

VFX Assignment #3: MatchMove

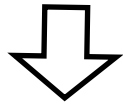
Ken-Yi Lee

Goal



Workflow

Movie



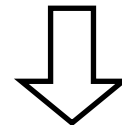
ICARUS

Tracking



Calibrate & Bundle Adjust

Camera Path



Blender

CGI Animation



Composition

Video Capture

- A digital video camera can be borrow by signed up at [VFX Wiki](#).

VirtualDub

- You should capture the video from DV.
- We set up a PC (Windows) with IEEE 1394a in R219.
- In VirtualDub,
 - File > Capture AVI
 - Device > [Choose the correct device]
 - Capture > Capture Video

ICARUS

- ICARUS v2.09 can be downloaded from the course website.

Import Movie

- Project > New
- Project > Import Movie
 - Select a video file or image sequences
 - ICARUS v2.07 only supports image sequences.
- Set Camera Parameters
 - Free Motion ?

Tracking

- [Optional] Tracking > Tracking Parameters
 - You can reduce the number of features to save time.
- Tracking > Auto Track
- [Optional] Remove some bad tracks (features).

Calibrate & Bundle Adjust

- [Optional] Click: Coordinate Frame > X, Y, Z Axis
 - Draw lines in a frame to deduce
 - Focal length
 - Ground plane
- Camera > Calibrate
- [Optional] Camera > Bundle Adjust

Export 3D Motion

- [Optional] Click: Coordinate Frame > Origin Point
 - Left click to add Origin Point
 - Camera > Orient Scene
- [Optional] Click: Coordinate Frame
 - Drag: change coordinate orientation
- Project > Export 3D Motion
 - Choose Human Readable (*.txt)

Import Camera Path

- Run Blender



- Use Text Editor :

- File > Open

- Select: ICARUS_import241.py

- File > Run Python Scripts

- Select: the file exported by ICARUS.

- Create Curves

CGI Animation

- Issues:
 - Model
 - Mesh, Texture, Particle ...
 - Animation
 - Solid Object ? Skeleton ?
 - Rendering
 - Illumination ?

CGI Animation



CGI Animation



Video Composition

- Use Video Sequence Editor :
 - Add > Movie
 - Add > Scene
 - Use Shift to select both Scene and Movie sequences:
 - Add > Effect > Alpha Under

References

- ICARUS User Manual
 - With the software
- Blender Manual (Wiki)
 - <http://wiki.blender.org/index.php/Manual/Manual>