor.com/wiki-en/action/view/Panotour_Documentation

Module 2B Recommended Sequence:

1) Software start-up and interface controls

2) Creating a new tour

- Loading images
- Tour information (right hand of the screen)
- Hotspot editor tools (8 tools)

Continued next page.

3) Style Options (This is where the hotspot and other tools can be altered)

- Most difficult part of the project is to figure out what each of the style options do when changed. Briefly describe each plug-in and option. You will assign each group the task of experimenting with 2-4 options and reporting their findings to the class next week. Depending on how many groups are created each group may have two style options or two from Plug-ins and two from Spots. There are other Plug-ins and Spots that could be used. The ones below are the most useful for creating a 360 virtual tour.

4) Recommend Style Option Assignments:

- Plug-ins
    - Control Bars & Controls
    - Image Zone & Text Zone
    - Loaders, Maps, & Menus
- Spots (Hotspots)
    - Point & Map Point
    - Polygon & Picture
    - Video & Web Content
- Groups will need to present to the class next week the following on the Plug-ins or Spots. Groups will need to show examples and will be expected to provide a live demonstration of the Plug-in/Spot. To demonstrate the changes learners will need to "Build" or create virtual a virtual tour since the software does not provide a preview.
    - What is it?
    - How does it work?
    - What do the controls do or change?

5) Building a tour

- This is the final stage of creating a tour. Since the software does not allow a preview of most Plug-ins and Spots users must create a tour and review it. User must then go back and make changes and Build the tour again. This is a weakness in the software that will impact tour creation and revision.

Module 2C: In-Class Work

The final 45-60 minutes of week 2 is to allow groups to continue group work. Groups should use this time to discuss/plan their group project and to start experimenting with the PanoTour Pro software.

Week 2 Homework:

- Group work on PanoTour Pro Plug-ins/Spots presentation
- Group work on the humorous virtual tour
- Groups capture location images for the group tour this week.
    - Groups will be given 48 hours to capture images and return camera so another group can capture their images. Group capture of images may stretch to the end of Week 3 if needed.

WEEK 3

Beginning of Class:

Individual Location Homework is returned. Location approval means the learner may continue with additional research on the location and begin making plans to capture images at the location. If the location is not approved the learner has five days to submit another location to the instructor.

Continue camera rotation until all groups have had the chance to capture the required images for the group project.

Advise learners that next week starts camera check-out for individual projects. Learners need to bring in several 48 hour (2 day) blocks where they could capture images over the next two weeks.

Module 3A: PanoTour Pro Group Presentations

This module is where groups will present information on the Plug-ins and/or Spots they were assigned. Each Plug-in/Spot presentation should be about 10 minutes long. These presentations will take about 140-150 minutes from start to finish.

Sample Grading Rubric fo Group Project: Page 38.

Remaining time will be used for group project work.

Homework:

- Groups should have images edited, general story created, and be ready to start putting the tour together in the software.
- Individuals should have research completed (or near completion) on the location selected for the individual project.
- Groups must be ready to create the group tour starting next week in-class.

WEEK 4

Beginning of Class:

First 15 minutes: This week will begin individual camera check out. Sign-up schedule will be created. (See page # for sample sign-up schedule)

Module 4A: In-Class Group Tour Development

First 60 minutes:

- During the first 60 minutes groups should begin creating the humorous tour and be ready for instructor to visit each group.

Last 105 minutes:

- Remaining class time will allow the educator to visit with each group and assess their progress and give them feedback on the design of the tour.

Homework:

- Group projects due start of next week.
- Group project presentations (15 minutes per group)
- Individuals should capture images and edit them of historical/cultural locations for individual project. This may take through week 5 to complete.

WEEK 5

Beginning of Class:

- Groups will turn in the group projects (method TBD- flash drive?)

Module 5A: Group Presentations

Groups will have 15 minutes to present their humorous tour. Assuming there are five groups there would be about 75 minutes needed for presentations. Add an additional 5 minutes between groups for loading tour on computer used for presentations or switching of laptops. Plan for 100 minutes for group presentations.

Module 5B: Class Discussion

Class discussion of what features/design of the virtual tours did learners like and why. Educator can provide feedback on design elements.

Sample Group Project Grading Rubric: Page 38

Homework:

- All learners should have captured and edited images of the historical/cultural location by the end of the week.
- Learners should have a "script" of what supplemental information they will add to the individual tour.
- Learners should start creating the individual project and come to class next week ready to put the tour together.
- Learners will need to bring a laptop (or computers will need to be available) next week.

WEEK 6

Module6A: In-Class Individual Project Work and Instructor Feedback

- By the start of this week all learners should have images captured of their location.

- Learners will work on the individual project in-class and the instructor will meet with each learner to review the virtual tour development. The instructor will give feedback on the tour and suggest edits/improvements.

Tour Option: (Instructor may chose to require)

- Have learners record 2-3 minute audio or video with audio that is part of the tour that explains why the location is important to New Mexico for historical or cultural reasons.

