

# Cut and Shut : Paint & Roto Power Techniques in Mocha & mochaShape

## Exercise One – Introduction to Rotoscoping (24:42)

### Outline

- Get an overview of the general aims of this course.
- Learn the “Golden Threads” of rotoscoping that we will use throughout this course.
- Establish a shared tracking, paint & roto language, so we all share the same terminology.



### Project Objective

No project.

### Footage Provided

No footage provided.



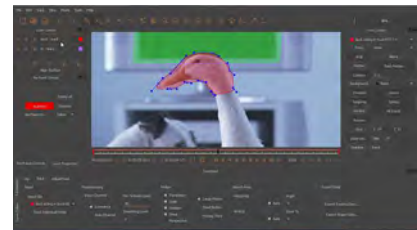
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## Exercise Two – Understanding the Tools (52:53)

### Outline

- Bring in SD footage and set it correctly for proper data export.
- Set out the workspace in the most efficient way for motion tracking multiple shapes.
- Get a detailed overview of the tracking parameters.
- Find the correct balance for speed and quality.
- Learn the importance and link between the tracking shape and the Surface.
- Create multiple shapes to improve tracking quality.
- Export both tracking and shape data for final compositing.



### Project Objective

In a track shot, replace a TV screen. Take care to keep the front elements clear.

### Footage Provided

No footage provided.



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## Exercise Three – Concepts for Roto (51:56)

### Outline

- Import HD footage and change settings for the resolution.
- Remember the Golden Threads for roto and identify how best to approach the problem.
- Isolate track elements to speed future roto work.
- Create a new workspace for efficient roto.
- Find the best start frame and make the first shape.
- Link masks & track elements.
- Fixing fundamental problems and making the best number of smaller tweaks.
- What you should never roto.



### Project Objective

In a moving shot, isolate one character from the scene. Pay close attention to the non-human elements as well as the main roto.

### Footage Provided

- 1) astronauts I.mov



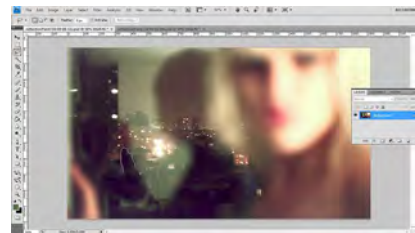
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## Exercise Four – Concepts for Paint (01:00:27)

### Outline

- Take a close look at removing a large reflection from a shot.
- Create a clean plate using multiple stills in Photoshop.
- Establish the best places to track for replacing distant objects.
- Track the matte element, setting separate tracking parameters for each track.
- Explore edge softness and the different methods to create it.
- Get an overview of the mochaShape plug-in, to complete our composite.
- Use Parenting to link our clean plate to the original footage.
- Bring in extra elements from the moving shot.
- Match grain and focus to the original.



### Project Objective

- I) Remove a reflection from the original shot. Ensure that depth of field and grain cues are consistent in the final composite.

### Footage Provided

- I) reflectionPaintOUT.mov
- II) reflectionPaintClean (10-00-00-11).psd
- III) reflectionPaint (10-00-00-11).psd
- IV) reflectionPaint (10-00-01-08).psd

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## Exercise Five – Roto for Greenscreen (50:51)

### Outline

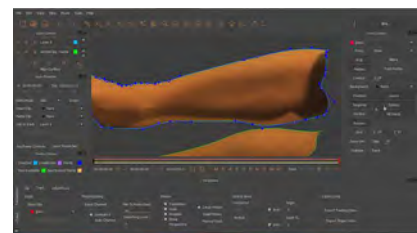
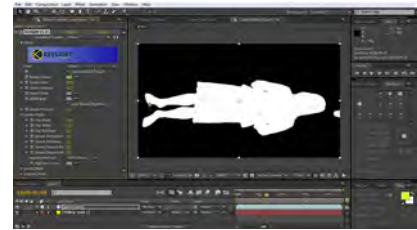
- Identify the initial problem and discuss methods to solve it.
- Create tracks for each leg.
- Combine the track with the roto shape to get a consistent result on each leg.
- Add another shape to refine the final mask.
- Stabilize and replace the leg texture.
- Refine the final result with color correction and minor tweaks.

