Release Notes

Havok Common

Version : 6.5.0 Release

including all development since version 6.1.0 Release

Documentation

Documentation Changes

COM-578	Implemented	**Add description for the hkDataObject, hkDataClass and hkDataWorld classes.**	6.5.0 Release
		Added description for the hkDataObject, hkDataClass, hkDataWorld classes, including "dictionary" and "native" implementations of hkDataWorld.	

Geometry

Bugs

COM-574	Fixed	**Matching Util returns wrong vertex when triangles are rotated**	6.5.0 Release
Behavior Change		The geometry matching utility was mapping search vertices to incorrect reference vertices, in cases where the search triangles had indices rotated with respect to the corresponding reference triangles. This has been fixed.	

COM-538	Fixed	**The reflected classes in hkGeometryUtilities should be registered with hkSerialize.**	6.5.0 Beta 1
		In the Havok 6.1 release newly serializable classes in hkGeometryUtilities (e.g. hkMeshShape) weren't registered with hkSerialize, which meant that customers who wished to use them needed to register them as custom classes. This has been fixed for 6.5.	

New Features

COM-567	Implemented	**Mesh simplification utilities**	6.5.0 Release

A utility for reducing the complexity of meshes has been added. This removes small details from the mesh until a user-specified number of faces or vertices remain. This can be used to e.g. create the first-pass of collision geometry based on render geometry. See the demo in Common/Api/Mesh/MeshSimplification for usage.

hkBase

Bugs

COM-303	Fixed	**Pointer Map operator = and copy constructor are now private**	6.5.0 Beta 1

Pointer Map operator = and copy constructor are now private. We also fixed an issue with operator= not returning a value.

COM-533	Fixed	**hkArray::spliceInto asserts under certain conditions**	6.5.0 Beta 1

hkArray::spliceInto would assert if the number of elements to be inserted was less than the number of elements to be deleted. The method now handles shrinking and growing.

Improvements

COM-544	Implemented	**Increase max job size on 64-bit platforms**	6.5.0 Beta 1

hkJobQueue::JobQueueEntry is now 256 bytes on 64-bit platforms. It remains the same size on 32-bit platforms.

COM-553	Implemented	**Added block size suitable for hkpRigidBody to hkThreadMemory and hkPoolMemory**	6.5.0 Release

Added block size suitable for hkpRigidBody to hkThreadMemory and hkPoolMemory

Memory

Improvements

COM-531	Implemented	**Make hkPoolMemory always allocate on 16-byte aligned addresses**	6.5.0 Beta 1
		Eight byte allocations have been removed from Havok. The smallest allocation hkPoolMemory can make is now 16 bytes. Custom memory managers may need to be updated.	

Interface Change

Serialization

Bugs

COM-563	Fixed	**Shared object cloned during tagfile save or load**	6.5.0 Release
		Fixed shared object cloning during tagfile saving.	

COM-571	Fixed	**Enums whose names are substrings of others in the same class can cause invalid class member reflection.**	6.5.0 Release
		Enum name generation has been improved for 6.5.0, fixing this problem.	

COM-573	Fixed	**Homogeneous array member hkClass pointer is not updated during versioning.**	6.5.0 Release
		Homogeneous array member hkClass pointer is now updated during versioning.	

COM-560	Fixed	**hkResource::getContents() returns different results to hkPackfileReader::getContents() for packfiles with no metadata.**	6.5.0 Release
		Fixed hkResource::getContents(). Its return results now match those of hkPackfileReader::getContents() for packfiles with no metadata.	

COM-561	Fixed	**Object may be wrongly defined and saved to tagfile as abstract class.**	6.5.0 Release
		Fixed defining object type in hkDataObjectNative. Do not return hkClass pointer provided by default, if the most derived virtual class is not found.	

New Features

| COM-358 | Implemented | **Patch based versioning** | 6.5.0 Release |

A new per-class versioning system has been introduced into the Havok Serialization framework. See the hkPatchVersionManager, hkDataClass, hkDataObject and hkDataWorld class descriptions for more details. The new system is completely separate from the existing serialization infrastructure, which is still supported.

Interface Change

Improvements

| COM-556 | Implemented | **Add safe load function to hkSerializeUtil** | 6.5.0 Release |

Added hkSerializeUtil::loadWithDetails(). It reports an error if loading a tagfile/packfile fails.

Interface Change

| COM-562 | Implemented | **hkBinaryTagfileReader crashes when hkDataWorldNative is used for loading.** | 6.5.0 Release |

Fixed the crash in hkBinaryTagfileReader when hkDataWorldNative is used for loading a tagfile.

| COM-576 | Implemented | **AssetCC2 should give more informative error message if failed processing tagfile/packfile.** | 6.5.0 Release |

AssetCC2 reports more error details when failed processing asset.

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