Homework:

- Individual project due at the start of class week 7.

WEEK 7

Beginning of Class:

- Individual Projects are Due

- Individual project is intended for web publication and evaluation of the tour should answer several questions:

  - Does the tour explain why the location is important to New Mexico history or culture?

  - Is the tour designed in a manner that it is easy to use?

  - Does the user gain appreciation for the location based off the images and information in the tour?

No further instruction on the 360 virtual tour project will be given. The educator has two options regarding the individual project.

Option A: Allow for in-class presentations week 7 of the individual project.

Option B: Load tours on web or in the Blackboard LMS and have each learner evaluate 3-4 other projects.

Instructor Resources

360 Virtual Tour Demo Links:

World Trade Center Memorial (360cities.net) http://www.360cities.net/search?utf8=%E2%9C%93&query=world+trade+center+memorial

Guggenheim Museum (360cities.net) http://www.360cities.net/search?utf8=%E2%9C%93&query=guggenheim+museum

Alcatraz (fullscreen360.com) http://www.fullscreen360.com/alcatraz

Other 360 Virtual Tours exist online. These were chosen for their historical/cultural value. 360cities.net has thousands of locations across the world represented.

Software Download Links:

Ricoh Theta S Software for MAC/PC and Apple/Android Mobile Devices: https://theta360.com/en/support/download/

Ricoh Theta S User Guide: https://theta360.com/en/support/manual/s/

Kolor PanoTour Pro: http://www.kolor.com/download/ *MUST BE PANOTOUR PRO.*

The other PanoTour does not have the same features as the Pro version.

Kolor PanoTour Pro Online User Guide: http://www.kolor.com/wiki-en/action/view/Panotour_Documentation

Instructor Resources

Adobe Photoshop Image Editing Links:

Lynda.com Tutorial Videos (UNM Students have access to this online training resource)

Basic: https://www.lynda.com/Lightroom-tutorials/Remove-unwanted-objects-Photoshop/435787/462284-4.html

Advanced: https://www.lynda.com/Lightroom-tutorials/Remove-unwanted-objects-Photoshop-Advanced/435787/462285-4.html

Using the "Clone" tools: https://www.lynda.com/Lightroom-tutorials/Removing-unwanted-objects-cloning-Photoshop/438406/471557-4.html

Web Link: (Note there are many web guides that are useful. This is just a sample)

Macworld.com:http://www.macworld.com/article/2980359/software-photography/how-to-remove-objects-in-your-photos-with-photoshop-s-content-aware-tools.html

Instructor Resources

Humorous Tour Information:

The humorous tour is intended to focus effort and instruction towards learning the process and the software. Learners are allowed to select their topic, locations, and details of the group project.
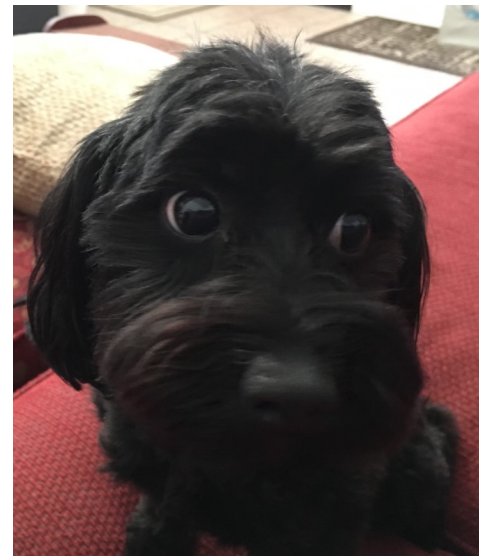
<u>Examples:</u>

Learners could attempt to make several manikin challenge style images using the Theta camera. Sample manikin challenge links:

Chicago Fire Dept: https://www.youtube.com/watch?v=V8OGR3AxEPU

Dogs: https://www.youtube.com/watch?v=q29IHs-A6TA

Other images can be created using photo editing techniques or just plain optical trickery.

The key is that the image will be a 360 image and there will be more "room" to create a visual message.

Instructor Resources

Kolor Panotour Pro Screenshots:

These screenshots are not intended to be a step-by step guide for performing the task of creating a 360 virtual tour. These images are intended to be a set of key points in the process and what the screen will look like at each of these points.

