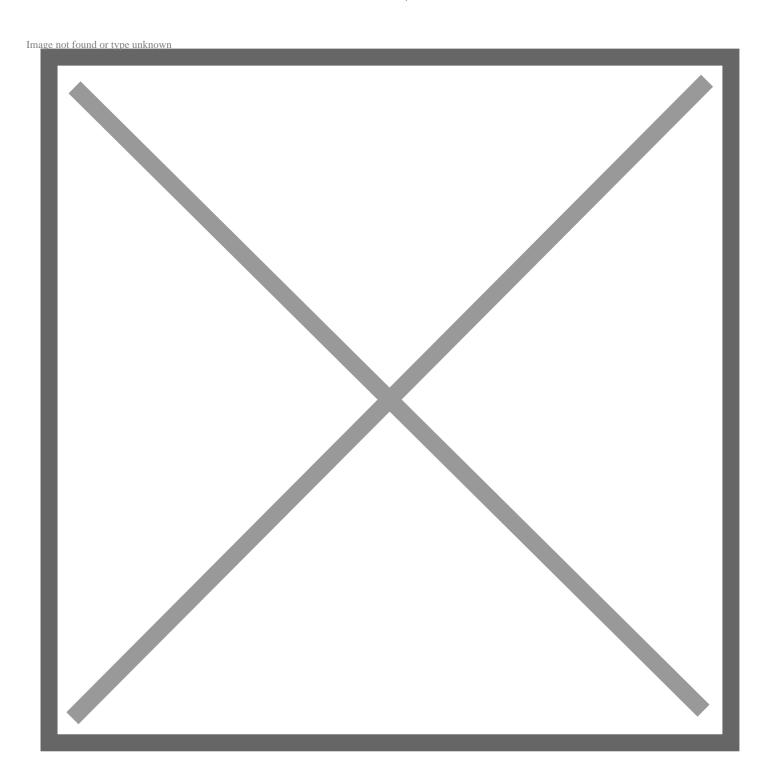# Desert Running Goes Digital with Toyota Tacoma IsoDynamic Performance Seat Simulator at SEMA

October 31, 2023

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LAS VEGAS (Oct. 31, 2023) – The innovative [IsoDynamic Performance Seats](#) found in the upcoming 2024 Toyota Tacoma TRD Pro are engineered to make mountains feel like molehills. Leave it to software engineers, then, to create an arcade inspired "TRD Pro Time Attack" video game to showcase just how much smoother they can make off-road driving in real time, all without the need to head to the great outdoors.

Debuting this week at the SEMA Show in the great indoors of the Las Vegas Convention Center, TRD Pro Time Attack pairs the new IsoDynamic Performance Seat with a six-degree-of-freedom simulator and gaming experience created in-house by software company Toyota Connected North America (TCNA). In it, drivers navigate a dynamic, high-speed course to experience how the IsoDynamic Performance Seat is designed to help reduce fatigue compared to a normal seat by stabilizing the ride on rough terrain.

"Our goal was to demonstrate the performance capabilities our R&D engineers built into the IsoDynamic Performance Seat, leveraging cutting-edge video game technologies," said Eric Bursch, design and innovation lead, TCNA. "Gamifying the experience allows us to show how the IsoDynamic Performance Seat performs on a simulated off-road course in a way that's both fun and educational for those wanting to understand its benefits."

Bursch spent time with Toyota Motor North America's (TMNA) R&D engineers in Ann Arbor, Michigan, studying how the IsoDynamic Performance Seats damp out terrain undulations. The team also compared their findings to data gathered on Toyota's Arizona proving grounds to fine-tune the simulator. Reciprocally, R&D engineers joined TCNA in Plano, Texas, to help calibrate vibration levels felt through the simulator's hydraulics to further align the game and reality.

The TCNA Immersive Experiences team created a completely custom, high-speed Baja-style racecourse in-house and collaborated with longtime Toyota partner JBL to create an audio profile to complement the experience.

The team draws from the background of engineers and artists who have worked in the video game and phone app industries. This blend of engineering and gaming would not have been possible without the expertise and leadership of Allen Danklefsen, TCNA's Technical Executive Producer, who brings with him 18 years of game development experience.

"Customers considering a 2024 Toyota Tacoma may not have access to an off-road park to test the mettle of the new IsoDynamic Performance Seats," said Danklefsen. "If we can provide drivers an experience that engages them and helps them confidently find the truck that's right for them, then that's what matters. The fact we can do this with cutting-edge technology is all the more satisfying."

The 2024 Toyota Tacoma TRD Pro is anticipated to go on sale spring 2024. The TRD Pro Time Attack is available to SEMA attendees October 31 through November 3.