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"Naming and Address Resolution in Mobile Ad-hoc Networks"
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ABSTRACT

In disaster scenarios, communication systems usually consist of heterogeneous nodes with different network interfaces and damaged infrastructure. Communication is important for both rescue teams and victims. However, serious problems might arise because normal network systems like wired or mobile radio Internet could be unreliable or simply not available. To deal with these problems, much effort has been spent to mobile ad hoc networks (MANETs) and their applicabilities. Due to high mobility, nodes join and leave subnets and therefore get a new local IP address with every change. Finding or reaching out to nodes over predefined identities leads to a reliable name resolution. The well-known Domain Name System (DNS) fails in MANETs because DNS server are single point of failure and therefore not applicable in such scenarios.

In this talk, we will describe our approach for MANET-adapted name resolution based on an adaptive routing framework including proactive and reactive routing schemes. We show possibilities to improve routing-based name resolution to add functionality or increase performance.

BIOGRAPHY

Sebastian Schellenberg studied Computer Engineering at Ilmenau University of Technology, Germany. He received his B.Sc. in 2009 and his M.Sc. in 2011, respectively. Since March 2011, he is a research fellow at the Communication Networks Group and a doctoral student at the International Graduate School on Mobile Communications at Ilmenau University of Technology. His research interests include networking protocols in sensor and mobile ad hoc networks.

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