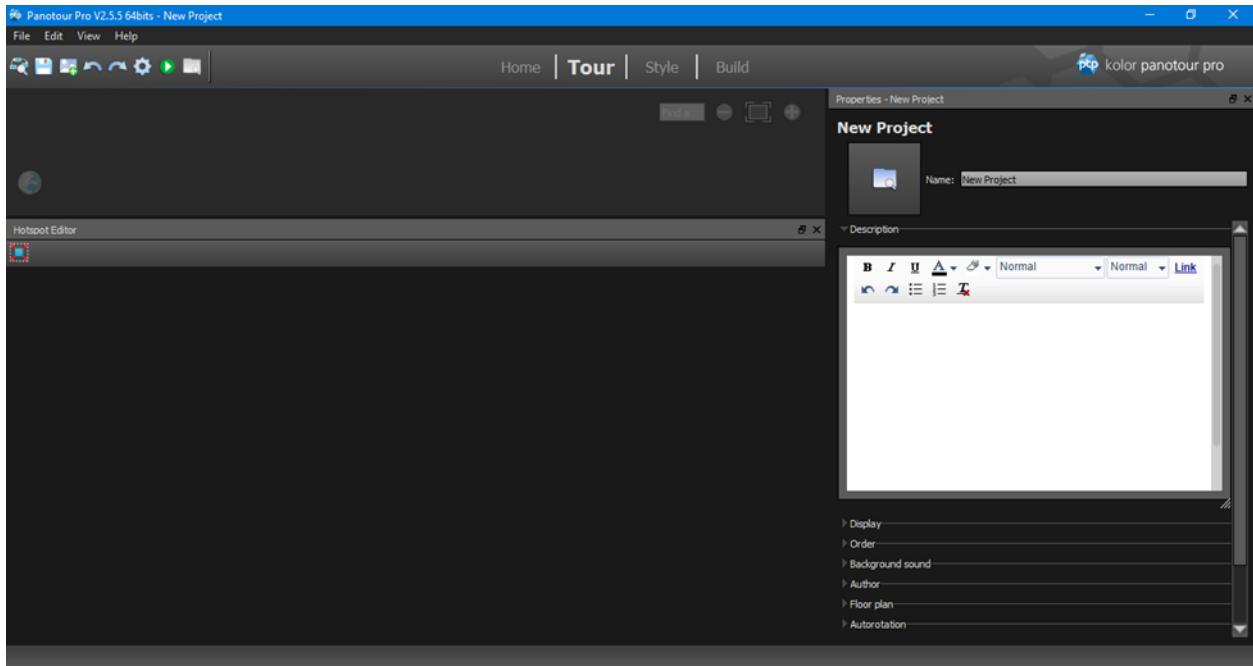Note: These images are of Panotour Pro 2.5. Updated versions or prior versions will look different.

Panotour Pro Home Screen
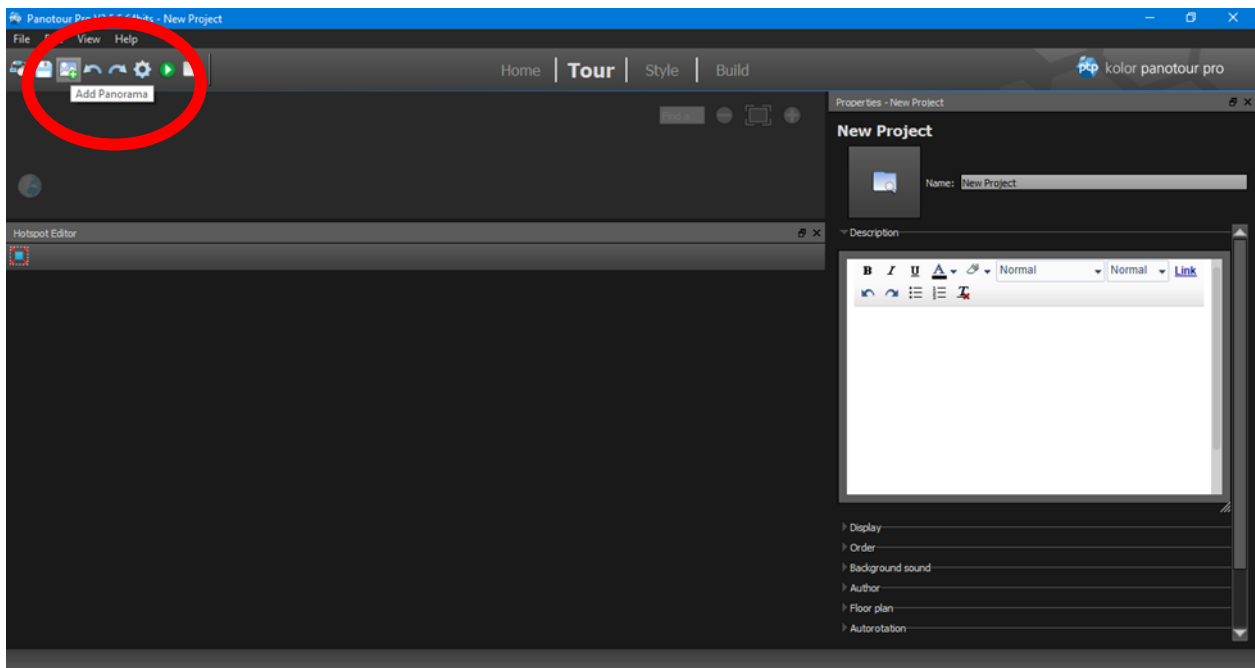
Instructor Resources

Kolor Panotour Pro Screenshots:

Starting a New Tour

No 360 images loaded yet.

