

TITLE OF PRESENTATION: Using 4000 point 3D transverse road profiles to evaluate longitudinal profiles, IRI and to compensate the effects of driver wander.

ABSTRACT:

This presentation will describe our progress in implementing the measurement of longitudinal profile by adding accelerometers to a 4000 point 3D transverse profiling system (LCMS). During this presentation we plan to show results for the cross-correlation and repeatability of consecutive profile measurements, we plan to compare our results to ground truth profiles (Surpro) and we intend to show that class 1 profiler status can be obtained using this system. We will demonstrate the importance of detecting the position of lane markings to compensate for driver wander. Results will show the possible improvements in repeatability when driver wander is corrected. Finally we will demonstrate the capacity of obtaining full lane coverage IRI maps or a pavement surface and discuss possible uses for this new type of data.

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