

Wwise 2010.3.2

Release Notes

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1 What's New in 2010.3.2?

2010.3.2 is a patch release. The following sections list and describe the changes made to Wwise between version 2010.3.1 and version 2010.3.2.

1.1 New Features

- **WG-18732** Xbox 360: Update to XDK 20353 November 2010

1.2 Bug Fixes

- **WG-18649** Fixed: Possible Wwise crash on bank generation when using rendered McDSP effects
- **WG-18684** Fixed: Sound may fail to play and Log the message "Inconsistent source status" When pausing two or more sounds that were scheduled to play at the exact same time.
- **WG-18688** Fixed: memory leak in Default Pool when editing a RTPC curve on an effect shareset.
- **WG-18703** Fixed: Adressable device IO memory (AkDeviceSettings::uIOMemorySize) is rounded up to a multiple of the granularity (AkDeviceSettings::uGranularity). This leads to memory overflow if the device is initialized with a memory size that is not a multiple of the granularity. It must be rounded down.
- **WG-18710** Fixed: Asserts and crash if low-level I/O hook implementations of IAkIOHookDeferred::Read() return AK_Fail (deferred devices only). Also, the streaming device is less vulnerable to invalid streaming data in general.
- **WG-18729** Fixed: Vorbis streamed file can fail to play on PS3 when seek table size is larger than streaming granularity.
- **WG-18730** Fixed: PrepareEvent cannot find media from mixed-type bank when Use Soundbank Names is OFF
- **WG-18734** Fixed: Wwise Meter CRASH on PS3 when no Output Game Parameter selected
- **WG-18735** Fixed: PS3 crash when voice using source plug-ins is sent virtual from elapsed time.
- **WG-18759** Fixed: Invalid assertion in sample CAkDefaultIOHookDeferred on the PS3: transferred size should not be checked if the request was cancelled.
- **WG-18763** Fixed: DMA corruption in Flanger plug-in on PS3

2 What's New in 2010.3.1?

2010.3.1 is a patch release. The following sections list and describe the changes made to Wwise between version 2010.3 and version 2010.3.1.

2.1 New Features

- **WG-18258** Sounbank content files can now be exported in Unicode so that Japanese and other non-ANSI characters are exported properly (new option in Project Settings > SoundBanks).

2.2 Bug Fixes

- **WG-18596** Fixed: Vorbis prefetch data size stored in banks (for zero-latency) is 4 times larger than the value indicated in the authoring tool (regression in 2010.3).
- **WG-18602** Fixed: Assert or never-ending voice when Break action occurs on a streamed Vorbis source at a very specific timing.
- **WG-18621** Fixed: Project Settings > SoundBanks: "Generate max attenuation info for events" is disabled when "Generate SoundBank content files" is unchecked.
- **WG-18357** Fixed: SoundBank content files are badly formatted if exported "Notes" contain line breaks or tabs.

3 What's New in 2010.3?

- [New Features](#)
- [Important Migration Notes \(2010.3\)](#)
- [Requirements and Other Important Information](#)
- [Known Issues and Limitations](#)
- [Complete Changelist](#)
- [Need Help?](#)

3.1 New Features

3.1.1 Convolution Reverb Optimizations

The Convolution Reverb introduces 2 new parameters that enable important optimizations for memory and CPU usage.

- **Threshold:** Specifies the level below which energy contained in the impulse response will be discarded to save memory and CPU resources. This threshold is compared against a frequency-specific energy computation that evolves over time in the impulse response and allows for the optimization of storage and processing of the convolution at no or minimal cost in terms of quality losses. A value of -144 dB will result in the full impulse response information being processed while lower values will typically eliminate low-energy higher frequency information to obtain significant optimizations. At higher threshold values (e.g above -50 dB), artefacts due to compression will be more noticeable.

- **Smooth:** Uses low pass filtering to smooth the frequency specific truncation points detected based on the threshold parameter. Smoothing can be used to compensate for the artefacts introduced by using high threshold values. The consequence of using high smoothing values is that any optimization gains will be reduced, so it should only be used when necessary. Note that it is sometimes best to set the threshold parameter at a lower value rather than having to use large smoothing parameter values.

