ESPN Emerging Technology’s use of NVIDIA'S GPU Solutions for High Resolution Imagery
Overview

• Who we are / What we do

• Software Architecture built around NVIDIA GPUs

• ESPN Uses of this SW Architecture

• Q & A
ESPN Emerging Technology

Who we are / What we do

ESPN Emerging Technology (ET)

ET develops the ideas and applications that bring the fan closer to the game with new, innovative production enhancements.

- Huck-O-Meter, HRD Ball Track, Snap Zoom, Ref Mics, Sky Cam, Ultra-Mo, Player Tracking, the 1st & Ten Line, K-Zone, the Emmy-winning EA Virtual Playbook and much, much more.
Who we are / What we do

ESPN Wide World of Sports Innovation Lab in Orlando
- Designated testing ground for new innovations
- Over 300 sporting events occur at this facility each year
Software Architecture built around NVIDIA GPUs

- Each GPU in the system is classified as either an Input, Output, Input / Output, or a Compute Engine
- All GPUs have peer-to-peer access via CUDA
- Multiple input cards and output cards may be assigned to a GPU
Software Architecture built around NVIDIA GPUs

- Hardware abstraction layer allows video I/O hardware from several manufacturers via gpuDirect

- Supports Quadro and Tesla GPUs (Fermi and Kepler)
Software Architecture built around NVIDIA GPUs

- Supports use of Cubix GPU Xpander

- Each GPU pipeline can handle unique video formats for input vs. output
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Video Capture for Advanced Technologies
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Low Cost Video Effects
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4k to 720p workflows

4K Input  \rightarrow  Zoomed 720p
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4k to 720p workflows

4K Input

Virtual Cameras
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Questions?