

Master's Thesis

« Distributed Clique Algorithms in WSNs »

Motivation

Finding cliques in a network is a common and well studied problem in graph theory. In wireless sensor networks they can be used to separate the network into sub-networks for various reasons. There are only few distributed algorithms for this problem.

Work description

The main task of the proposed thesis is the implementation of multiple self-stabilizing clique algorithms and the evaluation of their performance. These algorithms will be provided, implementation and evaluation are the main focus of the thesis. Especially the verification of the self-stabilizing properties of these algorithms is of vast importance.

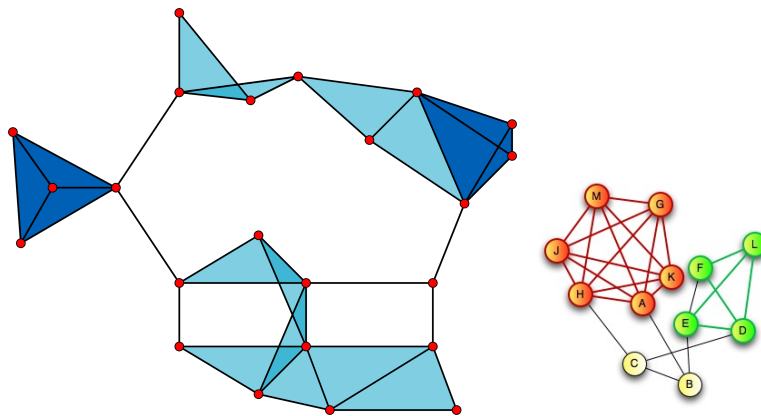


Figure 1: Two graphs with different clique representations

Requirements

- Fundamental programming skills, preferably in C++
- Basic understanding of distributed systems
- Basic graph theory knowledge
- (Knowledge about self-stabilization is encouraged but not mandatory)

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