

# A Look Under the Hood of Need for Speed: Hot Pursuit



Need for Speed: Hot Pursuit used image-based lighting for the forward-rendered cars to help them look integrated with the deferred-rendered environment, which dynamically changes with a full-day cycle of light and weather. A custom anti-aliased line-rendering technique greatly improved the aliasing artifacts that are common to deferred rendering.

The dynamic look of the game was enhanced with weather effects, including rain, snow, wet roads, lightning, and heat haze. A procedural sky and multi-colored atmosphere system included height fog. The post effects system included color grading, bloom, vignette, and a game-play-based treatment. Gamma-correct rendering and filmic tone mapping were used to ensure a good tonal response in the HDR range. Artistry was required to effectively manage a large number of visual controls, some changing spatially and some over time.

This demo features all the bells and whistles of this game turned up to 11. A special game build accelerates the time of day, turns on all the weather, and culminates in some action-packed racing and crashing with all the related effects spectacle.

## **Criterion Games**

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