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Title: Opportunistic Networks: Specialized Ad Hoc Networks for Emergency Applications

Abstract:

Contrary to General Ad Hoc Networks and Systems (GAHNS), which provide one-size-fits-all basis for all kinds of applications, opportunistic networks are a kind of Specialized Ad Hoc Networks and Systems (SAHNS), each of which being suitable as a foundation for a restricted class of applications or even for an individual application. It is expected that SAHNS, thanks to exploiting salient features of their application areas, will result in overcoming barriers that make GAHNS-based solutions technically infeasible or inefficient. Oppnets constitute a new class of networks that allow a pre-designed seed oppnet to grow into an expanded oppnet by finding and using external devices and systems, which become their helpers. Significantly, these helpers can be employed opportunistically at low or no cost. In this talk, I will present a general introduction to oppnets and their current state-of-the-art related research and research challenges. These include: (1) Motivation for specialized ad hoc networks, (2) Analogy to a human emergency response team, (3) Oppnets as a new type of specialized ad hoc networks, and (4) oppnets related research and research challenges.