

FaceTracker Quick Reference Guide

1 Inputs

- **bg** – undistorted source video;
- **cam** – camera (moving or static, with a correct focal length and aperture);
- **geo** – face geometry from *FaceBuilder*;
- **mask** – (optional) mask, if some objects are lapped over the target object;
- **img** – (optional) texture.

2 How to Use

2.1 Pre-Analysis

In order to track something, you should first analyse an input sequence and obtain an *analysis*-file, which contains all info for the successive rapid tracking. This file can be sent together with the Nuke comp, so you need to generate it only once and share it with the whole team. You can use the same analysis-file even if there are several objects in one scene.

To generate analysis-file, you should specify its path in the corresponding field and press the *Analyse* button. The calculations may take some time but they are fully automated.

If you already have the analysis-file, you can simply specify the path to it (when you transfer your project).

2.2 Tracking

To start tracking, you should first place the model. Press *Center Geo* button to place model in the center of the viewer. Left-click in some point on the geometry surface to create a *pin*, then drag it to the corresponding point on image. *FaceTracker* deforms face geometry to fit your changes. Right-click on the pin if you want to remove it. You could easily fit the model to the background by adding and dragging several points.

Congrats! You've set up your first *keyframe*. Now you can start tracking forward or backward from it (arrow-buttons in the toolbar). If something goes wrong, you can stop tracking and set up another keyframe. After you place it click the *Refine* button in the toolbar.

Note: If you press *Refine* while the playhead is between keyframes, refinement will take place in this frame range. If the playhead is placed on a keyframe, then refinement will be applied to the frame range between the closest keyframes to the left and to the right from the current one, if they exist. Well, there is nothing special here.

If you want to make model transformation with many pins already set up, but don't want to move them all (or remove them all by *Unpin* button), you may click *Disable Pins* button to temporary disable them, make transformation and enable them back by double-click on the button.

2.3 Some Useful Features

- **2D mask** – use it to mask objects that lay over the target of tracking.
- **3D surface mask** – use it to mask faces of tracked object that shouldn't be used in tracking (mirror surfaces for example).
- **Back-face culling** – show/hide faces that are turned away from the camera.
- **Center View** – place object being tracked in the center of the screen and set keyframe.
- You can specify colors of *wireframe*, *pins*, *residuals*, etc.
- **Motion Blur** – helps you correct tracking results for fast moving objects (knobs are identical to *Scaline Render*'s ones).
- **Focal length estimation** – set focal length mode to 'constant static' and estimate camera focal length by positioning an object in the usual way.
- **Smoothing parameters** – by changing smoothing parameters you may control penalties for specific object motion (rotation, translations to and back from camera, etc). It can be useful, for example, for removing unwanted jittering or fixating specific object motion.

2.4 Results and Export

You can use *WriteGeo* node to export *FaceTracker* geometry. Transformation results are shown in a separate tab in *Translate* and *Rotate* knobs.