

# Release Notes



## Havok Animation

### Version : 6.5.0 Release

*including all development since version 6.1.0 Release*

---

## Animation Demos

---

### New Features

<b>HKA-1145</b>	Implemented	<b>Create Utility and Demo for Uniformly Scaling Ragdoll Size</b>	6.5.0 Release
-----------------	-------------	---	---------------

The demo Animation/Api/Ragdoll/RagdollScaling has been added. This demo illustrates scaling a character's ragdoll, animation and skin.

### Demos

<b>HKA-1057</b>	Implemented	<b>Demo: Dismemberment e.g. tearing, chopping, cutting, pulling limbs off characters.</b>	6.5.0 Beta 1
-----------------	-------------	---	--------------

The Animation/Api/Ragdoll/Dismemberment demo has been added. This demo illustrates limbs and body parts dropping off of a fully skinned and animated character. The underlying physical ragdoll representation is updated for both the character and removed limb with each removal.

---

## Animation Runtime

---

### Bugs

<b>HKA-1155</b>	Fixed	<b>Spline compressed float tracks fail to decompress properly on SPU in long animations</b>	6.5.0 Release
-----------------	-------	---	---------------

Spline compressed float tracks now decompress properly on SPU for animations of arbitrary length.

<b>HKA-1123</b>	Fixed	<b>hkaLookAtIkSolver can generate NaNs</b>	6.5.0 Beta 1
-----------------	-------	--	--------------

The hkaLookAtIkSolver no longer generates NaN solutions when the target is very close to the head.



<b>HKA-1127</b> Fixed	<b>The interpolation between m_footPlantedGain and m_footRaisedGain is not as documented.</b>	6.5.0 Beta 1
	The interpolation between m_footPlantedGain and m_footRaisedGain is now computed as described in the documentation. This does not require a usage change for typical input values.	

## New Features

<b>HKA-1145</b> Implemented	<b>Create Utility and Demo for Uniformly Scaling Ragdoll Size</b>	6.5.0 Release
	The demo Animation/Api/Ragdoll/RagdollScaling has been added. This demo illustrates scaling a character's ragdoll, animation and skin.	

## Improvements

<b>HKA-1122</b> Implemented	<b>look at needs separate angular limits for side to side vs up down look angles</b>	6.5.0 Beta 1
	The hkaLookAtIKSolver now allows the user to specify individual left, right, up and down angular limits.	

## Compression

### Improvements

<b>HKA-1134</b> Implemented	<b>hkaWavelet needs warning or assert to protect against animations of less than 8 frames in the SDK.</b>	6.5.0 Beta 1
	An assert has been added to the SDK for the minimum number of frames to be compressed by Wavelet, Delta and Spline compression.	

## Exporter

### Improvements

<b>HKA-1133</b> Implemented	<b>Filter Manager should allow for both absolute and relative paths everywhere</b>	6.5.0 Beta 1
	The Havok Content Tools documentation now clearly describes how to use relative or absolute paths when exporting.	

## Filters

### Bugs

---

<b>HKA-1146</b> Fixed	<b>Havok Content Tools filter &gt; Create Mapping &gt; Define Mappings... &gt; Auto Name Can Produce Odd Results</b>	6.5.0 Release
-----------------------	--	---------------

The Auto Name feature of the Create Mapping feature has been made more intelligent. It now recognizes common conventions containing the letters R/L and the words Left/Right. Auto Pos though remains the preferred bone mapping feature.

---

<b>HKA-1137</b> Fixed	<b>Spline compression filter fails when the binding's m_trackToBoneIndices member is null</b>	6.5.0 Beta 1
-----------------------	---	--------------

The spline compression filter no longer fails to compress custom assets with null trackToBoneIndices.

## Improvements

---

<b>HKA-1125</b> Implemented	<b>Using a specified joint order when exporting multiple identical characters</b>	6.5.0 Beta 1
-----------------------------	---	--------------

Users may now specify substrings of bone names in a rig file. This allows multiple characters sharing an identical rig structure to be exported using the same rig file, as long as the bone names differ only by a prefix or suffix.

## Inverse Kinematics

---

### Documentation Changes

---

<b>HKA-1154</b> Implemented	<b>Inconsistent comments for first joint of hkaThreeJointsIkSolver.</b>	6.5.0 Release
-----------------------------	---	---------------

The documentation description of the first bone of the hkaThreeJointsIkSolver has been corrected.