Seminar on Stereoscopic Production for Computer Animation

11-13 June 2010

Syllabus

Day 1 - 11 June, 2010 – Topics and Activities	Time	Duration
Meet and Greet	09:00 - 10:00	~1 hr

Principles of Stereoscopic Production
   ◆ Seminar Assumptions
   ◆ Introduction to Course Materials
   ◆ Schedule Review
   ◆ The Elements of Stereo Vision
   ◆ How to Make a 3D Movie
	10:00 – 12:00	~2 hrs

3D Viewing Options
  ◆ At the Workstation
    ○ Commercial Solutions
      ■ Dual Monitor Polarized Viewers
        ● Planar
        ● Red Rover
      ■ Sequential Stereoscopy
        ● Shutter Glasses
          ○ Nvidia
          ○ Other Vendors
        ● Monitors (High Performance)
          ○ Acer's GD235HZ (24" diag)
      ■ 3D Gaming Monitors
        ● iZ3d
    ○ Inexpensive Solutions
      ■ Anaglyphic Stereoscopy
      ■ PokeScope
      ■ Half Silvered Mirror Viewing
        ● Single Monitor
        ● Dual Monitor
	12:00 – 13:00	~1 hr

Lunch	13:00 – 14:00	~1 hr

3D Viewing Options (Continued)
  ◆ Stereoscopic Review Stations
    ○ Large Scale Stereoscopic Monitors
      ■
    ○ Framethrower
    ○ Custom Built
      ■ Hardware
      ■ Software
        ● Scratch
        ● Pdplayer
        ● Rv
  ◆ Projection Systems
    ○ Expensive Digital Cinema Projectors
      ■ Christies
      ■ Barco
      ■ Sony
      ■ Texas Instruments
    ○ Inexpensive Solutions
      ■ DepthQ
	14:00 – 15:00	~1 hr

Afternoon Break (Coffee, Tea, Cake)	15:00 – 15:30	~30 min
Hands-on Look at Monitoring and Viewing Options	15:30 – 16:30	~1 hr
Q & A	16:30 – 17:00	~30 min
Dinner at Aquamarina Borgergade 17A, 1300 Kbh. K. http://www.acquamarina.dk/	19:00 to 22:00	~3 hrs (or until they run out of beer)

Day 2 - 12 June, 2010 – Topics and Activities	Time	Duration
Morning Coffee	09:00 - 09:30	~30 min

What Does Stereoscopic 3D Cost
    ◆ How Much of Our Existing Pipelines and Practices Can We Use?
        ○ Fewer the changes means less additional costs
    ◆ Who Needs to See Stereo and When?
    ◆ 2D "cheats"
        ○ When do they cost more than they save?
    ◆ Planning Ahead Helps Avoid Unexpected Costs
	9:30 – 11:00	~1.5 hrs

3D Layout and Rough Blocking – The First and Most Important Step
    ◆ What Does 3D Layout Mean in Stereoscopic Production?
        ○ Conventions and Strategy
        ○ Interaxial Distance and Convergence
        ○ Consistency Across Sequences
    ◆ Realtime Layout Tool
        ○ Why is Realtime Layout Important?
        ○ Is It Absolutely Necessary?
        ○ How Does Our Prototype Realtime Layout Tool Work?
	11:00 – 12:00	~1 hr

Hands On With The Layout Tool	12:00 - 13:00	~1 hr
Lunch	13:00 – 14:00	~1 hr
Hands On With The Layout Tool (Cont.)	14:00 – 15:00	~1 hr
Afternoon Break (Coffee, Tea, Cake)	15:00 – 15:30	~30 min

Integrating 3D Into Your Existing Pipeline
    ◆ The 3D Conundrum
        ○ The more you view 3D during the course of the production, the more the production costs.
        ○ You need to be able to view 3D at any stage of production for quality control purposes.
	15:30 – 16:30	~1 hr

Q & A	16:30 – 17:00	~30 min
Dinner at Orangeriet Kronprinsessegade 13, 1306 Kbh. K. http://www.restaurant-orangeriet.dk	18:00 – 22:00	~3 hrs

Day 3 - 13 June, 2010 – Topics and Activities	Time	Duration
Morning Coffee	09:00 - 09:30	~30 min

Dataflow, Lighting and Rendering in Stereoscopic 3D
    ◆ The Cost Versus Value Axioms in Stereoscopic 3D
        ○ The more you spend, the better you want the work to look
        ○ Sometimes, trying to do things the cheap way costs a lot more money.
    ◆ Dataflow Strategies
        ○ Build the stereoscopic camera on the fly as needed
        ○ Carry the 3D camera rig throughout the pipeline within the scene definition
	9:30 – 10:30	~1 hrs

Rendering a Shot Rendering Strategies	10:30 – 11:30	~1 hr
Q&A	11:30 – 12:00	~30 min
Lunch	13:00 – 14:00	~1 hr

Using flat 2D elements in your stereoscopic 3D shot
    ◆ Using 2D elements on cards in 3D space
        ○ Should be planned in layout
        ○ The further back in the scene a 2D card goes, the less problem the lack of relief becomes
        ○ Sometimes, shading on a 2D card is enough of a depth queue as long as it matches the 3D lighting very well
    ◆ Making Stereoscopic Pairs From 2D Images
	14:00 – 15:00	~1 hr

Afternoon Break (Coffee, Tea, Cake)	15:00 – 15:30	~30 min

Using flat 2D elements in your stereoscopic 3D shot (continued)
    ◆ Projecting 2D textures on simple 3D geometry
        ○ Should be planned in layout
        ○ The further back in the scene a 2D projection goes, the less problem the lack accuracy in the 3D model becomes
        ○ Sometimes, shading on a 2D card is enough to simulate modeled detail.
	15:30 – 16:30	~1 hr

Q & A	16:30 – 17:00	~30 min
Thanks for Attending!		