

GRAME - Computer Music Research Lab.

¥ From 4 to 4, state A

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Pa_StartStream	PaHost_StartOutput PaHost_StartInput PaHost_StartEngine	ASIOStart
Pa_StopStream	PaHost_StopOutput PaHost_StopInput PaHost_StopEngine	ASIOStop
Pa_CloseStream	PaHost_CloseStream	ASIODisposeBuffers ASIOExit
Pa_Terminate	PaHost_Term	removeCurrentDriver

On Macintosh ASIO drivers are files located in a special folder called **ASIO Drivers** located in the application folder. These ASIO drivers can easily be changed simply by moving ASIO drivers files to and from the ASIO Drivers folder. Some utilities functions are available in the the ASIO SDK :

`ASIOLoadDriver(const char * driverName)` load an ASIO driver in memory given it's name

`ASIOUnLoadDriver(const char * driverName)`

$\forall i \in [0, M-1]$: position in output user buffer
 $\forall i \in [0, N-1]$: position in output ASIO buffer

At initialization time, a $\text{write_offset}(i)$ function that implements the algorithm is used to compute the frame number used for the first host output buffer :

$\forall i \in [0, M-1]$ when $M > N$ we define $\text{write_offset}(i) = \text{write_offset}(i - N)$. This value is used to shift the i -th frame (host output write offset)

$\forall i \in [0, N-1]$ when $M < N$ we define $\text{write_offset}(i) = \text{write_offset}(i - M)$. This value is used to shift the i -th frame (user input write offset)

$\text{write_offset}(i) = \text{write_offset}(i - N)$

After host buffer creation the $\text{write_offset}(i)$ function is used to compute the frame number used for the first host output buffer :

to be done when converting ASIO buffers into user buffers, and the contrary at the output. This process is mixed with sample conversion.

A possible improvement is to extend PortAudio to allow the use of non-interleaved buffers. Thus de-interleaving is