Test Operation Procedures for Autonomous MRZR

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The military community is testing autonomous versions of their ground vehicles such as the MRZR to augment manned ground vehicles in contingency areas, in part, to reduce causalities. These platforms are expected to have similar or better mobility than their manned counterparts. In this study, we present a test operation procedure (TOP) for an autonomous MRZR. The TOP is designed around mobility in an off-road environment. Often due to the weather conditions or other electronic interference, autonomous vehicles guided by telemetry with a driver in the loop are plagued with latency issues. We also present a testing method to understand how latency in the commands during telemetry operation alters mobility. Introducing latency in the commands ranging from 0.10 to 1.50 seconds, we evaluate the performance of the vehicle and operator. We present a TOP for measuring mobility performance of a ground autonomous vehicle operating off-road.