

Blending CGI with 3Dfootage

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3D tracking \neq 2D tracking

Camera tracking is commercially available

➤ 2D only

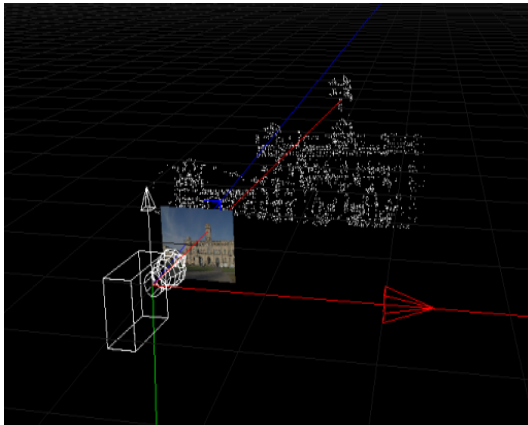
- Voodoo tracker (research only)
- VooCAT/CineCAT (based on voodoo ~ Cinema4D)
- Syntheyes
- Bajou
- Matchmover (~ 3Dmax/maya)

➤ 3D trackers (stereoscopic)

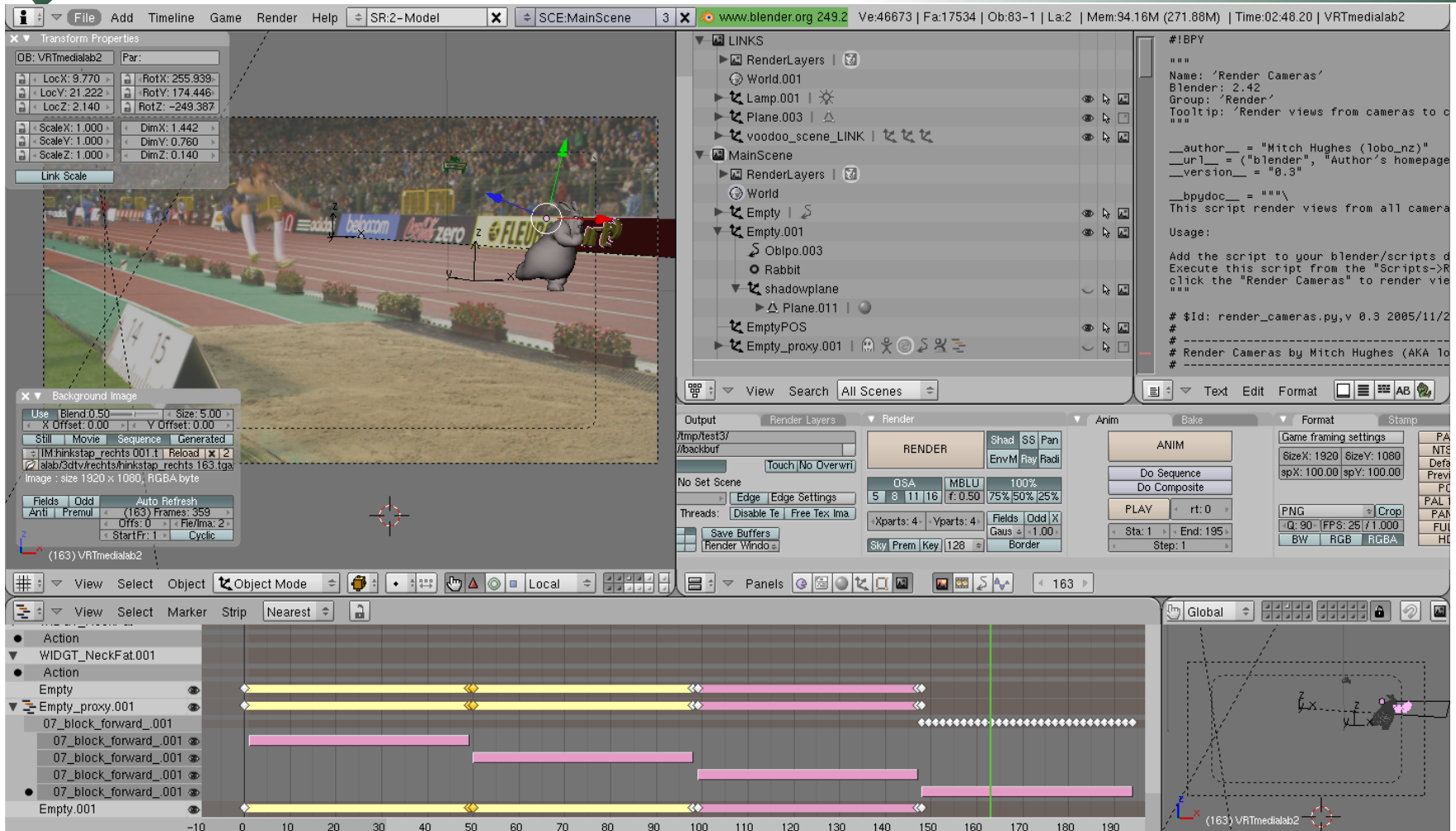
- PFtrack (previously Icarus)
- 3DE4 (won academy award for technical achievement for the 3D tracking)

Workflow - camera tracking

- Track cameras (L&R)
 - Extract feature points
 - Track feature points
 - Export pointcloud and camera motion



Workflow - editing 3D scene



Problems with 3D tracking

- ◆ Camera movements should be the same
 - The rig is static, but tracked images may be different.
 - Sync the tracking data or pick one
- ◆ Minimize parallax
 - Slightly adjusting the rotation to convergence point
- ◆ Compensation rig
- ◆ Different parallax for real and CGI image (headache!!!)



