



Overview and Motivation

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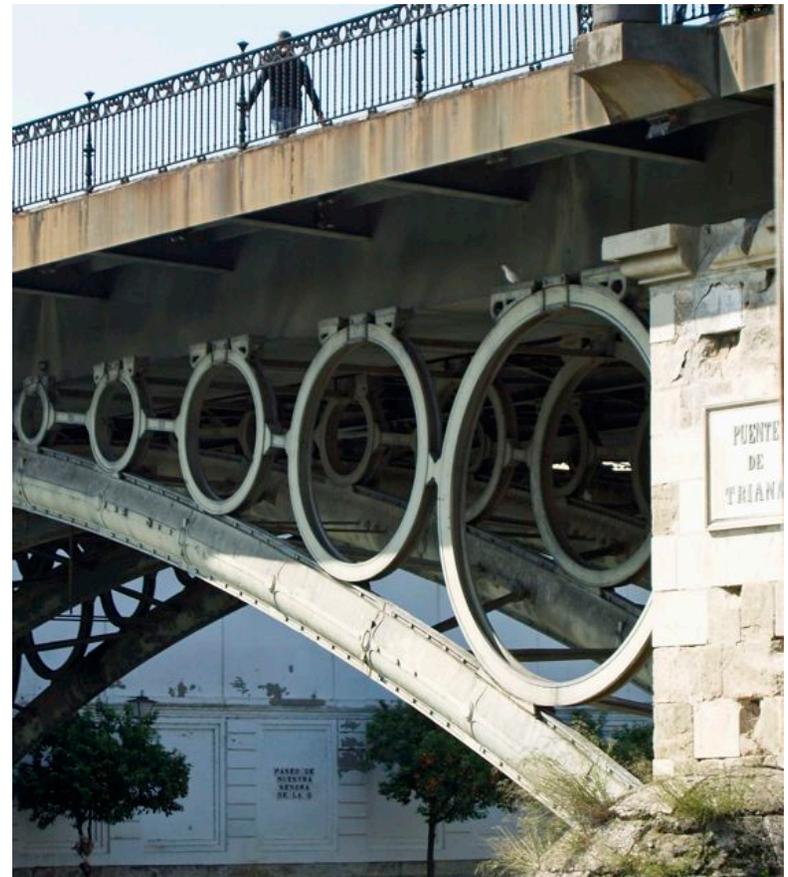
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Virtual Machine Group