### Project Objective

Re-texture and re-light elements on a greenscreen shot. Replace the leg with a different one. Create a mask to aid the final chromakey.

### Footage Provided

- I) gres1.mov
- II) Stabilizing Expressions.rtf



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## Exercise Six – Beauty Retouching I (32:43)

### Outline

- Create multiple shapes to track multiple objects simultaneously.
- Get a detailed look at the various Point Tools available in Mocha.
- Make a custom edge softness to keep important details sharp.
- Check a track's accuracy with the Grid.
- Explore various techniques to remove spots.
- See the disadvantages of working with Clone & Paint tools directly in After Effects.
- Reshape the jawline, whilst ensuring that the rest of the image is unaffected.
- Saving time by recycling track data rather than keyframing.



### Project Objective

Remove spots, redo wardrobe and create a more flattering jawline on our actress.

### Footage Provided

- I) skinCleanupIOUT.mov
- II) jaw track.txt



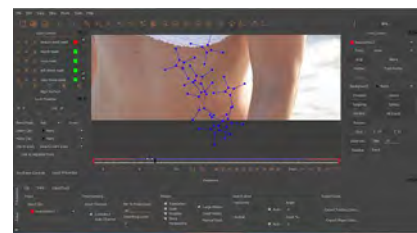
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## Exercise Seven – Beauty Retouching II (01:01:31)

### Outline

- Create a rock solid master track to base off all future work from.
- Refine our track.
- Identify and isolate each area of the face that we will be doing work on.
- Track multiple beauty marks when the track won't stick.
- Skin smooth in After Effects, ensuring that overall sharpness remains unaffected.
- Bring back hair details, using various techniques.
- See the fastest way to remove multiple blemishes on skin.
- Finalize the composite by enhancing the eyes and teeth.
- Match grain across the image.

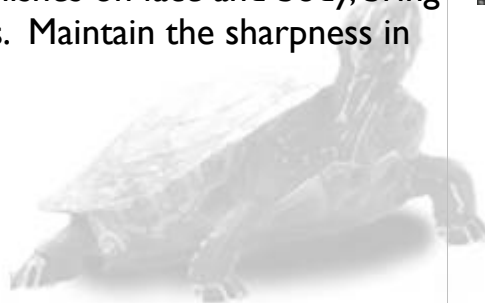


### Project Objective

Reduce multiple skin blemishes on face and body, bring up the eyes, teeth and lips. Maintain the sharpness in the original.

### Footage Provided

- I) beautyspot2.mov
- II) Mask data



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## Exercise Eight – Wire Removal (37:10)

### Outline

- Discuss a number of different techniques to tackle wire removal.
- Decide on the most suitable ones to use.
- Track multiple areas to form one solid piece of tracking data.
- Fix the resultant data by using Adjust Track.
- Create our wire masks.
- See how to tackle the problem of multiple shapes appearing at different times.
- Remove the wires.
- Bring back missing details.
- Introduce the idea of procedural mattes.
- Using Paint to refine our alpha channel.



### Project Objective

Remove a number of wires the appear across a single, moving shot.

### Footage Provided

- 1) wires2.mov



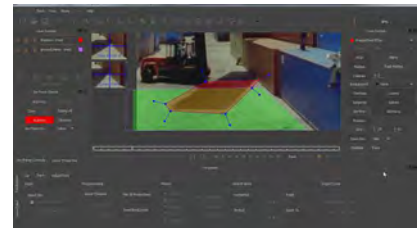
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## Exercise Nine – Changing the Time of Day (58:07)

### Outline

- How to handle letterboxed SD footage.
- Track a groundplane on a complex crane shot.
- Create a track matte to maximize the accuracy of the main track.
- See various advanced tricks one can do with the Surface, to ensure the best data.
- Use reference points in the Adjust Track tab to check the track holds steady.
- When adjusting creates a worse result than doing nothing.
- Why to link to a track that means more work.
- Track for a sky replacement.
- Create a new ground plane texture in Photoshop.
- Finish the composite by replacing the sky and color matching the shot.



