

Enhanced Survival Radio with Biometric Authentication

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CTC + Fidelica

CTC:

- Innovative technology scouting and partnership generation
- Experienced with technology transition in the federal sector

Fidelica:

- Pioneer in embedded biometric systems and thin, flexible electronics

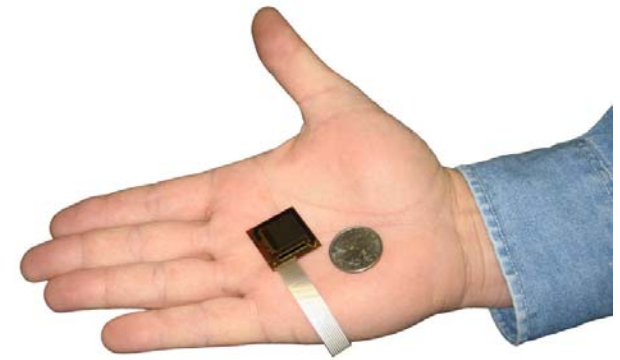
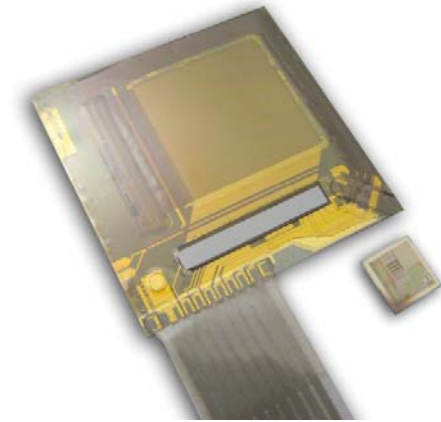
Authentication in Survival Radios

- **Problem:** Current survival radios rely on messaging for authentication, leaving opportunity for malicious use and ambush of search and rescue forces
- **Solution:** Include biometric fingerprint authentication system in the handheld device
- In this embedded environment, the biometric system should be:
 - Accurate
 - Robust
 - Easy to use
 - Low profile
 - Efficient



High Performance Biometric System

- 500dpi area-type fingerprint sensor
 - Single chip authentication electronics, based on 32-bit architecture
 - Minutia-based matching algorithm
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- Contains all fingerprint imaging, enrollment, and authentication in **postage-stamp sized device**



Benefits of Fidelica Technology

- Single touch, area-type sensor
 - Allows for single handed use, avoids awkward motion of swipe sensor
 - ➡ Beneficial for injured or compromised combat personnel
- Pressure sensitive fingerprint sensor
 - Works just like “ink-and-roll”
 - Images identically under all wet, oily, dry finger conditions
 - ➡ Functional in extreme weather environments
- Plastic substrate
 - Allows for remarkably thin system, less than 0.5mm thick
 - ➡ Enables integration without changing ergonomics of existing radio
 - ➡ Can be completely hidden during normal radio usage



Straightforward Integration

- Electrical
 - Biometric system delivers simple yes / no result
 - Can act as an electrical gate or “smart switch” or be used as a logical response to request for authentication
 - Runs on low voltage (to 2.25V), low power (<50mA)
 - Can be programmed as alternate input device
- Mechanical
 - Low profile design avoids need to change radio internals
 - Simple plastic housing designs



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