Emulator - Emulator Issues #7530

D3D11 Exclusive Fullscreen Enhancements

08/01/2014 12:09 AM - MichaelWFadely

Status:	Accepted	**% Done:**	0%
Priority:	Low		
Assignee:			
Category:			
Target version:			
Operating system:	N/A	**Relates to performance:**	No
Issue type:	Bug	**Easy:**	No
Milestone:		**Relates to maintainability:**	No
Regression:	No	**Regression start:**	
Relates to usability:	No	**Fixed in:**	

Description

So with the implementation of exclusive fullscreen, I have noticed a performance increase. However, unless I happen to be getting perfect performance, I often get screen tearing since it doesn't go through the window manager.

I imagine you might suggest v-sync, but by enabling it, my framerate will more often than not get locked to 30FPS in a 60FPS game if the performance dips just below 100%. I also see that there's a borderless fullscreen option I could use for the time being, but I do enjoy the overall improvements that exclusive fullscreen provides.

So I propose triple buffering. As far as I'm aware, it provides the best of both worlds; no screen tearing, but no noticeable framerate caps. There is a program called D3DOverrider which can force this for D3D applications, but it doesn't appear to work with Dolphin. I'm also aware I can enable OpenGL triple-buffered v-sync in my video card control panel (AMD R7 265, by the way), but my performance in OpenGL is typically not as good as D3D11 overall, and I don't know that it actually works in Dolphin anyway.

If it doesn't seem viable, I'd love to hear why, mostly because I find even the supposedly least interesting progress reports to be quite interesting in actuality.

That's all I have to say, really. Thanks for reading.

History

#2 - 08/01/2014 12:17 AM - phire

But triple buffering increases lag and drops frames, the exact features exclusive full-screen was implemented to have.

The adaptive vsync extension would do what you want, but I believe that's OpenGL only.

#3 - 08/01/2014 12:18 AM - JMC4789

AMD Video cards tend to perform better in D3D, and NVIDIAs tend to vary per game.

I don't think there's anything we can do about the vsync that'd work well. I mean, you can turn off vsync and prevent the large drop. Triple buffering only helps a bit; dropping to 40 instead of 30, right?

#4 - 08/01/2014 12:29 AM - MichaelWFadely

Well, it's hard to say. Usually the lowest my framerate drops in games I use triple buffering in would be around 40 anyway, regardless of triple buffering. Same goes for Dolphin actually, but the major difference is that the entire game's speed changes pretty drastically as a result of rounding down to 30 with typical v-sync, whereas most native games just skip frames.

I did test v-sync in Dolphin with Sonic Colors, by the way. Even though the game runs at 30FPS, in Planet Wisp act 1, the framerate dropped even

further below 30FPS with v-sync on right at the start, but disabling it avoids this.

Also, just disabling v-sync means I get tearing again. =/

#5 - 08/01/2014 12:03 PM - Armada

I'm definitely looking into triple buffering and improvements to V-Sync in general.

#6 - 08/19/2014 11:20 AM - kostamarino

@Jules.Blok is there a way to make adaptive vsync work with dolphin?

#7 - 10/22/2014 07:31 PM - mwernerxy

Yeah, some V-Sync love would be much appreciated. I have it on pretty much all the time. Recently, I turned it off for a test and was baffled how much better the performance was... but the screen tearing was just too painful D:

#8 - 02/21/2015 06:59 AM - JMC4789

- Status changed from New to Accepted

- Priority set to Low