3.1.2 Multiple State Groups Per Object

In the State Tab of the Property Editor, objects can now register to multiple state groups, instead of previously only one. For example, an object may register to a state group "In Menu" and at the same time register to state group "Power Up". Every of the registered state groups can define property variations (volume, lfe, pitch, lowpass), which will be cumulated depending on the current states driven by the game.

Additionally, for Interactive Music and Bus Objects, every registered state group can specify a music sync point for the state changes. For example, you could say, when the state goes to "PowerUp", raise the volume by 3db at the next musical bar.

Please review the [Migration Notes](#) for the multiple state groups per objects.

3.1.3 Capture Log Filter Enhancements

- The capture log filter now has a filter text field directly at the top of the view.
- The Filter button is highlighted when any of the filter criteria is active
- The Filter now allow related objects to be kept in the log

3.1.4 SoundBank Manager Shows Hierarchy of Soundbanks

The SoundBank Manager has now the option of showing the SoundBanks in a hierarchical view (Tree list) or in the traditional flat view. When showing the SoundBanks in Tree list mode, the SoundBanks appear with the same structure found in the Project Explorer (with the work-units and folders).

3.1.5 Copy Platform Settings

It is now possible to copy all the settings from one platform to another. This can be done when a platform is added later in the development cycle and that you want to base its setting on an existing platform.

The "Copy Platform Settings" dialog is available from the Project menu.

3.1.6 Advanced Profiler's Streams Enhancements

A new tab "Streaming Devices" tab was added and multiple new columns were added to the "Streams" tab of the Advanced Profiler. The new columns include low-level information such as memory, activity, throughput, etc. This additional low-level information allows engineers to optimize and tweak the streaming component of the game.

3.1.7 Project Explorer Context Menu

The Project Explorer context menu has been redesigned to be more consistent with the other context menus found in Wwise.

The following entry was added to all object menus:

- Open Containing Folder : Open Windows Explorer with the associated file(s) selected

Project Explorer menu improvements:

- Edit in external editor : now support multiple selection correctly
- Open in Schematic View : now supported in Project Explorer
- Workgroup (Perforce) : now available on any level of the hierarchy

3.1.8 Dialogue Event Editor Now Support Multiple Selection

The dialogue event editor now support multiple selection. The following actions are now possible with multiple selection

- Deleting multiple items
- Clearing multiple items
- Other standard actions on objects, such as opening on Schematic View, Find All References, etc...

3.2 Important Migration Notes (2010.3)

Please refer to the Installation and Migration Guide for general advice about migrating projects to a new version of Wwise.

3.2.1 Multiple State Groups Per Object

In addition to the multiple states per objects, a few functionalities were removed from the state group feature-set. Your project will be migrated accordingly and you should review the following items:

- Global state properties do not exist anymore. In 2010.3, it is not possible to define state property values in the State objects directly. State property values now only exist on the object where it's being used. This simplifies the state model and increase usability on the system. Global states are automatically migrated to states values instances where they are being used.
- Absolute states do not exist anymore. Absolute states were removed to simplify the state model, and to avoid potential conflicts when using multiple absolute states within a single object. Absolute states are automatically migrated to relative states by considering the current volume/pitch/lfe/lowpass of the object. There is a potential lost of data that can occur during the migration in this specific scenario: When the volume/pitch/lfe/lowpass of the object is unlinked and that absolute state values are found for the object, only the linked value will be used for the migration from absolute to relative, since states can't be unlinked.
- Disabled states do not exist anymore. Because the global states do not exists anymore, the disabled states were not relevant anymore. Disabled states are automatically migrated to relative states set to zero.

3.3 Requirements and Other Important Information

We have compiled a list of specific requirements and other important information that you should know before working with Wwise.

3.3.1 Audio File Management

Loops shorter than sample boundaries removed during conversion. During the audio conversion process, loop regions that are shorter than the sample boundaries are removed.

