ReadMe

APEX™ Clothing Module

June 2009 (Pre 1.0 Beta)

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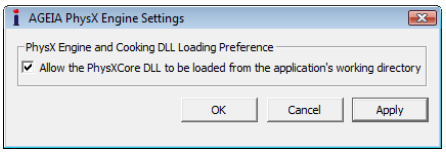
APEX Clothing Module - ReadMe

Getting Started



The APEX Clothing zip file contains a pre-beta release of APEX Clothing. In order to use this pre-beta version, the PhysXSettings need to be changed manually, by running:

"APEX/bin/win32-physx_2.8.3/PhysXSettingsExt.exe"

Select the checkbox to allow the PhysXCore DLL to be loaded from the application's working directory and click "ok".

The binary directory "APEX/bin/ext/win32-physx_2.8.3/" contains two more executables, the ClothingTool.exe and the SimpleClothing.exe.

Clothing Tool

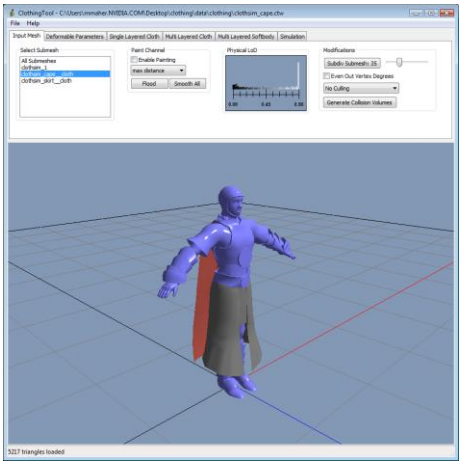
The Clothing Tool is used to author clothing assets. See the APEX Clothing User Manual, which is located at "APEX/docs/APEX_Clothing_Module_UG.pdf", for more information.

SimpleClothing App

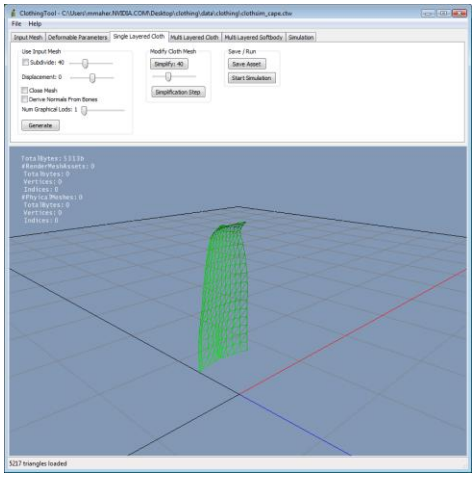
The SimpleClothingApp provides a simple sample application. Right now it is hard coded to load the bunny APEX clothing file assets (*.aca).

Guard Example

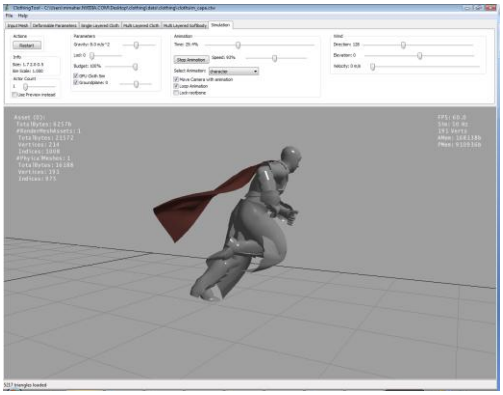
Start the ClothingTool and select File->Open Workspace to load the "**guard"** workspace file (guard_cape.ctw) from "data/clothing".



The cape of this character is using simulated cloth. In order to view the simulated cloth in action, go to the “Single Layered Cloth” tab and press “generate”. This will generate the cape clothing mesh, which will now appear in a green wireframe mesh.