360 VIRTUAL TOUR

Instructor Resources
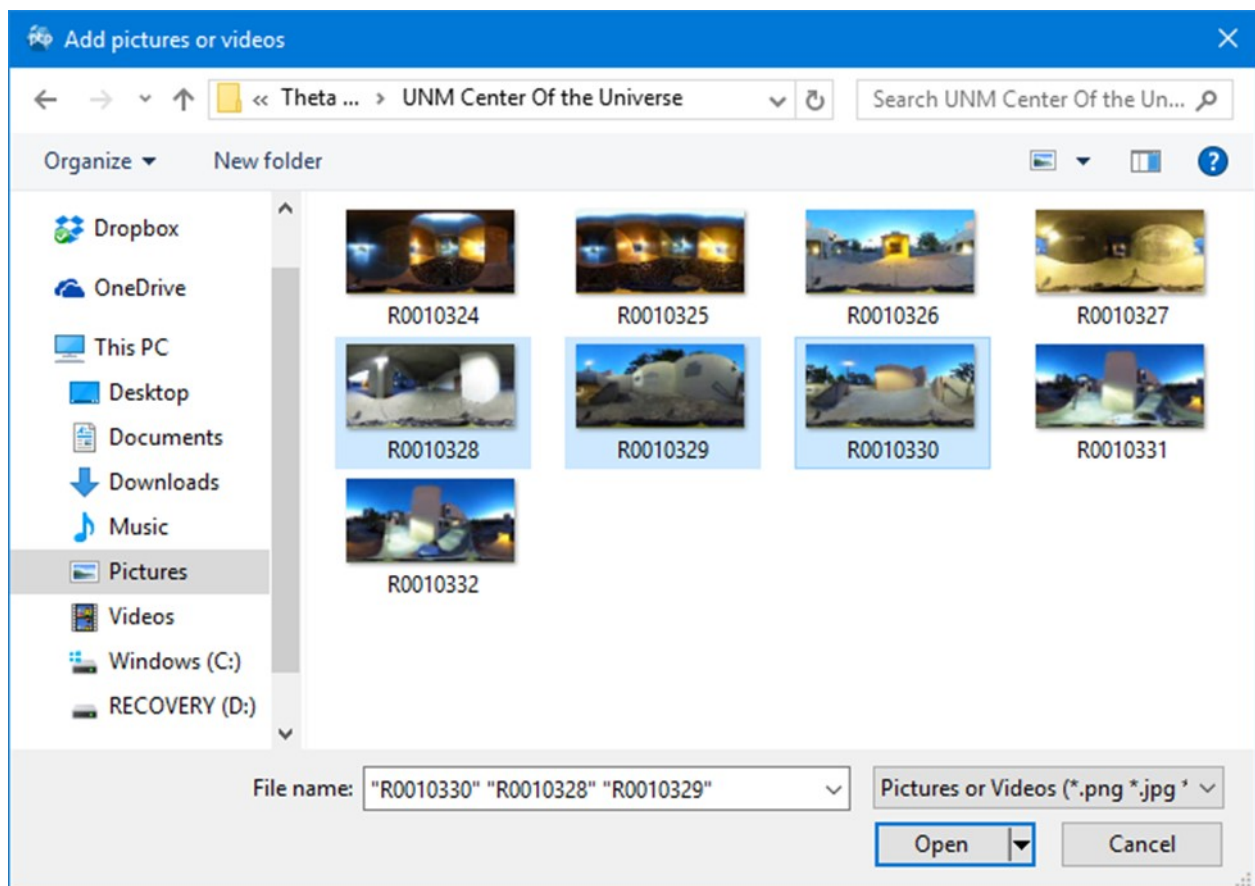
Kolor Panotour Pro Screenshots:

