What's new ?

Version 1.11 – The gizmo issue (June 2001)

- Gizmo objects (helpers) are now exported. I use them for « action zones » (in french : *zones scénariques* !) Hence the *HelperDescriptor* class has been updated. Gizmo helpers can be boxes, spheres or cylinders.
- CHUNK_HELP_VER is now 2 => Gizmo data has been added.
- There's a new checkbox to export skins as standard meshes. This is different from a *Collapse* operation before exporting, since now morph controllers work on skinned meshes. Thanks to Carl Adahl for that one !
- Ahem. The sampling rate slider was not working anymore due to a previous (quite savage) code cleaning session ☺
- And amazingly enough, alpha channel was not correctly exported for native 32-bits texmaps. It was only working with extra opacity maps. (Many thanks to Joe Meenaghan here !)
- There was a final extra bug in the code fixing non-manifold meshes. Basically it was only fixing edges shared by no-more than 4 faces. So meshes with edges shared by at least 5 faces were still exported as non-manifold meshes. (Thanks to myself for that one ☺)

Version 1.10 – The bugfix issue (May 2001)

- Bugfix : making a mesh manifold sometimes also flipped the culling. It has been fixed. (thanks gl)
- Bugfix : texture quantization was crashing if the texture was unavailable in MAX (which happens for example when the texture path has changed).
- Bugfix : animation sampling was not performed for a node without controllers, but whose parent was keyframed anyway. This of course produces wrong results when using global PRS.
- Bugfix : the 1.09 had a slight bug in the Character Studio code, for some meshes, due to various unfortunate experiments. My mistake. (big thanks to Brian Hoffer here !) It now works again, as in 1.08…..
- Bugfix : morph controllers were not working for some consolidated meshes. Consolidation indeed deletes redundant vertices in a mesh, whereas the morph controller outputs data for all vertices of the original mesh.
- Bugfix : scale of morphed vertices was sometimes incorrect !
- Bugfix : morph controllers were not taking the « Export single frame » checkbox into account. Now, they do.
- Bones should now be treated as BIPED parts.
- There's now a message box when you try to export a scene with unsupported materials. The names of invalid materials are displayed, so that you know what to fix… You can also let Flexporter convert them to a default material and continue exporting. Previous behaviour was to cancel the export.
- FOV controllers are now exported.

- Some camera and light attributes controllers are exported as well. See the doc for the complete list.
- There are some new user-defined properties matching those new controllers. Please refer to the doc.
- Flexporter SDK 1.04 : the code has been cleaned, and the interface has been updated in order for a given export plug-in to disable some unwanted or unsupported options. Please refer to the ASCII exporter source code.
- A new checkbox to export helpers or not. Previous behaviour was to always export them.
- CHUNK_CTRL_VER is now 2, owner's type has been added.

Version 1.09 – The winter issue (February 2001)

- There's a new dialog box to enter motion name & type before exporting Character Studio motions.
- CHUNK_MOVE_VER is now 3, since those name & type have been added.
- CHUNK_MESH_VER is now 5 => The character's ID is now exported for skins as well (previously only for BIPED parts). This is useful when you have a single character made of multiple skins.
- There was a memory leak when exporting packed ZCB files! Fixed.
- Fixed a bug in the lighting module... Anyway I must totally rewrite it with a more complete lighting equation….
- CHUNK_MATL_VER is now 2 => Cropping values are now exported for materials as well. In previous versions, you could run into problems when two materials were referencing the same texture. One set of cropping values only was exported (as texture-related parameters). Now the cropping values and texture matrix are exposed for materials AND for textures. ZCB files include both, but you can keep a single set in your own formats.
- Fixing the null smoothing groups issue introduced a brand new bug for skins ! Basically when I fix null groups in MeshBuilder2 I don't have access to the skinning info, hence don't replicate it, hence end up with replicated skin vertices without skinning info. So the previous fix has been removed for skins using null smoothing groups. (but it's still there for normal meshes)
- CHUNK_MAIN_VER is now 2 => BasicInfo has been updated with pivot-related information, and the scene information string (in SummaryInfo) is now exported as well.
- There's a new checkbox to quantize textures before exporting them. (which saves bytes)
- "Export target nodes" has been moved to the meshes-settings in the Options panel, since it actually controls camera AND light targets !
- Mirrored objects were not correctly exported. This should have been fixed. Apparently this is a classic bug in MAX exporters….. ☺ There's a limitation anyway regarding mirrored instanced objects. Please read the FAQ.
- The sampling/keyframes checkbox was not saved to registry.
- CHUNK_LITE_VER is now 3 => there are some new light parameters exported for shadows.
- ZCB Reader for Linux ?! http://home.earthlink.net/~spillner/flexporter.html
- Check out the little ZCB reader here : www.codercorner.com/ZCBReader.htm

- Last but not least, the consolidation code is now available ! Here : http://www.codercorner.com/Consolidation.zip

Version 1.08 – The MAX4 issue (February 2001)

- **Now supports MAX4 and Character Studio 3** !
- The Flexporter SDK has been modified (v1.03) in order to be compatible with MAX4. In short, the « TextureInfo » class now exists in MAX as well, so I changed the names of my own classes once and for all (even with namespaces mixing both of them was painful). *This means you'll have to make some changes in your custom exporters* (nothing difficult, just some classes to rename).
- The good news is : *your custom exporters are now MAX3 and MAX4 compatible* ! Write them once, use them with both. Expect the same behaviour the day I convert Flexporter to Softimage or Carrara….
- The VC++ projects for the ZCB and ASCII exporters have been reorganized. I think it's cleaner now.
- Non-official support for keyframes. Unfinished, not exposed in ZCB files, use at your own risk – or better, *don't*.