Sample rate conversion values should match native platform rate. The audio pipeline uses real-time sample rate conversion nodes when playing sounds that differ from the platform's native sample rate (48 kHz for Windows, Xbox 360 and PLAYSTATION 3). As an optimization, and also to prevent possible conversion rate aliasing artefacts, content that does not require pitch-shifting such as music should be converted to match that of the native platform. For Windows, it is also possible to have a native format of 24 kHz using the audio quality option that is available from the SDK.

XMA sample accuracy in Wwise is limited to codec capabilities. Because the hardware for XMA limits looping at 128 sample boundaries, keep in mind the following when using these sources for music objects:

- Minor artefacts may result when the Wwise loop fixing algorithm specified in the XMA conversion settings is applied to the XMA sources. These artefacts, which result from slight time-stretching or pitch-shifting in the algorithm, are less noticeable for sources with a long duration.
- Looping XMA source music clips may lose timing accuracy each time the loop point is crossed. However, the Play and Stop position in the segment are always sample accurate.
- Due to phase shifts that may occur in the XMA encoding/decoding mechanism, it is not recommended to try to align the last and the first samples of two contiguous XMA-converted clips.

3.3.2 General

External components required for installation. The following external components are required to run Wwise:

- Microsoft® .Net Framework Version 2.0, which is included in the installation package.
- XMLLite for Windows XP Service Pack 2. To download a copy of XMLLite, visit the Microsoft web site.

Note: XMLLite is automatically installed with Windows XP Service Pack 3 and Windows Vista.

DirectX® February 2010 or later, which is required to run the Game Object 3D Viewer in Wwise and the Xbox 360 controller on Windows. To update your version of DirectX, visit the Microsoft web site (<http://www.microsoft.com/directx>).

Note: If you have an older version of DirectX, Wwise will run normally, but the Game Object 3D Viewer will not be available and you will not be able to test motion in Wwise.

Visual Studio DLL Dependencies. The following versions of Microsoft Visual Studio are used to build the Wwise libraries:

- VC 2008 version: 9.0.30729.1 Wwise libraries have a dependency on a specific version of the CRT DLL. If you are using a different version of Visual Studio, or if you do not want your game to depend on that version of the CRT DLL, you can link to the libraries from the Debug (StaticCRT), Profile (StaticCRT) and Release (StaticCRT) folders instead. For more information on the Visual Studio DLL dependencies, refer to the "Platform Requirements" section of the SDK documentation.

3.3.3 Motion Devices

Connect game controllers to high power USB ports. Motion devices need to be connected to a high power USB port. If the USB port does not have sufficient power to run the motion device, the system will

unmount the device to protect both the operating system and the device itself. The USB ports in the front of a computer are generally not powerful enough to run a motion device, so you should connect them to the USB ports at the back of the computer.

3.3.4 Project Migration

Wwise Installation and Migration Guide. When you are ready to upgrade to a newer version of Wwise, you need to follow a coordinated protocol to ensure that your projects created in the previous version are migrated smoothly to the newer version. For more information, it is strongly recommended that you refer to the Wwise Installation and Migration Guide, before you upgrade.

3.3.5 SoundBanks

SoundBanks version has been updated. The version of the SoundBanks has been updated since the previous Wwise versions. This means that you will need to regenerate all your SoundBanks so that they are compatible with the current version of Wwise.

3.4 Known Issues and Limitations

Audiokinetic is constantly working to provide you with the highest quality software; however, you should be aware of the limitations and issues in this version of Wwise.

3.4.1 Wwise Known Limitations

The following table describes the limitations in this version of Wwise.

Section Description

- Audio Busses
 - If you are ducking a bus that is playing a series of short sounds within a looped sequence container set to Continuous, you may experience a loss in ducking between the short sounds or at the loop point of the container. To avoid this behavior, you can either add sample accurate transitions between the sounds within the container, or set the ducking recovery time to anything but zero.
- Audio File Management
 - The Vorbis encoder library may result in poor audio quality for sounds using sample rates below 16 kHz. The Vorbis codec was specifically tuned for higher sample rates and performs very well above 16kHz. Audio quality below the 16kHz sampling rate, however, can vary considerably depending on the encoding settings used and the audio asset itself.
- Containers
 - Even though a Sample Accurate transition can be applied to a Switch container that is the child of a Random or Sequence container, this option will have no effect in this case as the switch order more than one sound to be played simultaneously.
 - The maximum number of supported child objects in any type of container is 65535. Although Wwise allows you to create more than 65535 in the authoring application, no parent-child link can be made between the parent and the child above the 65535 limit. Without the link, these child objects cannot receive any notification updates during playback, including changes to volume, positioning, and so on.

