

NINTENDO GAMECUBE Character Pipeline SDK

Release Notes

Install Image 04/18/2001

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Note 8: New setup file and camera/light controls for previewer (4/18/2001)

A new setup file format (STP) that can hold user-defined cameras and lights exists specifically for the previewer. To accommodate this new format, the controls for the previewer have been revamped. Refer to section 1.3 in “Character Pipeline for Artists” (`/cp/docs/PDF/Artist.us.pdf`), or the previewer menu at runtime, for an explanation of the new controls.

Currently, only CPEXport for 3D Studio MAX Release 3.1 can export cameras and lights into this setup file. Because the setup file is specific for a game application, it is not exported through the C3 library. For more information on how to export cameras and lights from 3D Studio MAX Release 3.1, refer to section 1.9 in “Character Pipeline for Artists.”

Note 7: User-defined wrap modes in TCS script file (4/18/2001)

Users can now specify the wrap modes in each TPL texture header through the TCS script file. See `/cp/build/tools/TexConv/sample/sample.tcs` for an example. If no wrap modes are set for an image in the TCS script, the former defaults will be used for either the *s* or *t* texture axis; i.e., `GX_REPEAT` if the dimension is a power of two, and `GX_CLAMP` if otherwise.

For your information, these wrap modes do not influence the Character Pipeline because the wrap modes are stored in the GPL file in the `C3_STATE_TEXTURE0` state.

Note 6: Texture converter box filter fix (4/18/2001)

The new texture converter (TexConv) mipmap box filter fixes the blackout problem when alpha is zero. Previously, if all four texel alpha values were 0 in one LOD, the next LOD texel color would become black ($R=G=B=0$). This problem arose in special cases where alpha is pre-multiplied to evaluate the next LOD texel values. In such a case now, the TexConv filter averages the four current LOD texel colors into the next LOD texel color. The alpha value will still be 0, so the texel is considered transparent.

For more information, see Appendix C of “CG Tools Programming” (`/cp/docs/PDF/CG_Tools_Prog.us.pdf`).

Note 5: New zebra skinning model (4/18/2001)

A 3D Studio MAX Release 3.1 model of a zebra is available in the `/cp/max/Zebra` directory. The converted model is provided in `/cp/cpdata/max/Zebra`. To preview it on a DDH dev kit:

1. Open a Cygnus bash shell. The previewer can work with any `dvdroot` directory, as long as it is writable.
2. Change the directory by typing “`cd /cp/cpdata/max/Zebra`”.
3. Use the preview script by typing “`preview Zebra`”.

If you desire, you can use the CPEXport plug-in for 3D Studio MAX Release 3.1 to convert the zebra.

Note 4: New C3 internal architecture appendix (4/18/2001)

In “CG Tools Programming” (`/cp/docs/PDF/CG_Tools_Prog.us.pdf`), a new Appendix E details the internal architecture and program flow of the C3 library. This section should prove helpful in learning how each geometry, hierarchy, animation, and texture path is converted.

Note 3: C3 API change: C3SetVertexMatrix renamed C3SetWeight (4/18/2001)

With the recent addition of CPU skinning, the C3 API function `C3SetVertexMatrix` has been renamed `C3SetWeight` to be more descriptive.

Note 2: CP plug-ins renamed CPExport (4/18/2001)

The Character Pipeline converter plug-ins have been renamed:

- The 3D Studio MAX Release 3.1 plug-in is now `/cp/x86/bin/CPExport.dle`.
- The Maya 3.0 plug-in is now `/cp/x86/bin/CPExport.mll`.

Also, we've modified both project files so that release and debug versions can be built and loaded into the tool simultaneously. The debug plug-ins are suffixed with a "D".

Note 1: Initial release of CP SDK (4/18/2001)

This is the first release of the NINTENDO GAMECUBE Character Pipeline (CP) SDK (4/18/2001) since separating the CP from the NINTENDO GAMECUBE (GCN) SDK 1.0 (4/3/2001).

The CP SDK includes the following:

1. Documentation.
2. Source code and pre-built binaries for:
 - Texture converter (TexConv) with TC library.
 - CPExport plug-in for 3D Studio MAX Release 3.1 and Maya 3.0 with C3 library.
 - Runtime CP libraries (except `texPalette`, `fileCache`, and structures because these are still in the GCN SDK).
 - Demos: `previewer`, `texture previewer`, `performance viewer`, `cardemo`, and `sketchdemo`.
3. Data files to be used as `dvdroot` for CP demos in `/cp/cpdata`.
4. 3D Studio MAX Release 3.1 example scenes.

We've moved the documentation formerly located in the *NINTENDO GAMECUBE Character Pipeline & CG Tools Guide* to `/cp/docs/PDF`.

- To learn about the CP in general with a document overview, read "Introduction to the Character Pipeline" (`Char_Pipe_Intro.us.pdf`).
- To learn how to step through the CP, read the quickstart section in "Character Pipeline for Artists" (`Artist.us.pdf`).
- To learn how to build CP source code, refer to Appendix A in both "CG Tools Programming" (`CG_Tools_Prog.us.pdf`) and "Game Engine Programming" (`Game_Engine_Prog.us.pdf`). Note that GCN SDK 1.0 (4/3/2001) is required for the CP build.