

USER-CENTRIC NETWORKING AND SERVICES: PART 2



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BIOGRAPHIES

User-centric networks (UCNs) can be seen as a recent architectural trend of self-organizing autonomic networks where the Internet end user cooperates by sharing network services and resources. UCNs are characterized by spontaneous and grassroots deployments of wireless architectures, where users on such environments roam frequently and are also owners of networking equipment. Common to UCNs is a social behavior that heavily impacts network operation from an end-to-end perspective.

The second part of this Feature Topic starts with an article by T. Jamal *et al.*, “Cooperative Relaying in Dynamic Wireless Networks under Interference Conditions,” which describes RelaySpot, a novel link layer relaying protocol based on opportunistic relay selection and cooperative relay scheduling, which shows significant average throughput gains in comparison to proactive opportunistic and broadcast-based relaying approaches.

A second article by Loscri *et al.*, “Spontaneous Smartphone Networks as a User-Centric Solution for the Future Internet,” proposes a framework to assist in the deployment of UCNs based on smartphones, which considers, among other aspects, automatic methods to allow smartphones to organize in terms of spontaneous connectivity.

The third article by Mezghani *et al.*, “Content Dissemination in Vehicular Social Networks: Taxonomy and User Satisfaction,” provides another perspective on the applicability of UCNs: vehicular social networks. The article contributes a taxonomy for content dissemination as well as proposing the application of utility functions that integrate the notion of user satisfaction as a measure of successful dissemination, that is, the satisfaction level attained by a set of users who receive a specific object.

A fourth article, “A Trajectory-Based Recruitment Strategy of Social Sensors for Participatory Sensing” by Yang *et al.*, represents work developed in the context of relevant services in UCNs — participatory sensing. The article presents a framework for participatory sensing having in mind the goal of developing a trajectory-based recruitment strategy to select social sensors that are well-suited in terms of trust, device temporal availability, and energy consumption.

The fifth and final article of this Feature Topic, “Security and Performance Challenges for User-Centric Wireless Networking” by A. Frangoudis and G. C. Polyzos, identifies challenges of user-centricity in terms of impact on wireless networking architectures, particularly concerning security.

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