Subject: Re: ASIO DRIVER current status ?
Posted by mikeaudet on Sun, 11 Dec 2016 23:05:52 GMT
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Hi James,

Thanks for your kind words. I've been thinking about it all day.

This isn't Edmund's work. I think this was done by guys at Ensoniq.

Here is a comment from patchdef.e2, part of the ESP2 code that runs on the cards:

// The Sharemem in Scherzo is at 200000. The Patchbay is the first thing in memory.
// In consists of small buffers (patchpoints) that revolve in the ESP2 modulo fashion,
// around the whole patchbay. The voices need larger buffers, for buffering to and from
// the PCI bus. These buffers have to be big enough to "amortize" the variation in
// fill time due to 1. PCI latencies 2. frame and stream boundary processing.

/* A Playback patchpoint/buffer has 3 regions:
  A 64 word patchpoint "delay" area
  the 128 wordfetch-ahead buffer.
  A 64 word overflow area.
 A Record patchpoint/buffer has no delay region.
  A DSP writes to the patchpoint at the base of the buffer.
  The next 128 words are the buffer.

So, it looks like there is some significant buffering in the EDS cards for disk based voices that isn't there for live inputs that go through the mixer. It may need to be there because of the PCI bus.

The patch bay is the big area of memory that is used by everything. If I change it, all the code that runs on all 6 ESP chips is affected, and potentially broken.

Down the road, if there is interest in this, we can look at incorporating the PARIS mixer for direct monitoring and effects. As it is, the latency is still very low, and we can always track in the PARIS app and mix using ASIO. It's just not the 3 - 6 ms I know I was hoping for.

All the best,

Mike