SENG2260 Human-Computer Interaction

Workshop 2

Week 2

SPS

Today

- Distributed Cognition

- You will have read
  - Shamus P. Smith, Jonathan Hart, "Evaluating Distributed Cognitive Resources for Wayfinding in a Desktop Virtual Environment", 3D User Interfaces (3DUI'06) 2006, pp. 3-10, doi:10.1109/VR.2006.60

Resource Information structures

- Plans
  - Action to be performed

- Goals
  - Goals and sub-goals to be achieved

- Current state
  - Current state of the world or interactive system

- History
  - History of previous actions and what properties held of the state in the past

- Action-effect model
  - Effect actions have on the system

- Affordances
  - Affordances that the system current supports.

Resource configuration

- A **resource configuration** is a collection of information structures that can be defined for each step in an interaction and which can be used to inform action

- Resources can be **external** in an interface or represented in the head of the user

- Interaction strategies link resource configurations to support decision making on actions

In groups

- Consider the interaction strategies for **finding a book in the UON library**

Strategy	Resources required
plan following	plan, history and current state
plan construction	goal, affordances, action-effect and current state
goal matching	goal, affordances and action-effects
history-based choice	goal, affordances and history

In groups

- Group 1: Plan following
- Group 2: Plan construction
- Group 3: Goal matching
- Group 4: History-based choice

Strategy	Resources required
plan following	plan, history and current state
plan construction	goal, affordances, action-effect and current state
goal matching	goal, affordances and action-effects
history-based choice	goal, affordances and history

Groups review

Strategy	Resources required
plan following	plan, history and current state
plan construction	goal, affordances, action-effect and current state
goal matching	goal, affordances and action-effects
history-based choice	goal, affordances and history

In groups

- Group 1: Plan following
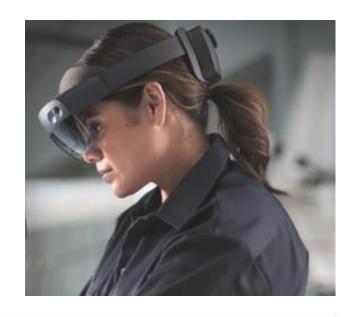- Group 2: Plan construction
- Group 3: Goal matching
- Group 4: History-based choice

- Now with a device:

Strategy	Resources required
plan following	plan, history and current state
plan construction	goal, affordances, action-effect and current state
goal matching	goal, affordances and action-effects
history-based choice	goal, affordances and history

Groups review 2

Strategy	Resources required
plan following	plan, history and current state
plan construction	goal, affordances, action-effect and current state
goal matching	goal, affordances and action-effects
history-based choice	goal, affordances and history

Workshop 3

- Virtual, Augmented and Mixed Reality technologies and supporting interaction