

- 1. Video
 - 4K HDR video (raw)
 $3840 \times 2160 \text{ pixels/frame} \times 3 \text{ colors/pixel} \times 10 \text{ bits/color} / 8 \text{ bits/bytes} \times 60 \text{ frames/second} = 1.866 \text{ GB/s}$
- 2. Time-varying volumetric rendering
 - Spatial resolution: $875 \times 556 \times 3052 \text{ voxel}$
 - Temporal resolution: 66 ms
 - $875 \times 556 \times 3052 \text{ voxel/frame} \times 4 \text{ byte/voxel} \times 15 \text{ frames/second} = 89 \text{ GB/s}$



NYU

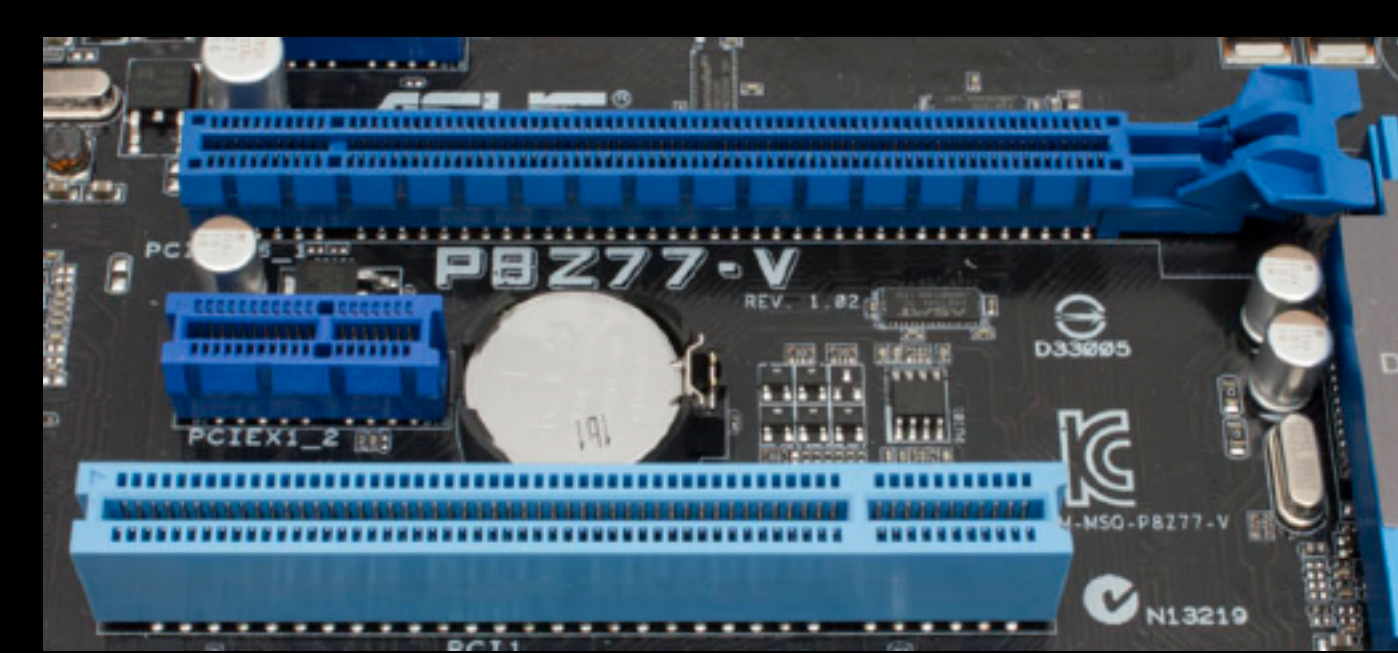
4K

HDR



MEMORY SPEED

- NVIDIA Quadro GV100: 870 GB/s
- PCI-Express 4.0 @ x16: 32 GB/s
- DDR4-3200: 25.6 GB/s
- SSD: (Samsung 860 Pro) 550 MB/s
- -> Data reduction techniques are essential



WHY NOT BRUTE-FORCE



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