

**Contact:**

**Isamu Hasegawa**

SQUARE ENIX CO., LTD.

haseisam@square-enix.com

Japan



This presentation showcases several real-time technologies implemented for FINAL FANTASY XV's epic battle between heroes and monsters:

- A procedural sky system that, while completely physically based, allows for extensive and intuitive artistic control.
- An efficient procedural cloud-rendering system.
- A novel algorithm for light probes that supports dynamic time-of-day.
- An elaborate and very powerful weather system.
- A modern and fast GPU particle system along with myriad tools for editing its content.

FINAL FANTASY XV uses an innovative hierarchical fusion of behavior trees and finite-state machines to control agents in-game. Each part of the AI, such as the body or the mind, can utilize the benefits of this hierarchy, and all systems integrate with a powerful environment-query language to assist targeting and location decisions. Ad-hoc cooperative interactions can be authored in a STRIPS-like fashion, which acts as an additional layer on top of the main individual decision-making process. This greatly reduces the complexity of modeling multi-agent cooperation and improves the AI's fidelity and ability to adapt.

Isamu Hasegawa  
Remi Driancourt  
Hiromitsu Sasaki  
Wan Hazmer  
SQUARE ENIX CO., LTD.