Using Blender 2.7 - Topics - Tracking: Video Stabilization

Markers are on tracks. A track starts either at the beginning of the video or when a feature enters the view of the camera that took the footage. A track ends either at the end of the video or when a feature leaves the view of the camera permanently.

* Open Blender
* Change 3D View to a Movie Clip Editor
* At the bottom of the Movie Clip Editor, click Open, then choose the video file you want to stabilize (or drag a file into the Movie Clip Editor)
* Go to the end of the video then press ‘e’ to set the end frame

Track the video (see also Tracking- 3D Motion Matching at [http://www.blendtuts.com/3D\_real\_integration\_comple­te](http://www.blendtuts.com/3D_real_integration_complete)):

* On the right, inside the “Marker Display” section check “Search” to show the search area (this is discussed later).
* Click Add button on the left then click on a feature of the video to add a marker (or click Detect Features)
* S to scale, G to grab, and place the small square over an obvious feature in the video, such as a dot or small object (the large square is the search area, where blender will look on the next frame to follow the feature, but that doesn’t matter as much unless the camera was moving fast while taking the video and you want that bigger).
* Press Ctrl T to track the marker automatically. When it is done, you will end up with a plain square with no widgets for moving or scaling it. This means the feature could not be automatically found in the current frame—this is common. To manually track the feature starting at the frame after the track stopped, click the eye in the “Track” section on the right, then move & scale it into place with ‘g’ and ‘s’ keys. While moving or scaling, hold Shift to move more accurately. Keep an eye on the “Track” section on the left which shows a zoomed in preview of where the center of the marker is in your video frame.
* Keep repeating this process for your whole video. You can use left and right arrow keys to go back and forward frame by frame.
* Add more markers: To fix the video accurately, you will need 3 or more markers (many more for more accuracy) on the screen at all times, even if some tracks start or stop when features enter or leave the video.
  + Repeat these steps for each track
  + If your camera is moving, tracking points on the ground or walls will help.
  + If the feature moves off screen, you may need to imagine where it would be if you have few points, and move the track on that frame where you think the feature would be. However, if the feature goes off screen and stays off screen, leaving the frame cleared/hidden (ending the track when the feature disappears) is ok as long as there are enough other tracks.

Turn on stabilization:

* Under “Tracking Settings” use change “Keyframe” to “Previous Frame”
* Scroll down, enable 2D Stabilization
* Select a Track, then under 2D Stabilization push the ‘+’ plus button to add the Track to the 2D Stabilization list.
* Check “Stabilize Scale” and/or “Stabilize Rotation” if needed (only works for video that is not supposed to rotate or scale, otherwise these options won’t work)

To render:

* Go to Node Editor
* Go to compositing mode
* Check “Use Nodes” “enable backdrop”
* Delete the RenderLayers node to avoid rendering a 3D Scene
* Shift A, Input, Movie clip, choose the movie clip
* Ctrl Shift Left Click to add a viewer (connect Movie Clip’s Image to Viewer’s Input to display the video as the backdrop)
* Shift A, Distort, Stabilize 2D
* Place the Stabilize 2D node between the Movie Clip and the viewer (Stabilization should be the very last thing you add before the compositor node, so that 3D objects and effects are using the source footage and get stabilized along with the video)
  + In the drop-down box in this node, choose the Movie Clip you stabilized
* Draw a line from Stabilize 2D “Image” output to the Compositor node’s Input. Now when you Render Animation, the stabilized video will render.

See also https://www.youtube.com/watch?v=nU8zqn091rM