- There are several restrictions and limitations that currently exist when using the crossfade, sample accurate, and trigger rate transitions with random and sequence containers. For a complete list, refer to the [Wwise Knowledge Base](#).
- If the playback instance limit is reached for a random or sequence container using Trigger Rate as the transition type, the currently playing sound as well as the container itself will be killed.
- Even though a sample accurate transition can be applied to a container with source plug-ins on the Wii platform, this option will have no effect.

- Effects
 - Since you cannot apply a crossfade when bypassing or un-bypassing an effect, you may experience clicking when using the Enable/Disable Bypass event action.

- Events
 - When you have an event that contains the actions Play, Stop, and Play, the second play action will not trigger the sounds to play as expected.

- Interactive Music
 - Transition segments with a length of zero, with Play transition post exit enabled, will not play when a “same time as playing segment”, “immediate” transition occurs.
 - The Break event action does not work as expected for music objects.
 - The empty space on a track before a clip will be used as the clip’s pre-entry.
 - The Wwise conversion method makes sounds longer by approximately 12 samples per minute causing some inconsistencies for music objects. Sources that are in the following frequency are affected:
 - * 44100Hz on Xbox 360, Windows, and PlayStation 3
 - * 22050Hz on Windows and PlayStation 3
 - * 11025Hz on Windows and PlayStation 3
 - The wave data displayed in the Music Segment Editor for a converted file represents the original file and not the converted file.
 - The total duration of “continuous” musical content that plays over “nothing” is limited to 12.4 hours. This includes the individual length of a segment or the cumulative length of stingers played all within the same switch. If a change in switch occurs, the cumulative time counter is reset to zero.
 - On single CPU machines without hyper-threading, you may experience a slow down in music tempo when moving the 2D Panner in Wwise. To avoid this problem, you can increase the Output Buffer Latency setting in the User Preferences dialog box.

- Interface
 - Some views in Wwise are cropped on Japanese systems and potentially other languages as well. This can also occur if you modify the font DPI in Windows. To fix this issue, you can download new registry files from the [Wwise Knowledge Base](#) or revert the font size to the standard Windows setting.

- PlayStation 3 platform
 - In order for streamed Vorbis files to play correctly on the PlayStation 3, the granularity of the I/O must be a multiple of 16 bytes.

- Positioning
 - The time base used in Wwise to record changes in positioning is independent of the time base used by your computer's sound card. As a result, the changes in positioning may not be synchronized to the sound that is played.
 - If you add or remove a point along the path during playback, the sound will continue to play, but there will be no propagation. The next time you play back the sound, the changes that you made will be applied.
 - Wwise uses an "equal power" schema to ensure that no audio source exceeds 0dB in any speaker. As a result, all stereo sounds set to 2D positioning will be played 3dB quieter by Wwise. To maintain the same mixing reference, boost the 2D sounds by 3dB.

- Projects
 - When a project is saved to a mapped network drive, performance may be seriously affected. If you decide to save your projects to a mapped network drive, Audiokinetic will not support these projects.
 - When "User Account Control" (UAC) is enabled on Windows Vista more recent versions, Wwise sample projects installed under "Program Files" or "Program Files (x86)" can't be opened with the 64-bit version of the Wwise authoring application because of permission issues. While these projects can be opened with the 32-bit version of the Wwise authoring application even when UAC is enabled, we strongly advise against it as the cache, Originals, and GeneratedSoundBanks folders will be "virtualized", and will thus be using the wrong folders. To work around this issue, do one of the following:
 - * Move the project to a location where you have full read/write permissions. Note that the IntegrationDemo executable will search for SoundBanks in the relative path where they would normally be generated, so you should also move the IntegrationDemo executable, if you plan to use it. (This option is recommended).
 - * Disable UAC. Since UAC is a security feature introduced in Windows Vista, we do not suggest disabling it as it may render your computer vulnerable to malicious software and other forms of attacks.

