

# JOURNAL OF TELECOMMUNICATIONS AND INFORMATION TECHNOLOGY

## *Preface*

We present in this issue a miniseries on ad hoc wireless networks. It has been inspired by the discrepancy between the amount of effort (be it academic research or industrial push) expended for the promotion of ad hoc wireless networking concepts and the minuscule degree of their materialization in our lives. As academics, we are used to the fact that only a small fraction of our work finds its way into applications. After all, the role of academic research is not only to immediately bring about tangible products, but also to enlarge the intellectual base of hypothetical solutions constituting the advanced framework for education and professional development of ourselves. In other words, we could not create even as little as we do in the way of real-life substance, if we did not contribute to the Platonic world of pure concepts.

Yet practical impact of research counts too, and in our own area, i.e., telecommunication, we often feel short-changed more than other disciplines. Especially when one looks at the multitude of algorithms and protocol improvements being published every month, accompanied by performance studies demonstrating their superiority over old solutions, the disappointment from the confrontation with reality must be painful. Shouldn't the industry people come along and do things "the right way"?

Wireless ad hoc networking is a particularly bitter example. This is because its practical side is virtually nonexistent, despite the apparent demand on the one hand (if only from the sensing industry), and the proliferation of ideas on the other. In the area of inexpensive sensor networks, where the commercial pull is especially strong, the solutions the industry has to offer fail to catch on, as if they are missing something important. As for wireless Internet, access points have stolen the show completely leaving no room for the ad hoc paradigm. How many wireless ad hoc networks have you seen in existence? Isn't this number in sharp contrast with the size of their bibliography?

The papers of our collection attempt to explain the practical failure of wireless ad hoc networks and point out ways towards improvement. Criticizing is always an easy task – however, in our opinion what makes all these papers worthwhile is their constructive collective message: they identify specific and solvable problems (Bouckaert *et al.*, Kosek *et al.*), find interesting niches for ad hoc networking in areas dominated by access points (Gierłowski *et al.*), and demonstrate comprehensive cost-effective solutions verified by commercial deployments (Gburzyński and Olesiński). One paper (Malhotra *et al.*) suggests novel sensing applications where wireless ad hoc meshes may be truly essential, thus providing a rationale to break the monopoly of fixed-infrastructure systems.

We would like to thank all the authors for their valuable contributions to this unique set, especially that, as it usually happens, the notice was short and the timing could have been friendlier. We very much appreciate their dedication and promptness in delivering the manuscripts, which made our work so much easier.

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