

Tracked :

The Art of Motion Tracking in Mocha for Final Cut

Exercise One – Introduction & User Interface (26:57)

Outline

- Get a brief overview of the Imagineer Systems Mocha interface.
- Understand the concept of “planar tracking” and how it differs from point trackers.
- Complete your first planar track and use different tools to check your results.
- Import custom files
- Use the Align Surface tool



Project Objective

Track an aerial shot of archive footage. Replace the runway with a bombed version.



Footage Provided

- I) planes.psd
- II) london_airport_TNA.mov
- III) london_airport_runway1.png



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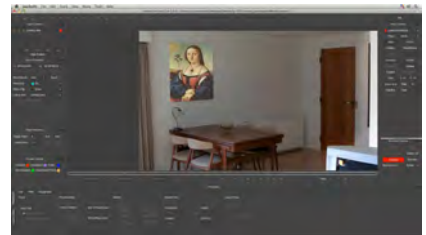
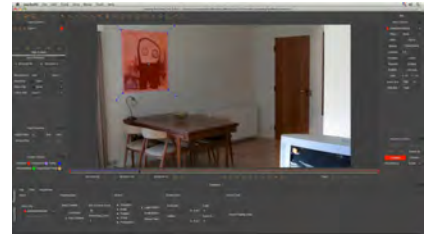
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Exercise Two – Corner Pinning in Final Cut Pro (59:21)

Outline

- Find the basic workflow to get clips from Final Cut Pro into Mocha for Final Cut.
- Adjust your application preferences to tweak the system.
- Overview of the X-Spline tool.
- Setting up Pre-processing to get the best track.
- Adding keyframes on the fly.
- Tracking shapes that move off-screen.
- Improving results using Adjust Track.
- Exporting tracking data to Final Cut Pro.
- Importing tracking data & basic workflow.
- Working with different sized source files.
- Quick finishing techniques.

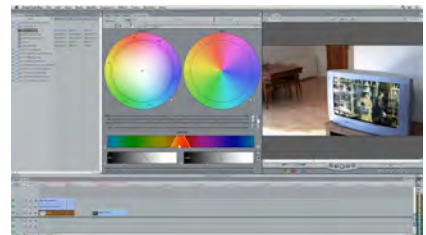


Project Objective

In a moving shot, replace the painting on the wall and add video footage to a television screen. You must also maintain reflections in the screen.

Footage Provided

- I) screen.mov
- II) painting_replace.jpg
- III) painting_replace2.jpg
- IV) old_film_replace.mov



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Exercise Three – Transform in Final Cut Pro (20:10)

Outline

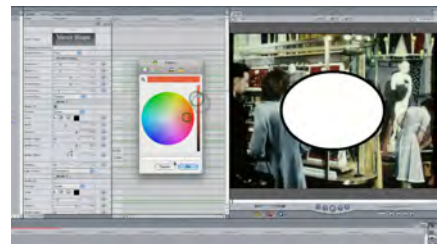
- Prepare the clip prior to creating our planes.
- Find the best place to start tracking.
- Retrack frames with different settings.
- Learn the significance of the Surface with regards to transform tracks.
- Link & offset multiple shape layers.
- Prep data in Mocha prior to export.
- Isolate certain elements from the XML data.

Project Objective

Circle a moving subject in a moving frame. Subject moves behind glass and changes features throughout. Label and matchmove the subject.

Footage Provided

- 1) festival_in_london_TNA_001.mov



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Exercise Three Extra – Blurring Objects (26:46)

Outline

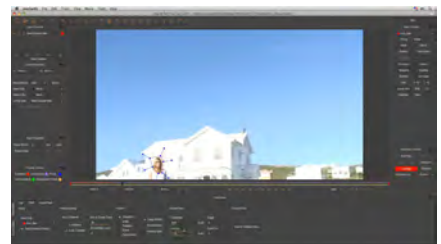
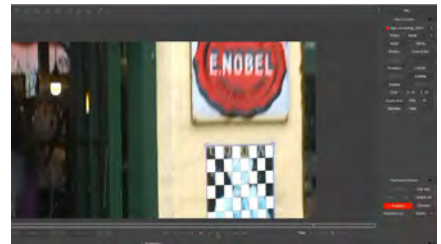
- Adjust our workflow to accommodate ProRes footage.
- Create an export preset in Final Cut Pro.
- See the significance of correct field order and pixel aspect ratio.
- Explore other tools to finesse our tracking.
- Use corner pin data to obscure an image.
- Work with track mattes in Final Cut Pro.
- Obscure or highlight a face using built-in features.

Project Objective

- I) Obscure a sign advertising tobacco.
- II) Highlight an actress's face, blurring the rest of the image.
- III) Speed your future workflow by creating templates for import into Mocha for Final Cut.

