

In this work, we present an approach for c -competitive routing in hybrid communication networks with intersecting convex hulls. A hybrid communication network consists of an *ad hoc network* and a *global network*. An ad hoc network is a dense network of nodes which are connected to other nodes in close range, e. g. mobile phones which are connected by wireless to each reachable other phone. This network might have holes, e. g. in a building where the wireless connection cannot be established through. The global network enables us to communicate between each pair of nodes, but using this network is costly. An example for such a global network is the network of an Internet Service Provider for mobile phones. The idea is to send user related data, e. g. pictures, only over the ad hoc network connections in order to save costs. The global network is used to calculate the routing path within the ad hoc network. In the literature, solutions for c -competitive routing in hybrid communication networks already exist. These solutions are based on the idea of calculating abstractions of the holes. With these abstractions, c -competitive routing paths can be calculated in $\mathcal{O}(\log^2 n)$ rounds. These solutions work on networks where the convex hulls of holes do not intersect. We present first approaches on solutions which calculate c -competitive routing paths for hybrid communication networks with two intersecting convex hulls in $\mathcal{O}(\log^2 n)$ rounds on expectation. We show that finding such a routing path can be reduced to calculating the shortest path in hybrid communication networks with the shape of a simple polygon. We also provide the major part of an algorithm to calculate the shortest path in hybrid communication networks with the shape of a simple polygon. We do not solve this problem completely in our work, but we get close to a final solution and will mention, which parts still have to be solved.