Getting started

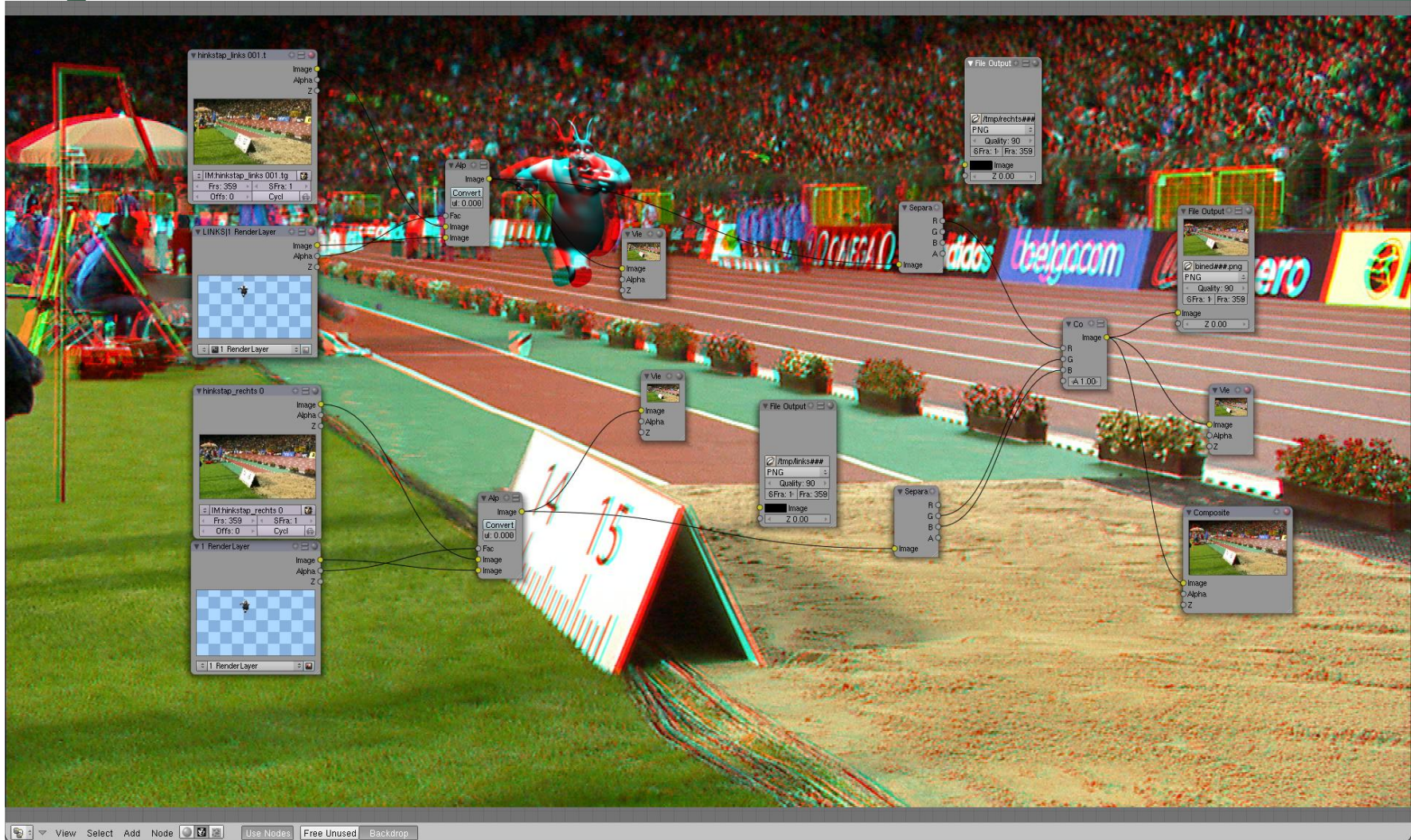
◆ Get a great 3D camera

- Both cams have same distance to convergence point
- Both cams are at the same height
- Both cams have synchronous tracking data

◆ Know your camera

- The more iparameters you have the better the matchmoving will be calculated.
- Interocular distance, focal length, back dimensions, ...

Rendering the 3D stereo image



Used tools

- ◆ Voodoo tracker (free for research purposes)
- ◆ Blender (open source) for all 3D modeling, animation rendering and post production
- ◆ Bunny from BigBuckBunny (CC-licenced)