Footage Provided

- I) sign_obscuring.mov
- II) sign_obscuring_h264.mov
- III) blur_face.mov



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Exercise Four – Stabilizing Footage with Final Cut (9:53)

Outline

- Emphasise the importance of setting up clip properties prior to working on the track.
- Choose a suitable place to track for stabilizing.
- New workflow for exporting track data.
- See a strategy to cope with recentering the footage.
- Creating a smooth move on the stabilized footage.

Project Objective

Remove gate weave in archive material. Maintain some of the original camera movement.

Footage Provided

- 1) all_the_kings_horses.mov



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Exercise Five – Tracking Difficult Footage (32:55)

Outline

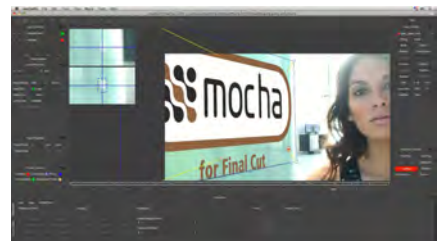
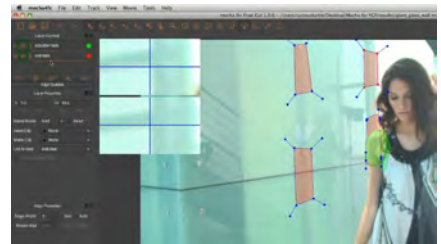
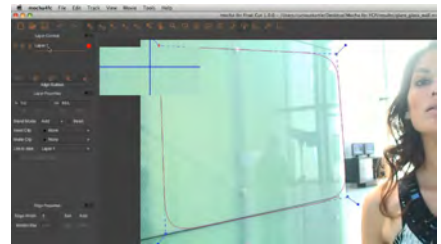
- Use multiple small shapes to improve the track.
- Work with multiple layers to create track mattes for the main track.
- Get deeper into the Adjust Track tab to create reference points when the tracked object goes out of frame.
- Learn to scrap a track when it doesn't work.
- Use Overlays to improve your Adjust Track keyframes.
- Check your results prior to export.

Project Objective

Track a glass wall to create a corner pin track. Track must ignore the reflections in the wall and actor in the scene.

Footage Provided

- 1) glare glass wall.mov



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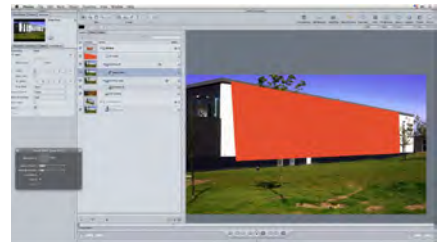
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Exercise Six – Mocha to Motion Using Keyframes (27:29)

Outline

- Find suitable area to track for sky replacement.
- Offset Surface to a co-planar region.
- Create an initial workflow to take the tracking data into Apple Motion.
- Set up the project correctly in Motion.
- Using the Keyframe Editor to matchmove sky footage layer and a layer mask.
- Adjust parameters to create a more realistic composite.
- Bringing the composition back into Final Cut Pro.



Project Objective

Replace the blue sky in the shot to something more suitable for a sunrise. Match colors & grain so the elements fit together.

Footage Provided

- I) building.mov
- II) tracked_circle.png
- III) sky_replace.tif



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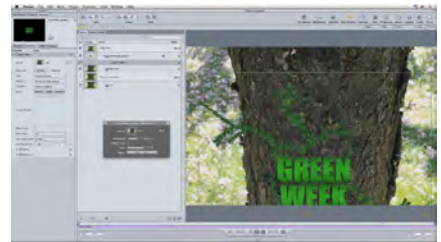
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Exercise Seven – Mocha to Motion Using Behaviors (33:44)

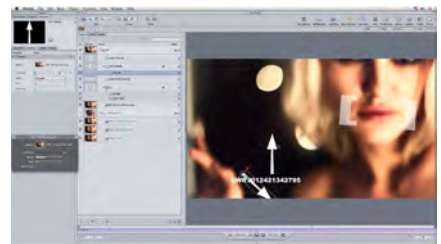
Outline

- Further techniques to track objects that leave the frame.
- Use a Behavior in Apple Motion to match move with Mocha's tracking data.
- A closer look at the Match Move behavior.
- Adjust & offset behavior values.
- Animate offsets.
- Explore the Custom behavior.
- Use multiple tracking sources.
- Use the Point At behavior for graphic effect.
- Troubleshoot Mocha Shape data exports.
- Matchmove the clean plate in After Effects.
- Add masks and film grain to complete the shot.



Project Objective

- I) Track a motion graphic up a live action shot of a tree.
- II) Add animated graphics to a clip of a girl. The shot moves out of focus and the tracked features moves out of frame.



