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Device Aware Networks

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The goal of a device-aware network is to match the capability of the end-devices to the information delivered, thereby optimizing the network resource usage. In the battlefield, all resources – including time, network bandwidth and battery capacity – are very limited. A device-aware network avoids the waste that happens in current, device-ignorant networks. By eliminating unusable traffic, a device-aware network reduces the time the end-devices spend receiving extraneous information, and thus saves time and conserves battery-life.

A device-aware network can satisfy some of the basic requirements of the Battlespace Communication Network. A key difference between a Battlespace Communication Network and the Internet is the capability of the end systems. In the Internet, most end systems are PCs with relatively high computational power, while in the battlefield, end systems are small devices suitable for mobile operation and have much limited resources in terms of processing capability, bandwidth and battery power. Therefore, devices used in the battlefield cannot be expected to perform as sophisticated processing as done by end systems in the Internet.

Related Thesis:

- Device Profiling for Device-Aware Networks
- Simulation Modeling and Analysis of Device-Aware Network Architectures
- Architectures for Device-Aware Networks

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