



Unite '17

Seoul



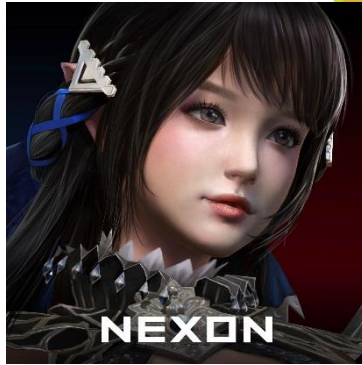
Joonyong Park

Samsung Electronics

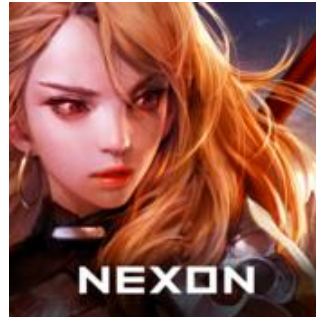


Samsung-Unity Vulkan Collaboration





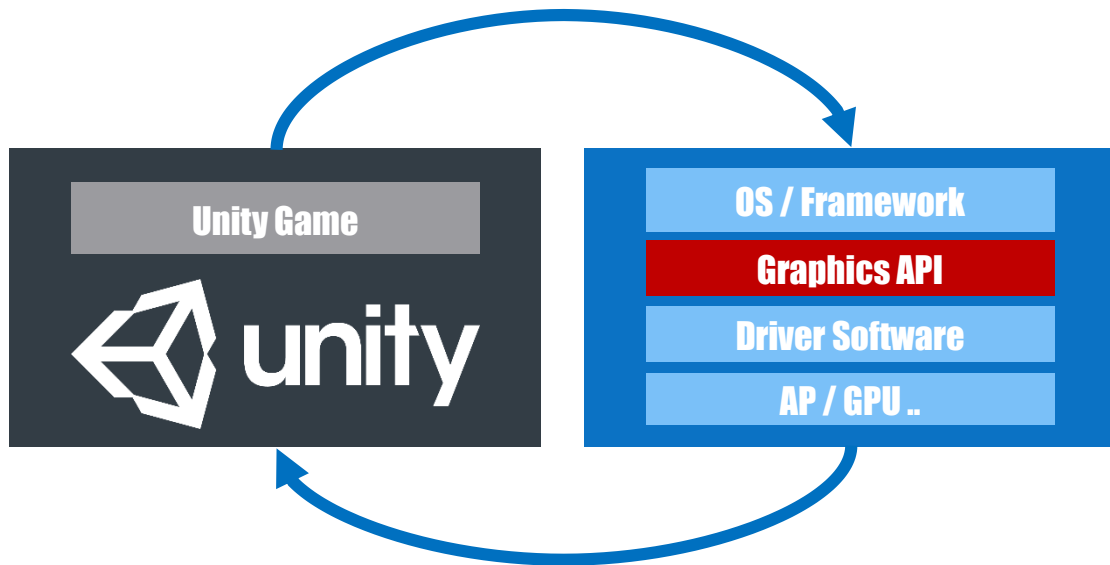
GameDev?





 **unity** X **SAMSUNG**
Galaxy

Unity Samsung Collaboration



Unity Samsung Collaboration

Unity - Samsung collaborate to improve Vulkan support in Unity

- Co work in optimizing the Unity Vulkan renderer
- Support Game developers to make their game with Vulkan
- Updating GPU driver with better quality and performance
- Guarantee Galaxy's support for Unity

Samsung Contributions

- Driver compatibility checks
- Persistent Pipeline cache
- Mobile optimized layout fixes
- Mobile optimized command buffer handling

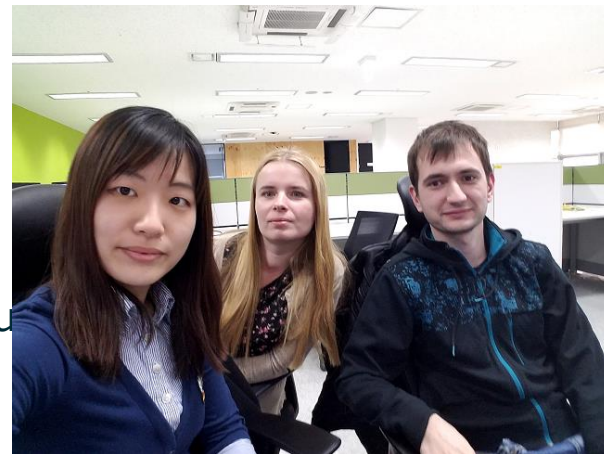
And more to come!

Case Study : AxE (Nexon)



Case Study : AxE (Nexon) 1/2

- Vulkan Supporting camp was started from 01-23
- Using 5.6, Base engine was 5.4
- Upgrading cost to 5.6 was little
(Minor script fixes due to deprecated stuffs)
- Samsung helps profiling, fixing engine / client issue
with unity collaborations



Case Study : AxE (Nexon) 2/2



AXE_GL

Version: 0

Session time: 22m 27s

Performance



39 FPS

Battery



2.9 hrs

Resources usage



33%



689MB



56%



AXE_vk

Version: 0

Session time: 21m 35s

Performance



45 FPS

Battery



2.6 hrs

Resources usage



32%



855MB



62%



More Galaxy devices will come.

Vulkan will benefit mass/main stream devices even more

- **A5 2017 (SM-G520F) launched with Vulkan support**
- **A game which shows 5% gain with S7 shows 13% gain with A5**

	GLES	Vulkan	Gain
S7	52	55	5%
A5	42	48	13%



Thank you!