

UPRM MOBILE DRIVING SIMULATOR SYSTEM FACT SHEET

The University of Puerto Rico at Mayagüez (UPRM) Driving Simulator System is a state of the art cockpit simulator with high RAM capacity desktop, a car seat, a gear shifter, a steering wheel, and the brake and accelerator pedals placed in a wood frame with six (6) wheels to make it versatile for mobile applications (See Figure 1). In terms of projection and visualization, the driving simulator has three (3) overhead projectors with their respective projection screens, aligned at a 10° deflection angle between them to create a panoramic view of the freeway, roadway of facility being simulated (See Figures 1 and 2).



Figure 2. UPRM Mobile Driving Simulator.



Figure 1. UPRM Mobile Driving Simulator Panoramic View

A canopy with a minimum area of 400 sq-ft and a height of approximately 12 ft is required to house the UPRM Driving Simulator Mobile assembly and supporting hardware (See Figure 3). The canopy provides the necessary shadow to effectively display the simulated scenarios using the three overhead projectors and display screens. An electric 110 volt outlet and an extension chord with sufficient length (30 to 50 ft) is required to provide power to the electronic equipment.

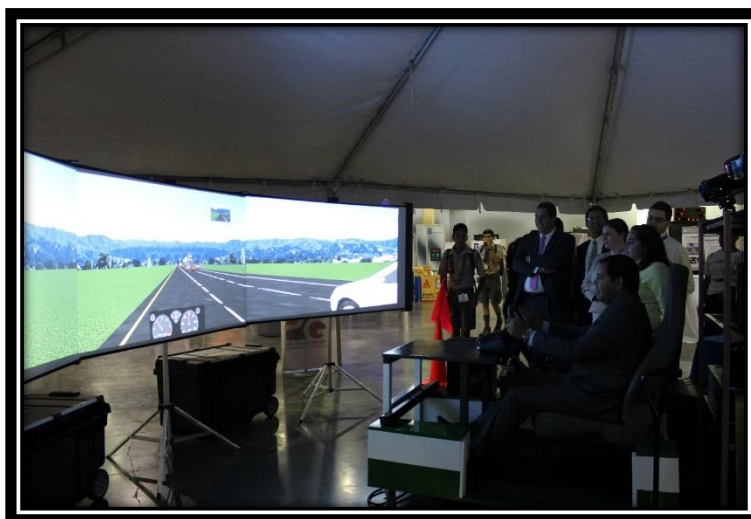


Figure 3. The UPRM Mobile Driving Simulator Set-up.

SELECTED REFERENCES:

1. Valdés, D., Colucci, B., Fisher, D., Valdés, J., Colón, E., García, R. and Rivera, J. (2015) "Operational and Safety-Based Analysis of Toll Plaza Signage using Driving Simulation". *Advances in Transportation Studies, an International Journal*, 2016 Special Issue, Vol. 1.
2. Valdés, D., Colucci, B., Fisher, D., Ruiz, J., García, R. and Colón, E. (2016) "Driving Simulation in the Safety and Operation Performance of the Freeway Toll Plaza". *Transportation Research Record: Journal of the Transportation Research Board*, No. 2602.