Adding 360 Images to Tour

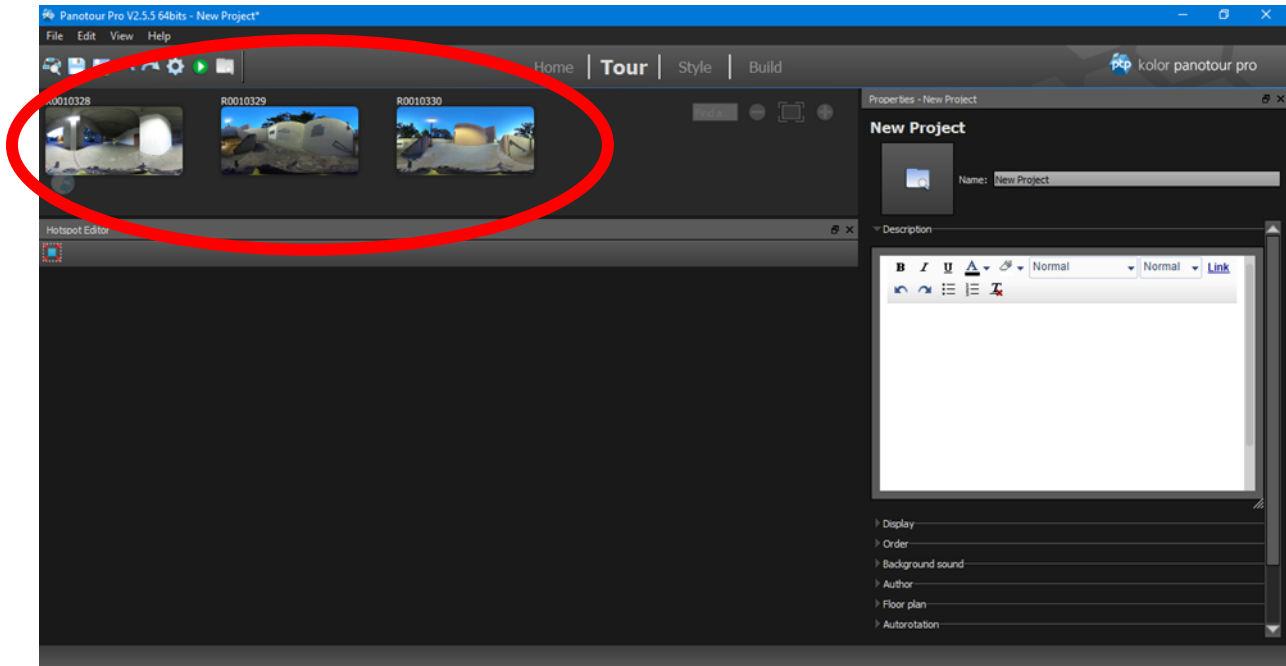# Instructor Resources

Kolor Panotour Pro Screenshots:

Selecting Images to Add to Tour

This is from a PC. MAC user interface will look different.
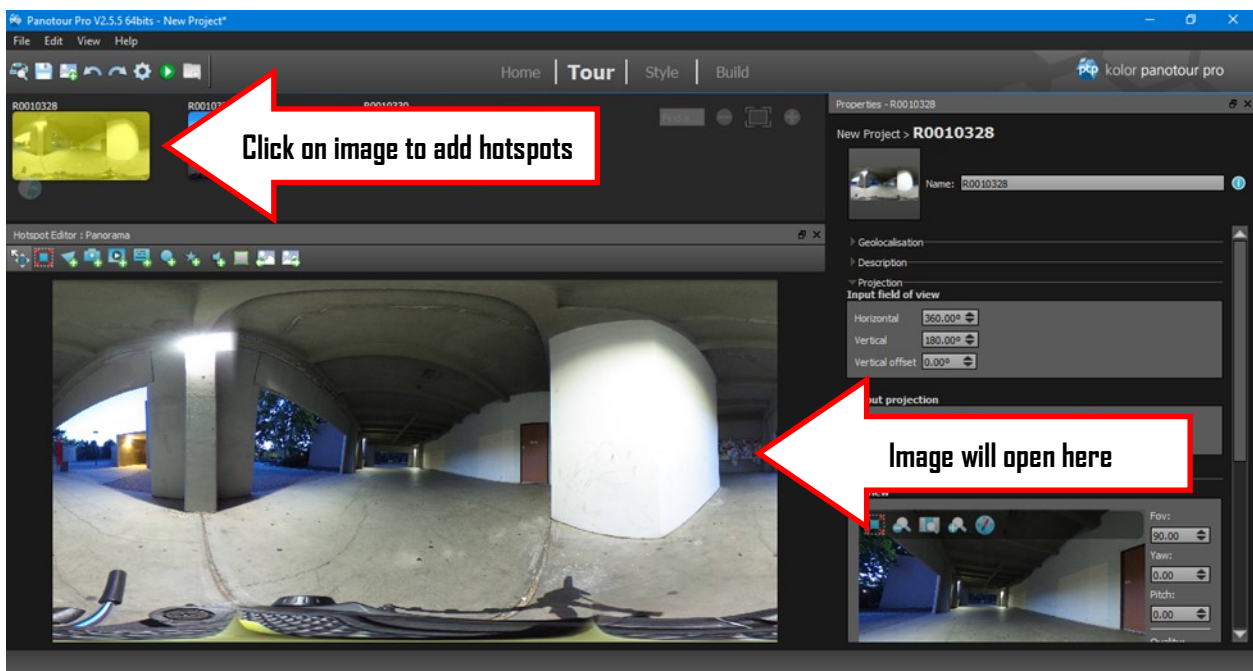
Instructor Resources

Kolor Panotour Pro Screenshots:

Images added to Tour

In this example three (3) images were added.

