ETH
Eidgenössische Technische Hochschule Zürich
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Distributed Computing Group

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Semester Thesis "MultiSweeper – A Multi-player MineSweeper"

Multi-player network games are enormously popular. So why not adapt some great but simple single-player games and play them together via LAN or the Internet?

In this semester thesis you will implement a multi-player variant of MineSweeper, a nice (Windows default) game. Since common versions of MineSweeper are played alone, you have to extend the rules and re-design the game-logic. All players should simultaneously sweep the **same** minefield, thus they see all flags and fields uncovered by other players. You must handle some problems: What happens, if two players will flag the same field? What, if a player wants to remove another player's flag? And in general – who wins?!

To handle the necessary communication between players, you should integrate the game into an existing Peer-to-Peer System, which is used in an ongoing research project of our group. Understanding of the basic network framework is one part of your work.

This thesis covers the development of the whole game. You might use an open (Java) source version of MineSweeper.

The goal of this thesis is to get a deeper understanding of the problems with distributed applications especially with racy games that need some coordination.

References:

- http://www.minesweeper.de (.org)

Skills

- Network and GUI programming in Java

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