

Interactive Display of Football Action

Bachelor Thesis Topic – Social Networks Lab

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Background: In association football (soccer), coaches routinely visualize their instructions on tactics boards. Whiteboards with magnets and markers are ubiquitous, and apps on tablets increasingly common. The latter may even include repositories of training exercises and animations of set piece routines.

Goal: Develop and implement an interaction design for multi-touch surfaces that allows for intuitive and efficient manipulation of tactical diagrams.

Approach: The thesis project will have four major milestones:

1. **Requirements:** Identify existing tools for interactive tactical diagrams and their use of visual languages, interaction designs, and data access features. Additional input and feature requests will be provided.
2. **Design:** Based on this research, establish a list of requirements and objectives with ideas for setting, animating, and manipulating groups of players according to game situations, formations, player tracking data, and instruction scenarios. The list should be prioritized and include desired, but non-essential features such as the specification and display of jersey colors or avatars, shirt numbers, and player data.
3. **Implementation:** Implement a working system. Platform and software development toolkit for implementation need to be agreed upon.
4. **Evaluation:** Access to experienced coaches for expert feedback will be available. An interaction study with subjects and tasks is not required.

Outcome: A written thesis that is self-contained and consist of (at least) an introduction, a review of relevant literature, a detailed description of the approach and its realization, an empirical evaluation, and a conclusion.

Any implementations used to obtain results or carry out experiments are to be made available upon completion of the thesis for verification and replication.

Shortly after handing in the thesis, an oral presentation of its main results should be given.