Multi-Touch Interaction for Disaster Management

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Multi-touch

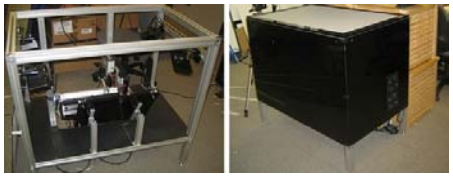
- Multi-touch is a very prominent technology
  - Much work on development of base technology and individual interaction and visualization techniques
- What are reasonable usage-scenarios?
- Are those systems intuitively usable ?
- Where are the limitations of such systems ?
- What new challenges occur using such systems ?

http://www.apple.com

http://www.microsoft.com/surface

http://dm.tzi.de/de/research/hci/mrt/

http://iad.projects.zhdk.ch/multitouch/



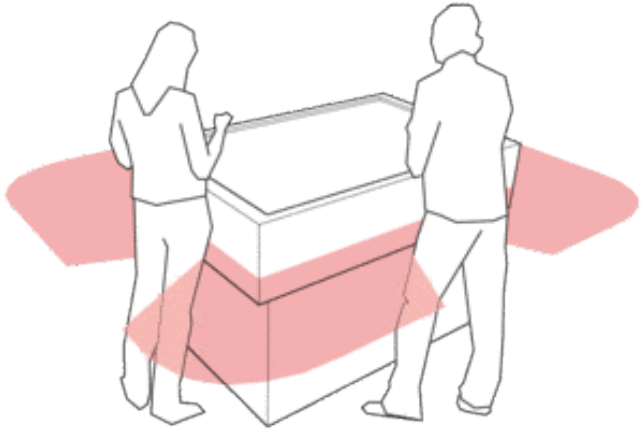
http://eis.comp.lancs.ac.uk/~dominik/cms/

http://johannesluderschmidt.de/l

User Centred Approach

- Multi-touch tables have high potential to improve situation awareness and collaboration in time critical multi-user applications
- Real applications (vs. photo sorting)

1. Requirements: recurring interviews and workshops with disaster managers and technicians from THW; observation of training exersises
2. Identification of areas for improvement through multi-touch visualization environments
3. Iterative refinement of scenarios



Scenarios

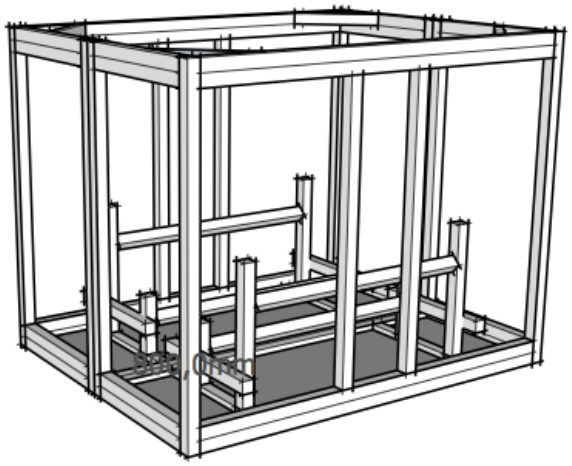
Management of an incident by a THW team

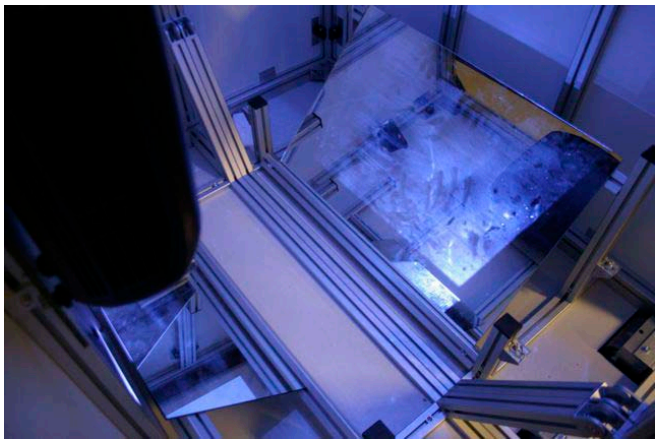
- paper maps, damage accounts
- location reference through magnetic tiles
- creation, manipulation, update of damage accounts

Key objectives

- maintain benefits of established workflow
- provide access to advanced functionality of a GIS based system

The useTable constructed @ C-LAB





Interaction on the useTable

touch

tangible

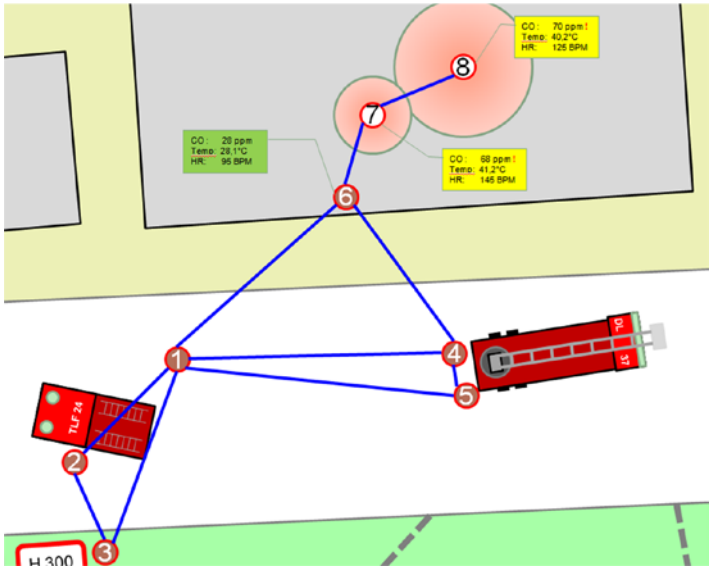
pen

User Studies:

- impact of different interaction and visualization techniques on cognitive workload
- examine potential physiological dangers incurred by long term use

More…

- combination with mobile sensor network to provide real-time tracking of rescue personal
- GIS for spatial queries and automatic situation analysis
- display extension



Come outside and try the useTable!