

## Army Transformation: Wireless Network Support to Horizontal Fusion

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### ABSTRACT:

Quantum Leap is a phased, multi-faceted experiment, with different agencies taking the lead in different programs, to test network-centric warfare operations. Army Research Laboratory (ARL) is a key participant in the Horizontal Fusion program which facilitates the flow of specific, relevant and timely information from the collateral space to the user based on pre-established criteria. The goal of Horizontal Fusion is to get the information into the hands of the designated user as quickly as possible, without going through the traditional process of processing and analyzing collected data. ARL is also responsible for the Warriors Edge program which consists of sending and receiving data from robots that follow and support ground soldiers. In order for these devices to communicate with the ground soldiers, and for the soldiers to communicate with each other using various devices, a robust communications network is essential. Since army radios are currently not sufficient for the volume of data transferred between all of the nodes, the ARL networking team turned to commercial of the shelf 802.11x wireless technology in order to ensure the overall success of the program. With this equipment, a wireless network is established with the necessary bandwidth, range and separation of data to ensure that all of the many assets are able to effectively communicate in order to accomplish the Quantum Leap mission.

KEY WORDS: Quantum Leap, Warriors Edge, Horizontal Fusion, Network Centric Warfare, 802.11x, wireless, network

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