Battlefield Networks

Proficiency Code: A

The Battlefield Airborne Communications Node (BACN) combined with Global Hawk, provides warfighters essential information to pursue and defeat the enemy.

BACN's Airborne Executive Processor (AEP) enables a persistent Gateway in the sky that receives, bridges, and distributes communication among all participants in a battle.

In theater operations, mountainous terrain inhibited line-of-sight communications; diverse weapon systems were unable to communicate with each other; each operating unit could see only a limited set of the complete picture. BACN bridges the gaps between those systems, enabling essential situational awareness from small ground units in contact up to the highest command levels.

In response to a Joint Urgent Operational Need (JUON), Northrop Grumman accelerated integration of BACN onto manned aircraft and provided this indispensable capability to the warfighter in 9 months. The BD700 aircraft integrated with BACN were delivered in theater ahead of already aggressive schedules.

Now, integrating BACN onto Global Hawk optimizes BACN's powerful communications capabilities by exploiting the operational flexibility and economical endurance of that platform. Global Hawk makes BACN available to support the warfighter 24/7.

Originally conceived as a technology demonstration, BACN rapidly proved at JEFX and various exercises that its capabilities were already mature enough to field.

BACN's AEP provides translator and gateway interfaces among all supported communications systems, and forwards knowledge based intelligence information to the Global Information Grid. By controlling the AEP via a ground station, BACN becomes:

- Radio Agnostic
- Platform Agnostic
- Un-tethered

Delivered 4 integrated systems, including payloads installed in aircraft and ground stations, in 16 months

- Translates among tactical data link networks
- Enables Joint range extension
- Beyond-line-of-sight connectivity for disadvantaged users
- IP-based data exchange among dissimilar users

Additional information:

https://www.northropgrumman.com/what-we-do/air/battlefield-airborne-communications-node-bacn/

https://usaf.dps.mil/teams/10445/LPL/Documents/3DXXX%20-%20Cyberspace%20Support/BACN.pdf