Instructor Resources

Kolor Panotour Pro Screenshots:

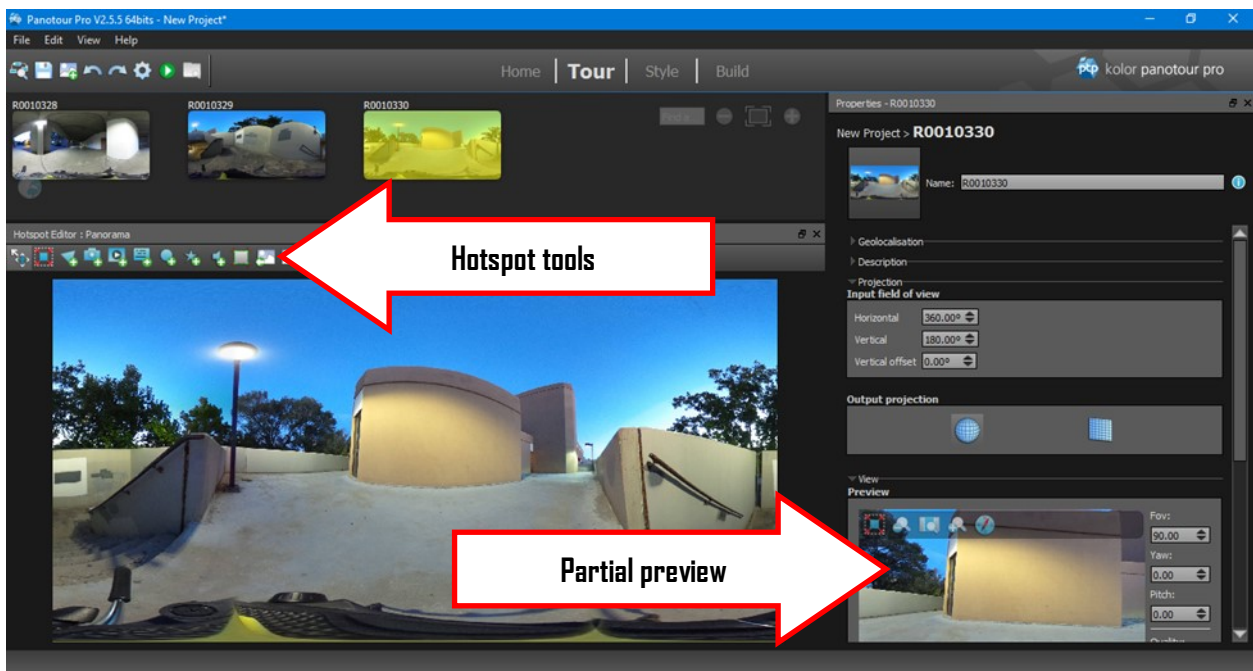Editing Image and adding Hotspots

Click on an image to add hotspots and other elements to tour.

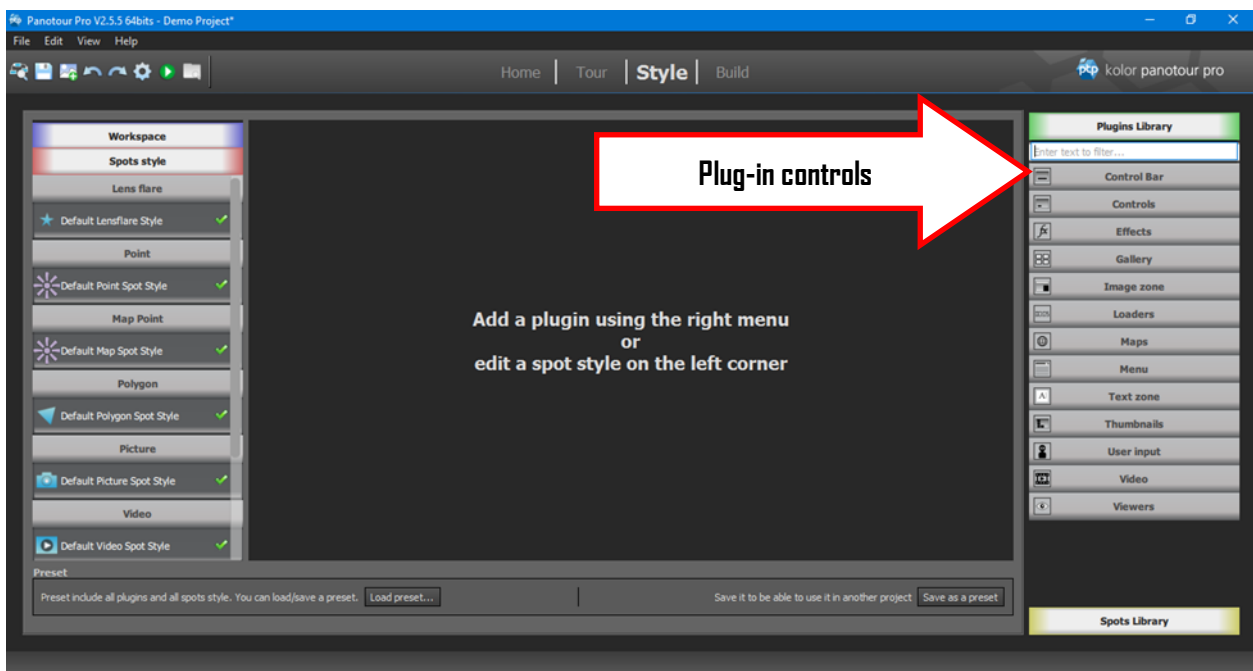# Instructor Resources

Kolor Panotour Pro Screenshots:

Editing Hotspots

Partial preview will show some elements of the tour being created.

