ANCILE: Dismounted Strike Warning and Position Tracking

Approved for Public Release

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What is ANCILE?

Note: Ancile is not an acronym but rather a name taken from the mythological shield and talisman of power to protect the Roman Army

- Novel technology combination and architecture integration

- Capability:
  - Warns dismounted soldiers about incoming indirect fires
  - Same device can report dismounted locations to “Blue Force” C2 systems

- Characteristics:
  - Pager-sized device
  - Simple Operation
  - Less than one pound

Strike warning and position tracking for dismounted soldiers

4 Patents and 4 PCTs Pending

~3 Year Collaborative Effort between PEO C3T & USMA
Inside the ANCILE Pager

- **Small**: 3 inches
- **Lightweight**
- **Low Cost**
  - **Battery Case**: 4 x AAA Batteries
  - **Radio Module**: 1 watt output, 256-bit AES Encryption, Frequency-hopping
  - **Audio Alarm**
  - **Computer Module**: Linux 2.6 kernel, 400 MHz processor, 64 MB Persistent RAM

**COTS Components**
How Does ANCILE Work?

1. Enemy forces launch mortar rounds against a friendly patrol.

2. Counter-battery systems, like FireFinder and LCMR, detect the rounds and generate a warning message.

3. A small bridge device on the tactical net receives the warning message and relays it to the Ancile pagers.

4. Ancile pagers in the predicted danger zone alert the soldiers well before the rounds hit them.

* Same Comms and GPS mechanisms can be used in reverse for “Blue Force” Position Reporting.
ANCILE Pager Warning Times

Successfully Demonstrated during Yuma Proving Grounds Live Fire Event

Rounds detonated more than 50 meters away from the pagers

Partnered with RDECOM-ARDEC to license ANCILE technology
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