

# Toyota's Latest Virtual Crash Dummy Software Can Model Occupant Posture before Collisions

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Toyota City, Japan, June 26, 2015 — Studies\* show that roughly half of drivers take defensive action (such as sudden braking or steering) to avoid collisions, with vehicle occupants commonly bracing themselves at the same time. Occupant posture — whether braced or relaxed — has a significant effect on body movement during a collision. However, current human surrogate models used in virtual crash simulations are unable to simulate the reflexive defensive actions that humans take in the moments before an imminent collision, such as bracing one's body for impact.

To address this, Toyota has successfully added a new muscle model capable of simulating human postural states in the latest version of its Total Human Model for Safety (THUMS) virtual human model software. THUMS Version 5 can simulate a variety of states from relaxed to braced, thus enabling more detailed computer analysis of injuries caused by collisions.

For more details, go to <http://newsroom.toyota.co.jp/en/detail/8487899/>