Instructor Resources

Kolor Panotour Pro Screenshots:

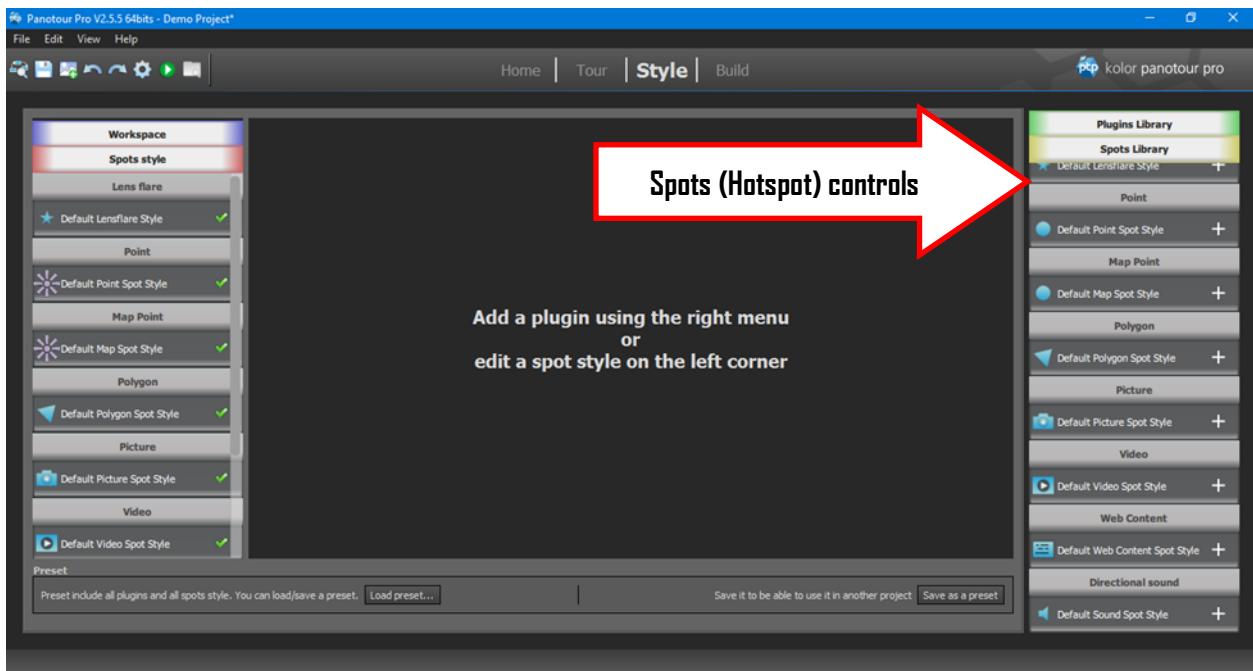## Style Screen

The Style screen controls most of the features of the virtual tour and how the tour will appear once completed.

Instructor Resources

Kolor Panotour Pro Screenshots:

Style Screen-Spots

This menu will control how the hotspots appear in the tour.

