

Soldier Wireless Authenticators

A NextFlex Project | Department of Defense Manufacturing Innovation Institutes



Technology: Soldier Wireless Authenticators

Project Participants: Department of Defense

Institutes' Role: As a supplement to the Common Access Card (CAC), NextFlex worked with the U.S. Army Combat Capabilities Development Command (DEVCOM) to develop alternative authenticator form factors that are flexible, wireless and that can be worn by placing in a pocket or embedded in clothing to allow authentication to a platform via a wireless link.

Technology Description: The first version of this prototype contained a standard security chip which was attached to a printed Near Field Communications (NFC) antenna to allow authentication via NFC readers connected to a workstation. The small form factor and flexible nature of the device allows it to be readily placed or embedded in clothing to provide discrete secure access to a system. The second iteration of this prototype added the capability of utilizing a Bluetooth link. The Bluetooth link allows for authentication from a longer distance enabling a more functional worn device.

Impact: These devices required the development of printed antennas as well as a strong encapsulation process for the devices to ensure their reliability in the field. The 2nd prototype devices had a good range while also being resistant to water infiltration. These new devices also have allowed the team at CCDC to investigate and develop new, improved & innovative ways of authenticating soldiers in the field. Helping to better ensure the security of DoD systems.