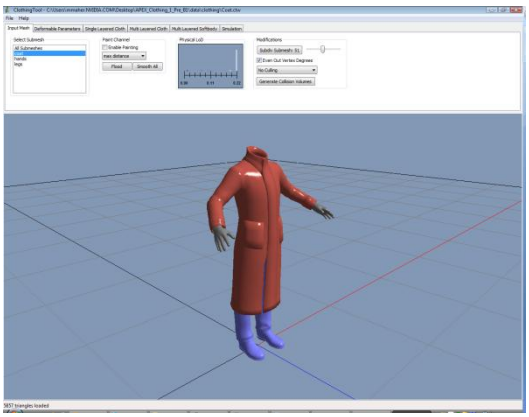
After clicking on “Start Simulation”, the actual clothing simulation will start in the “Simulation Tab”



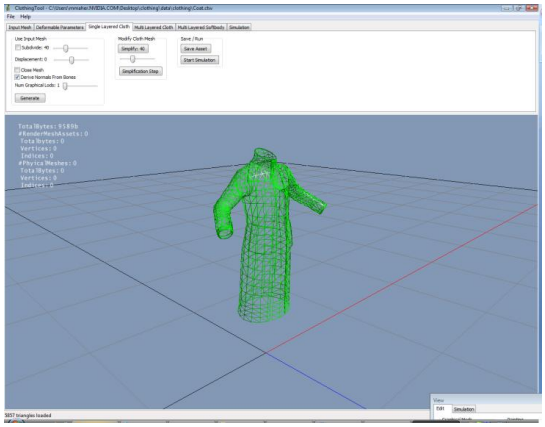
Note: This example is using mainly A-collision, which means the cape is colliding against the animated mesh and not the character itself. The shoulder armor on both arms are using primitive collision volumes since the original animation was penetrading the cape. In order to see the orignal animation slide back the “Budget” slider in the Parameters field from 100% to 0%. The same cape was used in HeroEngine, see e.g. http://www.youtube.com/watch?v=hPJhkkbR2Ws).

Coat Example

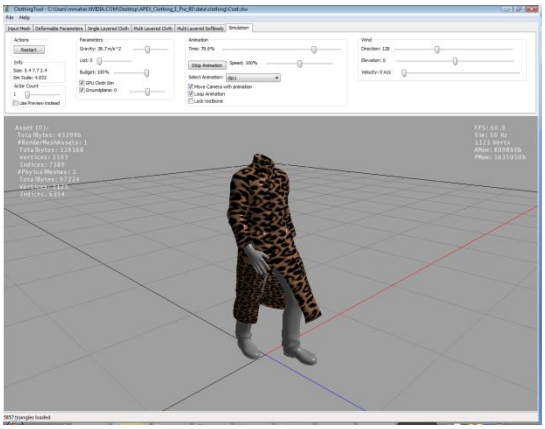
Load the workspace file called “Coat.ctw” from “data/clothing” into the Clothing Tool. In this example we show a more complicated clothing simulation.



Similar to the previous example, the clothing workspace file was already set up with the proper motion radius (max distance) settings as well as any other clothing parameters. Just go to the “SingleLayeredCloth” tab and click on “Generate”, which will generate the coat clothing mesh.

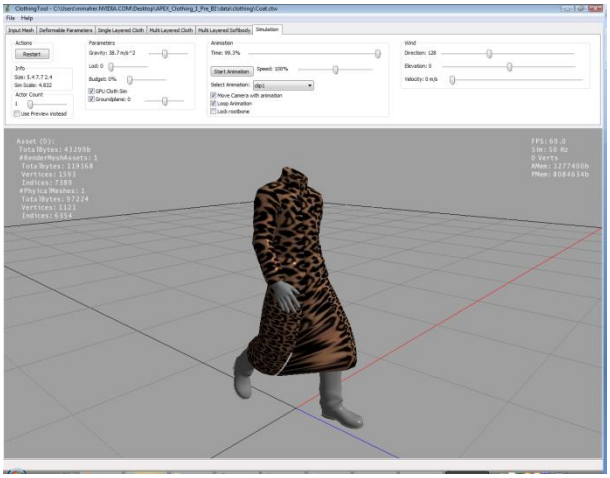


After clicking on “Start Simulation”, the actual clothing simulation will start in the “Simulation Tab”



Note: This example is using a mixture of A-collision and convex/capsule collisions. A-collision is used for the upper coat to show small clothing movements based on secondary motion. Since this ragdoll model only contains legs and hands but no real upper body, the clothing simulation is just colliding against the animation. The lower part of the coat is using collision volumes (Capsules and cylinders) to collide against the legs.

The user can compare the animated version and the simulated version by changing the available compute Budget from 100% to 0%.



Animated Coat

Compiling the Sample Code

Launch Visual Studio 2005.

Open: " APEX/samples/compiler/vc8win32_physx_2.8.3/SimpleClothing.sln"

Compile and run

Upcoming Features

- This release does not include the Clothing Materials, which allows you to specify a certain set of attributes per material instead of per clothing asset. This will be provided with the next release.

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