

Title: Daytona USA
Developer: Sega-AM2
Year Released: 1994

Tagline: Let's Race!

Picture:

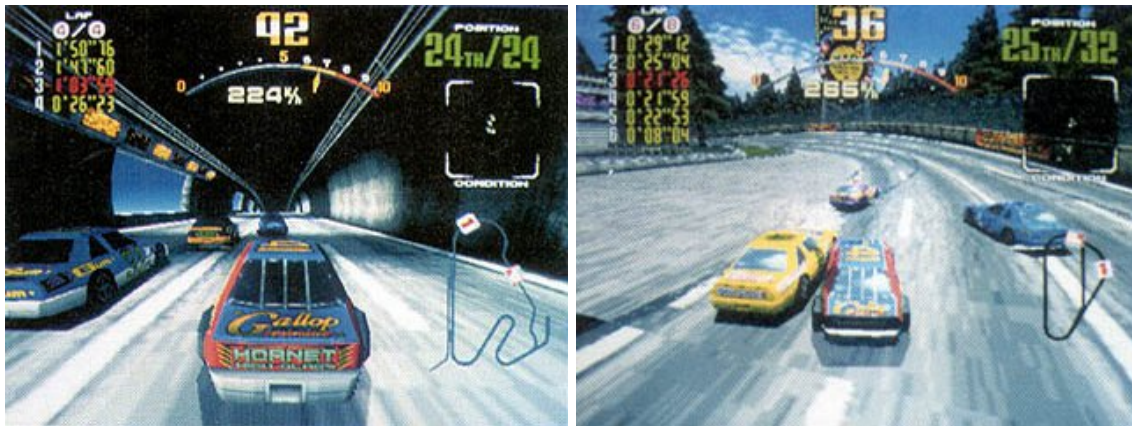


Figure 1: Images courtesy <http://www.system16.com/hardware.php?id=713>

Genre: Racing

Target Audience: General, all ages.

Innovation Keywords:

3D Rendering, Texture Mapping, Networked Multiplayer

Goal:

Out race other (human and/or computer) competitors in a stock car to the finish line before time expires.

It's innovative because...

“Daytona USA” featured two main innovations for arcade games: texture mapping and networked multiplayer. “Daytona” was a featured game introducing Sega’s Model 2 arcade board. The Model 2 board featured fast rendering of texture mapped 3D polygons. This gave the Model 2 the ability to render increasingly realistic looking virtual worlds at interactive rates without sluggish continuity in gameplay. The Model 2 was an improvement upon Sega’s Model 1 board that featured flat shaded 3D rendering.

“Daytona USA” was one of the first games that used networked multiplayer across cabinets. Up to eight stock car game cabinets could be linked together through an inter-cabinet network. During game play, each player had the perspective of their own car and competed against other players in a shared game state.

It's fun (or not) because...

The use of 3D rendering in “Daytona USA” created an immersive virtual racing world. This experience was the closest to simulating the experience of real driving for its time. Previous games, such as Sega’s 1980s offering “OutRun”, used sprite-based 2D engines. This technology limited gameplay to an “forward perspective” where the player was mostly driving straight with some minor turns. While fun, this overly restrictive gameplay did not match actual driving in any significant way. By using 3D technology, “Daytona” provided deeper and more flexible gameplay that felt more like real driving dynamics. For example, turns could be made more complex allowing for techniques such as drifting to provide a competitive advantage. Interactions (collisions) between cars had a more plausible quality. Further, players could arbitrarily change

the viewpoint of the driver around the car. This feature allowed for players to use a highly immersive “driver’s seat” view as well as the more standard “behind the car” view.

Multiplayer capabilities in “Daytona” were fun both technically from sharing game state over different displays and psychologically from the group dynamics that formed in the arcade environment. Similar to games like Street Fighter II, crowds tended to form around competing players, reacting to events and heightening interest and intensity. Most games, however, were based around two players sharing the same display. By splitting the display and adding more players, “Daytona” became a greater spectacle for crowd interest at arcades and a source of adrenaline.

Cite use of these innovations in subsequent games.

“Daytona USA” could be argued as the model for today’s standard of a 3D racing game with immersive car dynamics, as currently typified by “Gran Turismo”.