- Remote Connections
 - If the IP address of a computer changes while the Remote Connections dialog box is open, the computer will be displayed in the Available list using the LAN IP address instead of the usual "Local Host" IP address. If you connect to this computer, this computer will be added to the History list using the LAN IP address even if the same computer is already in the list using the "Local Host" IP address. Wwise doesn't recognize that these two entries are the same remote computer. The next time you use Wwise, both entries will remain in the History list. Despite the duplication, you can connect to the computer using either entry.
 - Refer to this Wwise Knowledge Base article for information on troubleshooting the remote connection: <http://kb.gowwise.com/questions/137>

- SDK
 - The Wwise SDK contains four sample effect and source plug-ins: Delay, Sine, Audio Input, and Tone Generator. The C++ projects that create the DLLs to be used in Wwise offer three configurations: Debug, Profile, and Release. Right now, only the Profile and Release versions of the DLLs will work with these plugins in Wwise. The Debug version crashes when you try to use these sample plug-ins.

- SoundBanks

- If a sound exists in more than one SoundBank, a transition will not be applied between the two instances of the sound when one SoundBank is unloaded and another one is loaded. In this case, the first instance of the sound will stop and the second instance will start from the beginning.
- Note: Using the PrepareEvent mechanism will prevent this sort of problem from happening.
- Streaming
 - If the hard disk on the Xbox 360 and the PlayStation 3 have not been read for a while, you may experience longer read times than normal. When this occurs during critical streaming situations, notifications of voice starvation and source starvation will be sent to the Wwise error log.
- Wii platform
 - The value returned by AK::IAkLowLevelIO::GetBlockSize() must be a multiple of 32 (bytes) in order to play back ADPCM files.
 - On the Wii platform, streamed audio files with file and loop lengths of less than 20ms will not play as expected.

3.4.2 Wwise Known Issues

The following table describes the relevant outstanding issues that could not be resolved in this version of Wwise.

- Audio Files
 - **WG-11260:** Audio from file with too many markers fails to play. If the marker data chunk in the file header is larger than the granularity of the file streaming, the code fails to read the header.
 - **WG-14380:** Padding of XMA files inside the header and at the end of the file makes them larger in size than necessary.
 - **WG-15767:** Markers are handled incorrectly when used with virtual voice option 'FromElapsedTime'.
- Blend Containers
 - **WG-15390:** A sound within a blend container may not be triggered if it follows a sound that failed to play.
 - **WG-15729:** Playback may fail when chaining multiple containers in continuous mode and step mode and finally Blend Containers with multiple sounds.
- Command Line
 - **WG-15554:** When using Windows Vista, WwiseCLI.exe can't be used with the Task Scheduler when no user is logged in.
- Contents Editor
 - **WG-14785:** Objects displayed in the Contents Editor are not sorted alphabetically, which can make it difficult to find objects quickly.

- Effects
 - **WG-10527**: Real-time effect is layered on top of rendered effect when connected to a game.
 - **WG-14931**: Rendered effects are not listed in the Edit tab of the SoundBank Editor.
 - **WG-15310**: If the Bypass option is selected for an effect that is used as an environmental effect, the environmental effects will be bypassed when connected to a game.

- Events
 - **WG-14402**: In very rare circumstances, Wwise may crash when renaming a newly created event.

- Game Object 3D Viewer
 - **WG-15054**: Game objects with multiple positions are not shown in the Game Object 3D viewer.
 - **WG-16246**: The Game Sync Monitor doesn't update as expected until you add or remove a watch from the Watches list.

- Game Simulator
 - **WG-16071**: Game Simulator is not detecting game pad inputs on Vista 64 bit.

- General
 - **WG-15941**: When using certain UI schemes in Vista, the property sliders may not react as expected.