Instructor Resources

Kolor Panotour Pro Screenshots:
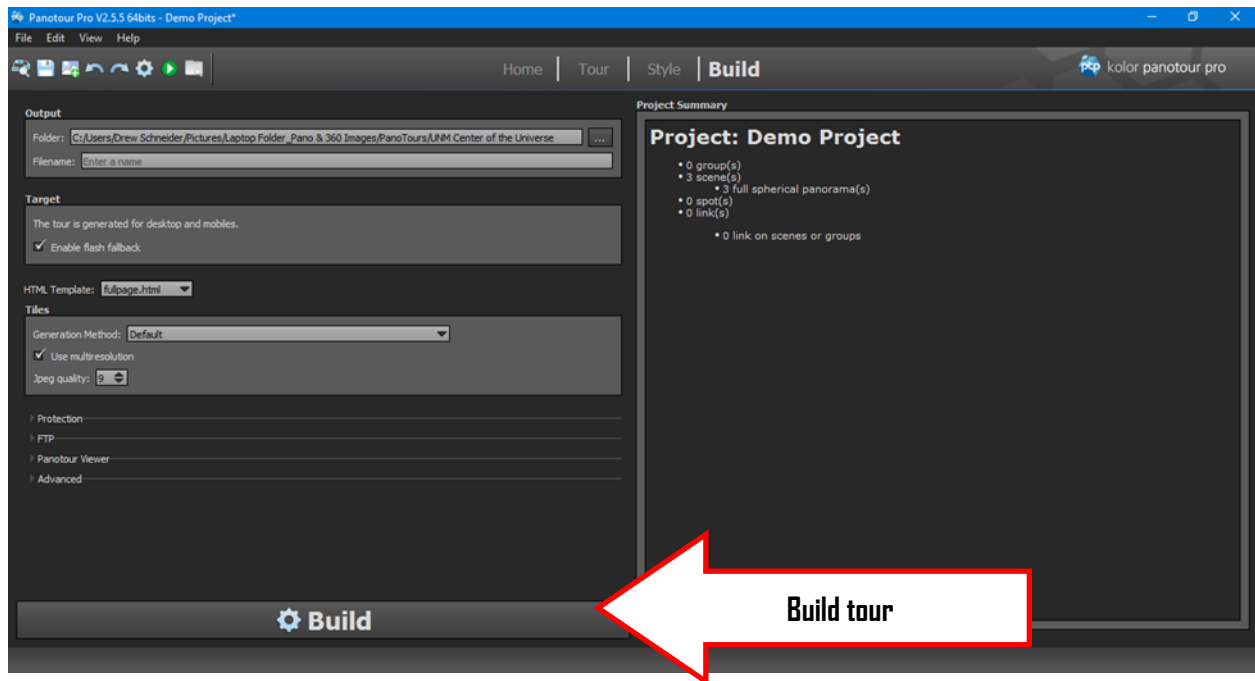
Build Tour Screen

This screen is where the tour is created.

360 VIRTUAL TOUR

Instructor Resources

Individual Project Selection Homework (Historical/Cultural Location)

Name: _____

1) Name of Location: _____

2) Describe your rationale for selecting this location and why it has historical/cultural importance. (500 words min/1000 words max)

3) Supporting Citations:

Learners should submit this homework typed on the beginning of week 2. This homework is on page 17 of the Learner's Guide.

Instructor Resources

Sample Theta S Camera Check-out Schedule

WEEK 2:	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Camera 1	Class Day	Group 1	Group 1	Group 3	Group 3		
Camera 2	Class Day	Group 2	Group 2	Group 4	Group 4		
Week 3:	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Camera 1	Class Day	Group 5	Group 5	Group 7	Group 7		
Camera 2	Class Day	Group 6	Group 6	Group 8	Group 8		

Instructor Resources

Sample Theta S Camera Check-out Schedule

WEEK 4:	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Camera 1	*Class Day*	Learner 1	Learner 1	Learner 3	Learner 3	Learner 5?	Learner 5?
Camera 2	*Class Day*	Learner 2	Learner 2	Learner 4	Learner 4	Learner 6?	Learner 6?
Week 5:	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Camera 1	*Class Day*	Learner 7	Learner 7	Learner 9	Learner 9	Learner 11?	Leaner 11?
Camera 2	*Class Day*	Learner 8	Learner 8	Learner 10	Learner 10	Learner 12?	Learner 12?

Instructor Resources

Sample Before/After Images:

Before

After

Instructor Resources

Links to Sample Before/After Images:

Before Image Link: http://simminion.com/360VirtualTourID/UNM%20Center%20of%20the%20Universe-Before.jpg

After Edits Image Link: http://simminion.com/360VirtualTourID/UNM%20Center%20of%20the%20Universe-After.jpg

Links to Sample Images for Module 2B: Intro to PanoTour Pro

Image 1 Link: http://simminion.com/360VirtualTourID/360Sample1.JPG

Image 2 Link: http://simminion.com/360VirtualTourID/360Sample2.JPG

Image 3 Link: http://simminion.com/360VirtualTourID/360Sample3.JPG

**Online Resources No Longer Exist.
As of Jan 2018**

360 VIRTUAL TOUR

Instructor Resources

Group Project Sample Grading Rubric:

Criterion:	0 Points No Completed	1 Point Developing-Needs Work	2 Points Shows Competence	3 Points Shows Mastery	Total
All images have tripod/monopod removed and are edited effectively	0	1	2	3	
Tour uses Hotspots effectively	0	1	2	3	
Tour uses Plug-ins effectively	0	1	2	3	
Tour design is user friendly	0	1	2	3	
Content is free from grammar and spelling errors	0	1	2	3	

Instructor Resources

Individual Project Sample Grading Rubric:

Criterion:	0 Points No Completed	1 Point Developing-Needs Work	2 Points Shows Competence	3 Points Shows Mastery	Total
All images have tripod/monopod removed and are edited effectively	0	1	2	3	
Tour uses Hotspots and Plug-ins effectively	0	1	2	3	
Tour effectively demonstrates the historical/cultural importance of the location	0	1	2	3	
Tour design is user friendly	0	1	2	3	
Content is free from grammar and spelling errors	0	1	2	3	