

I will present my research on Distributed Algorithms for Hybrid Radio Networks that I conducted and plan to conduct as part of my PhD thesis. Hybrid Radio Networks employ two modes of communication - a local one, which may correspond to ad hoc connections, and a global one, which may correspond to cellular connections. The goal is to exploit the global connections to improve properties of algorithms that would classically have been executed on the local connections only. Since this is a fairly new area of research, not much is known on the topic yet. Recently, Coy et al. presented an algorithm for the setting that efficiently computes compact routing tables as long as no radio holes are present. In my current research, I work on a generalization allowing for any number of radio holes with a runtime dependency on the number of holes. In future research, I will pursue alternative approaches, with the goal of obtaining runtimes independent of the number of holes. Additionally, different settings may be of interest, where the global communication could be performed by drones that are able to move to handle areas of high traffic or to cover radio holes.