- Integrity Report
 - **WG-15569**: The integrity report message "Streamed XMA files do not support region loops" may be displayed even when the audio file doesn't contain a region loop.

- Interactive Music
 - **WG-6432**: "Use Transition Segment" option starts the next cue at the beginning in error when "Play from elapsed time" is selected.
 - **WG-14711**: When music loops, the music timer callback sends 2 'bar' or 'beat' notifications instead of 1, as expected.
 - **WG-15367**: If a change in switch occurs while the music is paused, it may not transition to the new switch when the music is resumed.
 - **WG-15728**: When a transition segment is added to the Any to Any transition and then removed, the music segment and corresponding media file is still included in the SoundBank, in error.
 - **WG-16261**: If a double switch reversal occurs during the playback of a music switch container, the wrong music segment is played.
 - **WG-16269**: Glitches may be heard due to the hard trimming of effect tails for music segments and tracks.

- Looping Sounds
 - **WG-14878**: Looping sounds get kicked in error due to instance limiting.

- Motion
 - **WG-15383:** Pragma warning line for the D-Box relates only to the PC, and should not be included for the other platforms.
 - **WG-14852:** Motion FX objects do not work as expected within a Dialogue Event.
- Multi-Channel Creator
 - **WG-16302:** Sample loop markers within a source file are not kept in the multi-channel files generated by the Multi-Channel Creator.
- Obstruction/Occlusion
 - **WG-15678:** When updating the Obstruction/Occlusion curves in Wwise while connected to a game, the curve information is not propagated to the game, as expected.
- Playback Limit
 - **WG-15124:** Playback limit may continue to be applied even though it is greyed out in the Wwise application.
- Profiler
 - **WG-11746:** Unhelpful message is displayed in the Capture Log when using PostEvent on a non-registered game object.
 - **WG-14176:** The RR and RL columns on the Listeners tab of the Advanced Profiler are inverted.
 - **WG-15476:** Error message missing in the profiler when Wwise detects two similar media files that don't have the same size.
 - **WG-15617:** When an error occurs in the profiler, Wwise displays the event ID, but not the event name.
- Projects
 - **WG-14579:** Projects may become corrupted when migrating a project that contains a missing plug-in.
- Random/Sequence Containers
 - **WG-15057:** Random/Sequence containers (AkRanSeqCtr) take up more memory than required in the sound engine.
 - **WG-16227:** The Weighting option for objects within Random/Sequence containers does not work as expected in certain situations.
- RTPCs
 - **WG-14506:** Audio glitches may occur when using a Peak Limiter as well as a Parametric EQ that has an output level driven by an RTPC.
- SDK/Sound Engine
 - **WG-15451:** Wwise libraries may not be compatible with some compilers as a result of certain libraries using the Whole Program Optimization.

- **WG-15501:** Memory address may be reused by switch container after a game object is unregistered causing Wwise to play a different sound than is expected.
 - **WG-15537:** Race condition may exist that causes the sound engine to crash when connected remotely to your game.
 - **WG-15805:** The casing of the file AkAssert.h is used inconsistently in the SDK; either AKAssert.h or AkAssert.h.
 - **WG-16185:** Speaker volume matrix callback is not called for 2D sounds in IsInitiallyUnderThreshold.
- SoundBanks
 - **WG-12087:** Game parameters used by control busses are not included in the Initialization bank.
 - **WG-13305:** SoundBank output text files become inconsistent when a project contains two switches/states with the same name in two different groups.
 - **WG-14186:** When SoundBanks are generated, Wwise loses registered game objects registered by the SoundFrame preventing sounds from playing.
- Source Plug-ins
 - **WG-16232:** Clipping may occur when using the Pink or Red noise color setting within the SoundSeed Air - Woosh source plug-in.
- Wii
 - **WG-10869:** Possible loss of DSP control may cause audio corruption for streamed audio files.
 - **WG-15250:** Glitches may occur when pausing music segments on the Wii platform due to inconsistencies between the music and lower engines.
 - **WG-17439:** Breaking a looping and streaming sound on the wii can in very rare situations cause the sound to stop with the error: "File or loop region is too small to be played properly".
- Workgroups
 - **WG-15634:** When using the Perforce plug-in, Wwise may hang if the P4 server does not respond.
 - **WG-15557:** When using the Perforce plug-in, the following message "login not necessary, no password set for this user" may be displayed unnecessarily.
 - **WG-15558:** When using the Perforce plug-in, the file history scrolls unnecessarily as the information is received.
 - **WG-15559:** When using the Perforce plug-in, the history returned by P4 truncates the description removing useful information.
 - **WG-16257:** Wwise may crash when loading a work unit that includes an audio source with a space at the beginning of its filename.

