## MatchMove

Computer Science and Information Technology, Spring 2010 *Tz-Kuei Huang* (kuei@cmlab.csie.ntu.edu.tw) 2010/4/16

#### Workflow



- Input
  - Video
  - CGI Animation



#### Workflow







### Setting

- Blender
  - Version: 2.49b (stable)
  - Operating System: Windows, Mac OS, Linux, ...
  - Need to install Python 2.6 (2.6.5 final)
  - Web Site: <a href="http://www.blender.org/">http://www.blender.org/</a>
- Voodoo
  - Version: 1.0.1 beta
  - Operating System: Windows, Linux
  - Web Site: <a href="http://www.digilab.uni-hannover.de/">http://www.digilab.uni-hannover.de/</a>
- Other Options:
  - Free: ICARUS + Blender
  - Pay: boujou + 3D Max, boujou + Maya, ...

### **Recipe: Get Image Sequence**

**DigiVFX** 

- Open Blender
- Open video file:
  - Change Window Type to Video Sequence Editor
  - Select  $\lceil Add \rightarrow Movie \rfloor$
  - Put the strip in Layer 1
- Do sequence:
  - Choose Scene(F10)
  - Output  $\rightarrow$  Choose where you want to save
  - Anim  $\rightarrow$ 
    - Click Do Sequence
    - Select start and end of the sequence
  - Frame  $\rightarrow$ 
    - Set frame size
    - Choose output file type(Targa)
  - Click ANIM button

#### • Open video file:





# Click here to change window type

• Open video file: **Open video file** Ρ C:\Documents and Settings\Kuei\My Documents\course\CSIT\ Select Movie DSCF6110.avi Cancel demo 0001 0210.avi 193 548 964 AceOfSpace.jpg 34 979 blender-2.49b-windows.exe 11 293 392 demo.blend 792 876 demo.blend1 792 472 191 071 demo.pv DSCF6110.avi 8 196 372 MatchMove.pptx 257 676 model.jpg 54 399 python-2.6.5.msi 15 103 488 result.jpg 52 918 step1.jpg 126 136 step2.jpg 65 568 vedio.jpg 44 479 256 826 368 vfxxxxxx.avi. voodoo-Win32-1.0.1.msi 42 378 752 voodoo-Win32-1.0.1.zip 41 895 471 ~\$MatchMove.pptx 165 **Select video file** 

• Open video file:

| 4   |   |     |
|---|---|-----|
| 2   |   |     |
|   | 210   C:\Documents and Settlings\Kuel\My Documents\course\CSIT\DSCF6110.avi   |     |
| ) 0.1 1.0 1.1 2.0<br>■ View Select Marker Add Strip 2 1 + Refres<br>■ Panels @ 2 0 1 1 F<br>V Link and Materials<br>• ME:Cube F OB:Cube<br>Vertex Groups Material | 2.1 3.0 3.1 4.0 4.1 5.0 5.1 6.0 6.1 7.0 7.1 8.0<br>sh<br>Mesh<br>Mesh<br>TexMesh:<br>Degree<br>Sticky Make<br>UV Texture<br>New | 8.1 |
| 2 1 Mort 1 2  | Click to Put the<br>strip in Layer 1  |     |





### **Recipe: Calibration**

- Open Voodoo
- Open image sequence:
  - Select  $\[\]$  File  $\rightarrow$  Open  $\rightarrow$  Sequence
  - Select the first frame
  - Select Move Type
- Track:
  - Click Track button
- Export Python script:
  - Select  $\[\]$  File  $\rightarrow$  Save  $\rightarrow$  Blender Python Script  $\]$
  - Save .py file

### Step by step: Calibration

🛱 Vooloo File

Save

Quit

Start: 1

Step: 1

Interlace:

not interlaced

View

Help

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Ctrl+Q



**DigiVF** 

## Step by step: Calibration





## Step by step: Calibration







### **Recipe: Import 3D Motions**

- Open Blender again
- Delete default objects
  - Click "a" two times, then click "del"
- Open Python script:
  - Change Window Type to Text Editor
  - Select  $\lceil \text{Text} \rightarrow \text{Open} \rfloor$
  - Select the .py file export from Voodoo
- Load background images:
  - Change Window Type to 3D View
  - Select  $\lceil$  View  $\rightarrow$  Cameras  $\rightarrow$  Set Active Object as Active Camera  $_{
    m J}$
  - Select 「View → Background Image…」
  - Load background images, choose the first frame
  - Set sequence
  - Set scene



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#### • Open Python script



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**Digi**VFX

• Run script

| cur.  | link(00003)  |  |                     |                |  |                       |   |                 |                    |
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Load background images





Load background images



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### **Recipe: Compositing**

- Change Datablock to SR:4-Sequence
- Add video sequence:
  - Change Window Type to Video Scene Editor
  - Select  $\lceil Add \rightarrow Images \rfloor$ , select all images
  - Put the strip in Layer 1
- Add Scene:

  - Put the strip in Layer 2
  - Set sequence
- Animation:
  - Click ANIM button





















- 器材借用
  - 4/19~4/28,請mail給助教約借用時間,一次借用以一小時為限
- 分組:
  - 2人,考慮做難度較高者可以3人
  - 請於4/21 23:59 以前mail給助教
- 上傳
  - Ceiba
  - 大小限制:15MB,請用ffdshow video codec壓縮
- 繳交期限:
  - 5/7 23:59
- 評分:
  - Voting
  - 故事
  - 技術



#### Reference

- Blender official website
  - <u>http://www.blender.org/</u>
- Voodoo document website
  - <u>http://www.digilab.uni-</u> <u>hannover.de/docs/manual.html</u>
- 使用 Blender 以及voodoo 來模擬子彈飛行
  - <u>http://newwork2000.blogspot.com/2009/10/blog-post.html</u>
- K-Lite Mega Codec Pack
  - <u>http://www.free-</u> codecs.com/K\_Lite\_Mega\_Codec\_Pack\_download.htm