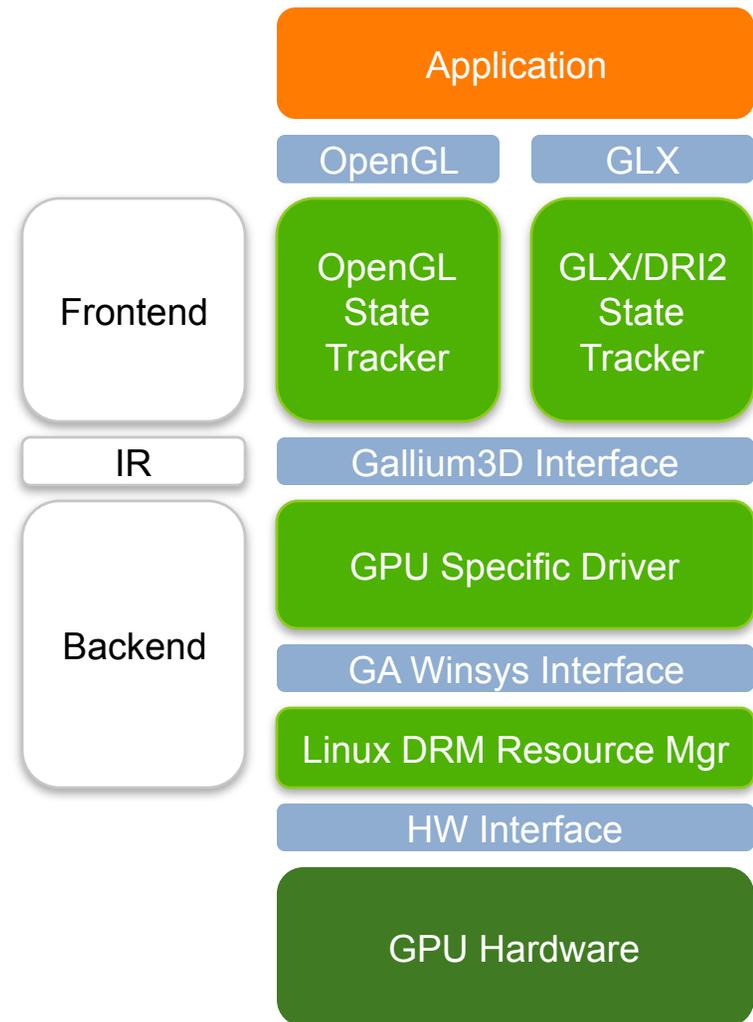
Gallium3D Design Goals

- ❖ Portability to all major operating systems and graphics interfaces
- ❖ Make drivers smaller and simpler
- ❖ Reuse HW drivers and API implementations
- ❖ Reflect current graphics hardware design



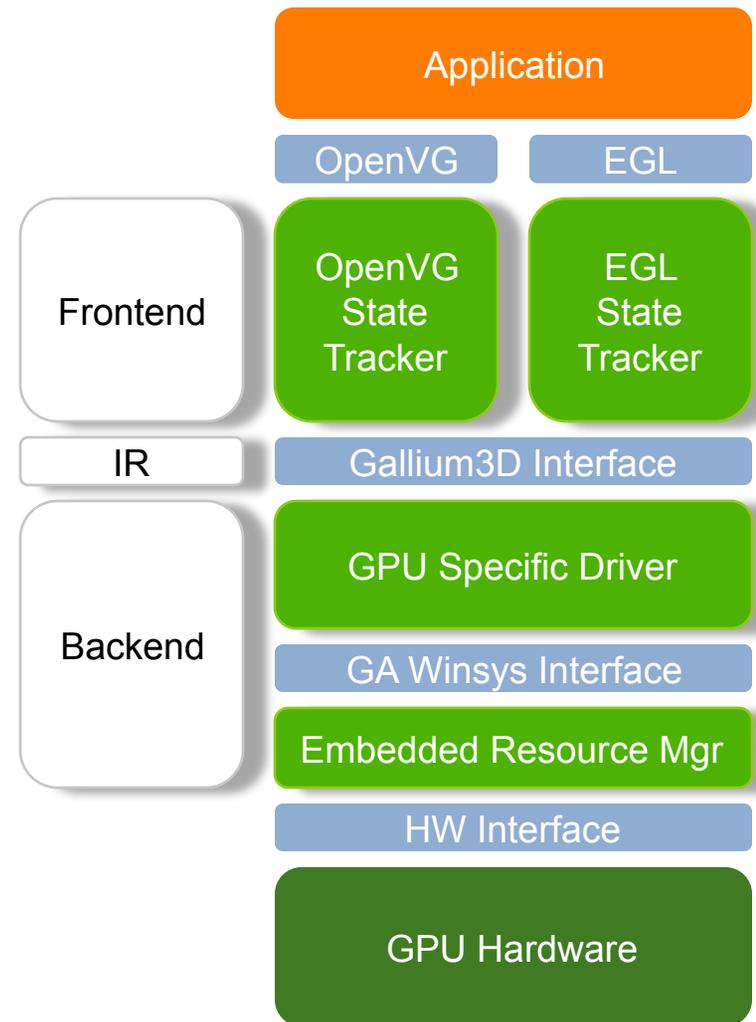
Gallium3D Architecture

- ❖ Frontend state-trackers are specific to API's
- ❖ Backend drivers are specific to GPU Hardware
- ❖ Drivers are parameterized to OS with winsys component.
- ❖ Frontends and drivers can be connected in many combinations.



Gallium3D Architecture

- ✧ The interface is key, isolating API handling from hardware details
- ✧ Gallium **is** the interface
- ✧ The interface is still evolving, influenced by:
 - new APIs
 - new hardware
 - new ways to use the stack



Gallium3D Architecture

- ❖ Support new API, reuse hardware drivers.
- ❖ Build new hardware driver, get many API's for free.
- ❖ Port existing graphics stacks to new operating systems with minimal effort.