3.5 Complete Changelist

The following sections list and describe the changes made to Wwise between version 2010.2 and version 2010.3.

3.5.1 Platform SDK updates

- PlayStation 3: updated to SDK 350.
- Xbox 360: updated to XDK 20209.1 (September 2010).

3.5.2 API Changes

- **WG-18420** `IAkStdStream::SetStreamName()` and `IAkAutoStream::SetStreamName()` now accept an `AkOSChar*` instead of a `wchar_t*`.
- **WG-18264** Removed `AkDeviceSettings::uIdleWaitTime`, which was deprecated in Wwise 2010.2.
- **WG-18267** Removed `AkIOTransferInfo::uSizeTransferred`. Low-level I/O hook implementations do not need to set `uSizeTransferred` anymore. If they return `AK_Success`, it means that the size transferred was equal to the size requested (`AkDeviceSettings::uRequestedSize`), so this additional operation was useless.
- **WG-18286** Removed function `Init()` of `\SDK\include\AK\Tools\Common\AkListBareLight.h`.

3.5.3 New Features

Sound Engine:

- **WG-18276** Major performance optimizations in convolution reverb can be obtained by using new threshold parameter
- **WG-17245** Stream Manager devices now have the ability to cache file data in their Stream IO pool. When a cached buffer is found, no transfer to the Low-Level IO is required. This is particularly helpful with RAM/VRAM devices streaming small looping sounds.

Authoring:

- [Convolution Reverb Optimizations](#)
- [Multiple State Groups Per Object](#)
- [Capture Log Filter Enhancements](#)
- [Project Explorer Context Menu](#)
- **WG-16944** [The SoundBank Manager view can now display folders and soundbanks in a hierarchical manner](#)
- **WG-17663** [Advanced Profiler's Streams Enhancements](#) : Multiple new columns were added to help tweak the streaming performance.
- **WG-7841** [Dialogue Event Editor Now Support Multiple Selection](#) Dialogue .
- **WG-18280** [Copy Platform Settings](#) : You can now copy properties from one platform to another for the whole project ("Copy Platform Settings" under the "Project" menu)
- **WG-18118** In the State Tab of the Property Editor, objects can now register to multiple state groups, instead of previously only one. For example, an object may register to a state group "In Menu" and at the same time register to state group "Power Up". Every of the registered state groups can define property variations (volume, lfe, pitch, lowpass), which will be cummulated depending on the current states driven by the game. Additionnaly, for Interactive Music and Bus Objects, every registered state group can specify a music sync point for the state changes.

- **WG-14666** It is now possible to drag and drop objects over the following elements in the Property Editor: Audio Bus, Motion Bus, Conversion Setting, Attenuation, Switch Container's Group and Default, Meter's Game Parameter.
- **WG-18195** It is now possible to specify effect sharesets in the SoundBank definition import files to have the associated Impulse Responses included in SoundBanks.

SoundFrame:

- **WG-16966** SoundFrame now expose the object path for Events, Dialogue Events and Game Syncs.

3.5.4 Behavior and Performance Changes

Sound Engine:

- **WG-18136** Vorbis: looping and seeking are now sample-accurate.
- **WG-18262** Optimization: Reduced memory required in the Default Sound Engine memory pool.
- **WG-18379** Reduced CPU usage when seeking in vorbis files with large seek table block size.
- **WG-17717** Stream buffering is more efficient with small streamed sounds, and uses less IO memory.

Authoring:

- **WG-18221** General Performance was improved when converting a low number external sources at command line by minimizing the overhead of the Wwise startup.