Footage Provided

- I) tree.mov
- II) GreenWeek_graphic.mov
- III) CU_Girl_by_Window.mov

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Exercise Seven Extra – Camera Smoothing (14:02)

Outline

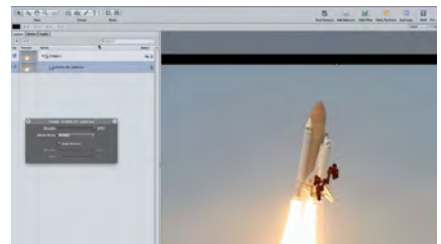
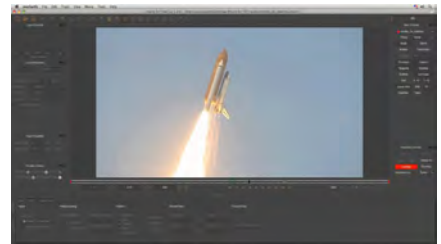
- Find the best place to track a moving subject for stabilizing.
- Take stabilizing data into Apple Motion.
- Smooth the tracking using behaviors.
- Smooth the tracking using the Keyframe Editor.
- Finalize the camera smooth using regular keyframing.

Project Objective

Smooth out a shaky camera move, whilst maintaining the feeling of movement within the subject.

Footage Provided

- 1) shuttle_for_stabilize.mov



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Exercise Eight – Advanced Image Obscuring (26:57)

Outline

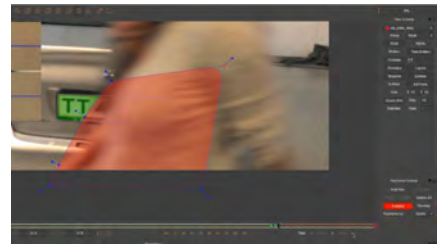
- Start tracking an obscured number plate.
- Learn how to use track mattes and layer shape order.
- Fill in missing tracking data.
- Track multiple objects simultaneously.
- Adjust missing data using Insert Clip.
- Import and utilize corner pin data in Apple Motion.
- Link track mattes to Mocha transform data.
- Add masks to mattes (and learn the difference between the two!)

Project Objective

Obscure a car's number plate. This must not affect any other objects or people that move in front of the plate.

Footage provided

- 1) car_plate_tricky.mov



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Exercise Nine – Rotoscoping Techniques with Mocha (16:49)

Outline

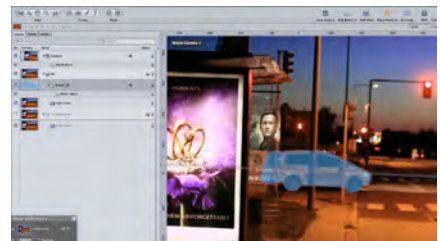
- Track a car as it passes behind pieces of scenery.
- Understand the different rules that apply to pure track mattes as opposed to layers intended for data export.
- Use the car track in Motion to minimise the number of keyframes needed to create a roto-scoped mask.
- Use 3D groups and cameras to temporarily stabilize your shot during roto.
- Unstabilize the shot.

Project Objective

Rotoscope a car from a moving shot. This mask must be usable in a later exercise.

Footage Provided

- 1) night.mov



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Exercise Ten – Simple Paint Techniques (33:44)

Outline

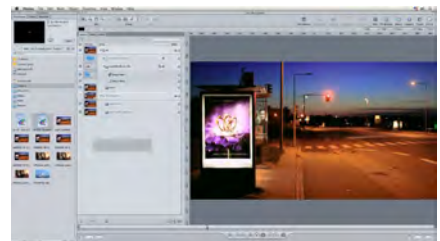
- Track the shot to match the camera movement and zoom.
- Use Align Surface to give the needed data.
- Export the tracking data to Final Cut Pro.
- Create a clean plate.
- Mask the needed information in using Motion.
- Export multiple frames to Photoshop to create a more complicated clean plate.
- Import image mask from a previous project.

Project Objective

- I) Mask out a bird flying through the shot.
- II) Mask out a moving car to create an empty road.

Footage Provided

- I) shuttle for simple paint.mov
- II) night(00-00-01-20).psd
- III) night(00-00-01-20).tga
- IV) night(00-00-04-07).tga
- V) night_cleanPlate(0-00-02-00).psd



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Exercise Eleven – Tracking for Particles (13:59)

Outline

- Track a suitable co-planar area to essentially track a non-visible area.
- Export the tracking data to Final Cut Pro & Motion.
- Explore the basics of particles in Apple Motion.
- Match Move and adjust a particle emitter using the Mocha tracking data.
- Discover when Behaviors are not the most suitable solution for match moving.

Project Objective

Add smoky exhaust fumes to a moving shot of a van.

Footage Provided

- 1) van for particles.mov



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Exercise Twelve – Final Wrap-up (10:06)

Outline

- Take a final look at the Smooth and Nudge features in the Curve Editor.
- Find out how to use extrapolation to extend a track out of frame.
- Troubleshooting your exported data. What to look for and how to fix it.

Project Objective

No final project. Updating & tweaking previous exercises.

Footage provided

- 1) None



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