



Cooperation Systems – Interim presentation

Visual augmented reality manual support

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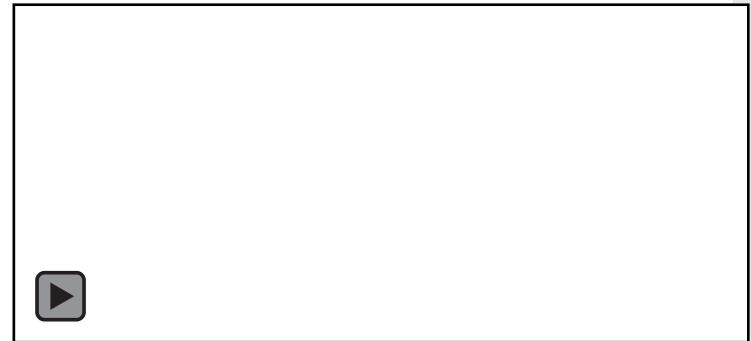
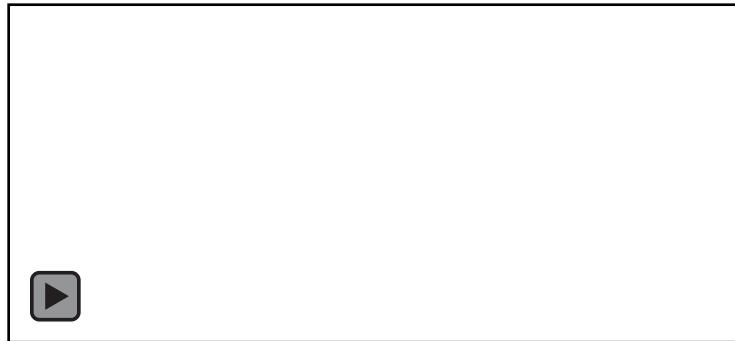


Our cooperation system (1/2) – idea

- AR support for the collaborative usage of (operation) manuals
- e.g. build your furniture together with additional complementary information
- Supporting through Augmented Reality
- Different roles possible but not necessary
 - “Searcher”
 - “Builder”



Our cooperation system (2/2) – prototype



**Marker for searcher
(show next parts)**



**Marker for builder
(show steps to
assemble)**

Concepts for this cooperation system

- Social interaction and coordination tool
- Roomware
- Awareness
 - All parties are always aware of the progress and the actual following task
- Synchronous bidirectional communication support
- Co-located (AR shared space)
 - In general a symmetric system design (Exploring, working on the same content, build/assemble the furniture together (teamwork))
 - Can also be used in an asymmetric scenario (Helper-Expert)



Plan for evaluation

- user studies
 - Questionnaires (pre/post)
 - How do you feel supported? (with traditional paper manuals/with AR supported manuals)
 - Were you always aware of the tasks of your partner?
 - ...
 - Interviews
 - flexibility
- Kirkpatrick Model
 1. Reaction – Do the users need this support?
 2. Learning – Can users work better together to build their furniture?
 3. (Transfer) – Can they use the knowledge with different manuals?
 4. (Results)



Planned improvements for the system

- transparency of bricks in modell to show progress (improve awareness)
- add properties of parts to list of next parts
- network manager improvements for collaborative task
 - Synchronize tasks between users