Cybernet Systems Corporation, a leader in ammunition characterization and manufacturing automation, developed the Projectile Identification System (PIDS) under a Phase II Small Business Innovation Research (SBIR) contract for ARDEC at Picatinny Arsenal. The PIDS was developed as a bolt-on to the ON-MT, which is an automated fire mortar turret that can be integrated with various vehicle bodies planned for use in the Future Combat Systems (FCS) program.

The PIDS is capable of automatically identifying 120 mm mortar shells as they are loaded into the magazine of automated fire weapon systems. By mounting the PIDS over the projectile loading port of the weapon system, the physical loading process remains the same (the soldier slides the projectile through a circular opening), but software applies image processing algorithms to determine properties of the projectile (i.e., projectile type, fuse type, and lot number) using shape recognition, color matching, and text recognition.

**PIDS Specifications:**
- Mounts over the projectile loading port of the weapon system.
- Automatically determines projectile properties (such as type, fuse type, and lot number).
- Automatically identifies projectile properties, using shape recognition, color matching, and text recognition.

**PIDS Benefits:**
- Increases combat effectiveness by making the reloading process faster, easier and safer.
- Reduces error rate.
- Modular system that easily upgrades/adapts to support new and evolving inspection requirements.

**PIDS Variants and Options:**
- Additional recognition modules (barcode readers, etc.).
- Additional munition-type handling (ATACS, etc.).
- Capability customization for new applications.

The Projectile Identification System makes the reloading process faster, easier, and safer.

**Tactical Automation: Increasing Soldier Effectiveness with Technology**