Version 1.07 – The millenium issue (January 2001)

- Custom exporters now have access to the main Flexporter text window, thanks to the new SetLogString method.
- There's a new option to include Character Studio motion files in the main exported file. That way you don't have to use two separate files, which is handy when you just want to test your code.
- There's a new option to take the face areas into account in the normals computation.
- The bounding sphere code has been improved. It's now more robust.
- Two new options to flip textures horizontally & vertically before exporting them.
- A bunch of new commands in the user-properties. (see the main doc for the updated list of commands)
- The Character Studio motion format has been updated with an extra bool for local/global PRS.
- The material IDs are now exported for shapes as well.
- Custom exporters have been renamed to *.flx* files. Since MAX also has .dli files, the old names were a bit confusing.
- The consolidation code has been completely rewritten. It's more efficient, and the null smoothing groups bug has been fixed. The inner class responsible for the consolidation is now *MeshBuilder2* (instead of MeshBuilder), so some names may have changed for consolidation-related structures.
- Update : CHUNK_MESH_VER = 4 => a new bool has been added for mCastShadows
- Update : CHUNK_LITE_VER = 2 => a new bool has been added for mCastShadows

Version 1.06 – The shapely issue (September 2000)

- Bugfix : precomputed lighting was not exported (doh !). Thanks JC for quickly figuring it out……..
- Bugfix : the texture stretching was quite messed up in v1.05 due to some internal tests I forgot to remove (doooh !). Now it's fixed, and you have a new option in the Max Texture Size droplist : Nearest power of 2. This tells Flexporter to downsample the textures to the nearest power of two in both width and height, which allows non-square textures to be exported in a hardware-friendly size.
- Shapes are now exported…

Version 1.05 – The compressed issue (September 2000)

- Lighting can be precomputed and exported as vertex colors. Shadows and color-smoothing can be used as well.
- Some ZCB chunks have a new version number. Watch out !
- Code lifting. Old plug-ins may not compile anymore with the new SDK, and I expect some minor changes to be needed (mainly to fix bad variable names, that kind of things)
- « Export filenames only » was not working !….It's fixed, but there's an extra byte in the ZCB format for each texture (hence the version number have been increased)
- Support for data compression added for ZCB files. Flexporter can use *Zlib* or *Bzip2* according to the user settings. Moreover, vertices are quantized with a user-selected number of bits, and faces are delta-encoded. I only used simple compression mechanisms not to lost anyone ☺
- Edge visibility codes can now be discarded when you don't want them.
- Vertex references (in faces) are stored as words or dwords in ZCB files. Moreover the way faces are saved has changed a lot – see the Format documentation.
- I think there was a minor bug for some Character Studio meshes in the method removing non-uniform scales. It should've been fixed.
- The parity value for skins has been reversed.
- Morph controller added. I can't automatically detect morphed objects, so you must use a user-defined property (« MORPH ») to create a Morph Controller on a given mesh.
- Consolidation udate : there's a new option to use ICE's *Meshmerizer* in order to fix non-manifold meshes before exporting them.
- Last but not least, some code has been added to the Flexporter SDK to help you reading ZCB files, which can especially be useful to dequantize the vertices of a compressed file – for example. Moreover, the file *ZCBHelp.cpp* contains some extra code showing how to use the consolidation results and the cropping values in order to feed a DX7 Vertex Buffer.

Version 1.04 – The unloaded issue (June 2000)

- A new option to unload the Flexporter plug-ins.

- Doc updated with vital Character Studio information…

Version 1.03 – The animated issue (June 2000)

- Cameras' target nodes can be discarded.
- Hidden nodes aren't exported anymore.
- Extra skeletal information added for Character Studio skins.
- PRS animations are now exported.
- Sampling only. You can choose the sampling rate.
- Visibility track is exported. (Hey JC, that one's for you….)
- Node-basis settings via the user-defined properties.
- Redundant textures no more exported, I keep track of them.
- Motion files for BIPED characters can be exported alone.

Beta version 1.02 – The registered issue (May 2000)

- Flexporter crashed when exporting a Character Studio skin made of blended and non-blended vertices. The bug has been tracked and fixed. (thanks Amaury)
- New options in the Options Panel to save/restore your settings in the registry.

Beta version 1.01 – The consolidated issue (May 2000)

- Mesh flags replicated in IceZCBFormat.h
- Defines for chunk version numbers.
- A flag has been added for local / absolute PRS.
- Textures in ZCB files are now 24 or 32 bits.
- Consolidation settings in the options panel
- Consolidation code updated, some bugs removed
- Consolidation result is now exported by ASCII & ZCB exporters
- Consolidation is now also performed on Character Studio skins
- Now I keep track of exported materials and don't export redundant ones.
- Even better, if a mesh only uses a single submaterial, I just export that single one (even if it is part of a MAX material which have many submaterials)
- Instance information is now exported by the ZCB exporter
- Stability has been improved, and it *shouldn't* crash anymore.

Beta version 1.0 – The original issue (April 2000)

- first Flexporter release

Thanks for your feedback

Amaury Aubel (http://ligwww.epfl.ch/aubel.html)
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Brian Hoffer