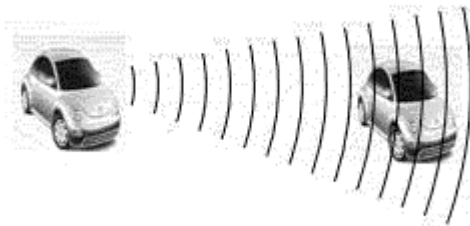


## Diplomarbeit/Semesterarbeit “Ad-Hoc Networks”

A little while ago a number of car manufacturers announced the following vision: They plan to ship a radio transmission unit with each new car. Together, all these cars become a so-called wireless multihop ad-hoc network. Ad-hoc networks have no engineered network topology, but instead must create a topology autonomously. If a driver of the fleet



wants to send a message to a friend (another driver), the sender will transmit the message to a car close by, which will again forward it to another car close by, and so forth, until the message is received by the friend.

There are several interesting research problems in the ad-hoc area: In which direction should one forward the message? How do we keep track of the position of our friends, so that we do not have to flood the network of cars with each and every message?

In this Diplomarbeit we would like to build a simulation test bed to assess the quality of our algorithms.

Skills: Interested in algorithms, geometry, and/or simulation

Contact: Roger Wattenhofer, wattenhofer@inf.ethz.ch, IFW A47.2, phone 26312.