3.5.5 Miscellaneous Changes

- **WG-18126** The authoring tool executables and DLLs are now built using VS2008.
- **WG-18129** The sound engine is not built and shipped with VS2005 anymore. Win32_vc80 and x64_vc80 platforms have been removed.

3.5.6 Bug Fixes

Sound Engine:

- **WG-18388** Fixed: Deadlock possibility when multiple thread block on a full message queue
- **WG-18220** Fixed: possible stability issue when Wwise connects to the game.
- **WG-18438** Fixed: (PS3 only) Random crash when coming back from virtual (elapsed time) when started as virtual by a sample-accurate container in vorbis.
- **WG-18344** Fixed: (Wii only) Streamed mono PCM and ADPCM files may play bad data when streaming memory is full.
- **WG-18240** Fixed: Interactive music child switch delayed transition not scheduled when parent transition ends up not being scheduled.
- **WG-18302** Fixed: Notifications randomly not working on Motion sounds.

- **WG-18292** Fixed: Possible crash when generating banks while the option "Generate max attenuation info for events" is enabled and the target of a play action is reported "Missing".
- **WG-18386** Fixed: Possible source starvation at end of stream when using Vorbis
- **WG-16800** Fixed: Stream buffering not accurate with sounds that have a looping region. Looping streams with loop regions used to consider that all data of the stream buffer crossing the loop end was valid, resulting in smaller effective buffering than expected. This could result in source starvation at each loop. It does not apply whole-file loops.
- **WG-17636** Fixed: Streamed Vorbis files may stall indefinitely if some of their packets are larger than the streaming granularity. This is more likely to occur with very high quality settings, and very small streaming granularity. They now fail on start up.
- **WG-18432** Fixed: Vorbis on Playstation 3 can sometimes hold on to more streaming buffers than necessary
- **WG-17800** Fixed: an I/O transfer may be flushed for nothing right after file header is parsed, from time to time. This results in a waste of I/O bandwidth.
- **WG-15481** Fixed: SetVolume action that is applied to a bus may be applied twice when the bus also contains an effect.
- **WG-18448** Fixed: (Wii only) Rare assert in AkVoicePlaybackCtrl.cpp that can occur if a music segment playing a Vorbis audio clip is sought and terminates in the same audio frame.
- **WG-18459** Fixed: Source starvation notifications not reported with interactive music if the audio clip starved so much that it was stopped by the music scheduler before it even started playing.
- **WG-18489** Fixed: Streamed ADPCM sources may be truncated by a few samples at the end (Windows and Xbox 360).
- **WG-18492** Fixed: Sounds playing in multiple environments does not use proper control value (PS3).
- **WG-18526** Fixed: Connecting a project on a meter effect may cause the meter effect to stop driving the associated RTPC.
- **WG-18578** Fixed: Possible crash when using MeterFX plug-in in 5.1 configuration on PS3.

Authoring:

- **WG-18435** Fixed: Context Menu can appear twice in Mixing Desk under some scenarios.
- **WG-18301** Fixed: In Advanced Profiler, Stream Tab, the sort of the column File Size is not working correctly.

3.6 Need Help?

3.6.1 Using Help

Wwise Help contains detailed information on each interface element in Wwise.

To open Help from within Wwise, do one of the following:

- Click the Help icon in the title bar of any of the views or dialog boxes.
- From the menu bar, click **Help > Wwise Help**.
- Press **F1**.

3.6.2 Contacting Support

Audiokinetic has established a complete [online support center](#) for our maintenance and evaluation customers. The following resources are available:

- A [feedback form](#) to submit details about bugs, crashes, and/or to suggest a feature, or make any general inquiries.
- Access to all the latest product [downloads](#).
- The [Wwise Knowledge Base](#) with knowledge base articles, tips, and tricks.
- [Video tutorials](#).

You can also contact us directly at: support@audiokinetic.com.

Note: Email support is only available for maintenance and registered evaluation customers.

3.6.3 Got Comments?

We'd appreciate any comments or suggestions you may have about these release notes or any other piece of our documentation. Just send them to [documentation](#).