### Project Objective

Create a day for sunrise shot. Reduce the major shadows in the scene, replace the sky and color correct the entire shot.

### Footage Provided

- I) changeTimeOfDay.mov
- II) groundPatch.psd
- III) changeTimeOfDay (10-00-00-00).psd
- IV) changeTimeOfDay (10-00-06-08).psd
- V) sky-1.jpg

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## Exercise Ten – Track & Procedural Mattes (42:31)

### Outline

- What is a procedural matte and when would you use it.
- Check out the channels to find the best building blocks.
- Create a procedural matte using channel keys.
- Create an additional matte using chroma keys.
- Render out and import a track matte into Mocha.
- Building up track mattes to create the most efficient final matte.
- Retrack parts of a bad track to avoid doing adjust work.
- Import final shape, track matte and tracking data into After Effects.
- Use MochaImport to speed up certain types of tracking data import.
- Make a holdout mask.



### Project Objective

Add a logo to the container. Keep the foreground subject clean.

### Footage provided

- I) bodyRotoMaster.mov
- II) bodyRotoTrackMatte.mov
- III) genericLogo.psd
- IV) container - corner pin.txt

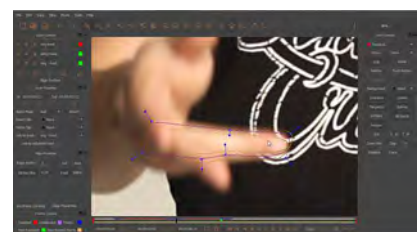
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## Exercise Eleven – Roto Hand and Motion Blur (43:23)

### Outline

- Break up hands into separate objects, ready to roto in the most efficient way.
- Save hours of work by identifying the elements that need rotoscoping and those we can tackle with a different technique.
- Deal with objects that don't need rotoscoping across the entire length of the clip.
- Handle motion blur with two different methods.
- Rendering luma mattes out of Mocha.
- Work around deficiencies in the mochaShape export.
- Track a simple translation move to create a matchmove.



### Project Objective

Add a fireball to the scene. Give a feeling of 3D space by making the hands go both in front and behind of the fireball.

### Footage Provided

- I) hands1a.mov
- II) fireballBG.mov
- III) fireballFG.mov
- IV) handMatteOut.rar



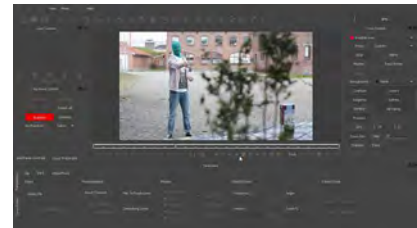
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## Exercise Twelve – The Invisible Man (44:11)

### Outline

- Track three separate planes to build up a full set of data.
- Make a hard-edged shape that balloons out into a very soft-edged top.
- Create a solid track on the t-shirt to form the basis of a four-corner pin effect and a shirt mask.
- Export out all the tracking and shape data into After Effects.
- Mask out and insert the clean plate as we have in a previous exercise.
- Use a filter to rebuild the back of the t-shirt.
- Track the back of the t-shirt and the replacement front into the shot.
- Displace and mask out the new front.
- Finalize the shot by making a last holdout mask and giving it a quick color grade.



### Project Objective

Remove the head of the actor. Replace the background and the rear of the shirt. Also replace the picture on the shirt with a different design.

### Footage Provided

- I) invisible man.mov
- II) invisible man (10-00-00-24).psd
- III) loeveSml.jpg
- IV) teeAndHoodBack.psd

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