Abstract

Intelligent approaches and techniques will be discussed for improving in-vehicle network architectures and minimizing electric power consumption in combat vehicles. Emphasis will be placed on surveillance missions that require all devices to operate on battery power. Batteries have limited capacity and recharging requires operating the combat-vehicle engine. An operating engine places soldiers at the risk of being identified by enemy forces. Therefore, a combat vehicle must work with a restricted-power source. A combat vehicle must meet the challenges of interoperability, software reliability, software complexity, and device-power consumption. The network architecture must address all these challenges and provide efficient solutions.