Energy Aware Disaster Recovery Network Using WiFi Tethering

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ABSTRACT
In this paper, we explore the use of WiFi tethering technology, ubiquitously available on wireless devices, like smartphones, personal digital assistant (PDAs) and tablets, for setting up the network infrastructure in disaster affected regions. To this end, we propose novel mechanisms, which aid in autonomous network creation, distribution of data capturing task among the devices, and collecting data with minimum delay. Specifically, we design and implement a distributed coalition formation game for distributing the data capturing task among wireless devices based on their capabilities, available energy, and network participation for higher network lifetime. Finally, we evaluate the performance the proposed solution using simulations.

*The publication of this abstract is intended for educational purposes only from an internal symposium and its content has not been peer-reviewed.*