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Dwarf Academy's Formation : Shot TD FX

DemoReel BreakDown 2011

01 R&D Art directable clouds :

Project "Aftermath" / Sequence 01 - Shot 01
Studio : Dwarf-labs
Position : R&D FX clouds creation system and user interface
Tools : Autodesk Maya & Mel script / The Bakery Relight

00:10 >> we were 3 person to brainstorm on a methodology to create an art directable cloud based on a shape mesh. We made many tests before deciding on a methodology. We thought about a simple interface with a maximum of predefined parameters. An artist should be able to quickly use it.

Finally, i wrote the entire script of clouds development.
Globaly, the procedure consist in modeling a cloud mesh, filling the mesh with nParticles, converting the nParticles to nurbs spheres to emit fluid voxel by surfaces. We used Nurbs to have a better definition of voxel emitter. To have a better definition in rendering, we thought to add a layer of emitters around the base mesh.

01:13 >> it's a preliminary test to art direct the voxels shape where I tested our cloud development script
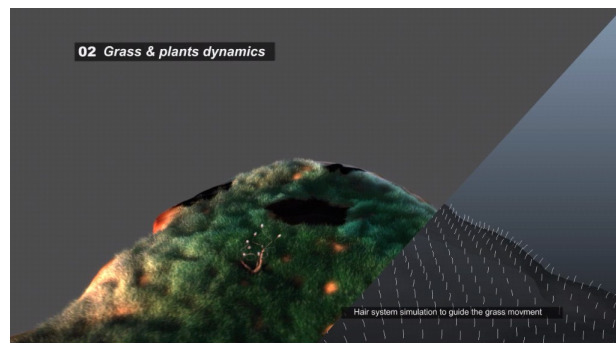
02 Grass & plants dynamics :

Project "Aftermath" / Sequence 01 - Shot 01
Studio : Dwarf-labs
Position : FX Grass simulation & plants simulation
Tools : Autodesk Maya

01:26 >> using maya hair system and turbulence, newton, volume axis fields, i gave a direction and intensity of wind to control the curves (who guide the movment of the grass)

01:37 >> using maya nCloth system on a proxy of plant affected by the wind i created beforehand for the grass. Parented with wrap constraint to apply the simulation on the final mesh

01:40 >> using maya hair system and wire constraint to control the movment of the flower mesh by a curve

03   Water blob dynamics :

Project "Aftermath" / Sequence 01 - Shot 01
Studio : Dwarf-labs
Position : FX water simulation
Tools : Autodesk Maya / The Bakery Relight

01:53 >> I simulated a type of vortex of zero gravity water blob who collide on a low poly collision mesh, using maya nParticles, gravity, volume Axis, newton and turbulence fields, adding an expression to control the magnitude of the volume axis field. I instanced then the particles with a realflow simulation of zero gravity water

02:02 >> using the bakery relight (reyes technology software) and realflow, i compare a reel simulation of water and an animated displacement shader applied with a perlin noise to optimize the render time and for the visual of the water

04   Dust :

Project "Aftermath" / Sequence 01 - Shot 01
Studio : Dwarf-labs
Position : FX fluid dust simulation

02:13 >> using maya dynamic fluids, I simulated the dust generated by the collision between the wheels and the ground. Many air fields are also used to simulate the water blobs falling on the dust billows

02:20 >> External camera of the movement of the dust

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In this project, I also worked under Linux, on the development of the "in house" datamanagement cross software named "Dwarfman". In collaboration with other scripters, I created a module with Python and TCSH script to parse the content of a data file (relight software scene file) to export in a new formated file. This was the same methodology that I used in training on the parsing of RIB file to render in pixie (rendering software like renderman)

And before this, I also participated in storyboarding (paper and GIMP) and creating the art direction with the visual structure rules based on a understanding of "how can I guide the audience's eye". I played with visuals components and their contrast and affinity (grayscale) to structure the staging.