

## Re: Rendering to Multiple GPUs

**Source:**

<http://www.tech-archive.net/Archive/Development/microsoft.public.win32.programmer.directx.graphics/2004-06/028>

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**Date:** 06/11/04

Date: Fri, 11 Jun 2004 14:06:02 -0700

For a multi-head case do you mean that it uses the D3DCREATE\_ADAPTERGROUP\_DEVICE flag when it creates the device? If not how does it do it? If so, is it then just like a normal device in terms of how you render to it?

Also, I didn't say that managed resources exist *\*only\** in system memory. There is a copy in system memory that is copied to video memory as needed. Please clarify if I am wrong, but I am pretty sure this is how it works.

Since there is a copy in system memory DirectX *\*could\** utilize this to share resources across devices. It doesn't though, which makes multiple device rendering a big pain.

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PS. As a side note, look in d3d9.h for CreateVertexBuffer/CreateTexture etc. There is an extra parameter called pSharedHandle that is reserved. I bet this was going to be used for sharing resources but they scrapped it. Does anyone know if they intend on letting us use this someday? eg DirectX9c?

"Phil Taylor" wrote:

> *for the multi-head case, the screensaver framework does not create copies.*  
>  
> *if its separate devices, there is no way to avoid the copies.*  
>  
> *managed resources do not exist only in system memory, you misunderstand how*  
> *resources and resource management works.*  
>  
> "Eric Penner" <[EricPenner@discussions.microsoft.com](mailto:EricPenner@discussions.microsoft.com)> wrote in message  
> news:94232435-0468-4E80-AB33-363CBE867E45@microsoft.com...  
> > *Hi there,*  
> >  
> > *I'm interested in methods of rendering to multiple monitors. In general,*  
> *as soon as I drag a window off of one monitor it drops to software rendering*  
> *(except for a few cases like using NView to make two monitors appear as one*  
> *monitor to windows.*  
> >

> > *The moire screen saver demo creates numerous devices and renders to each  
> independantly, but this requires creating multiple copies of all your  
> resources (not very fun).*

> >

> > *Is there \*any\* solution to render to numerous monitors at the same time or  
> to share resources across devices? I get errors if I use a managed resource  
> created on one device on a different device. It \*should\* be able to work  
> since managed resources exist in system memory.*

> >

> > *Anyway, any help would be appreciated!*

> >

> > *Eric Penner*

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