

Advanced Human-Machine Interaction

Interaction Data Analysis

Introduction

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What does HMI mean?



HMI: Human-Machine Interface / Interaction

Human-Machine Interaction and Complex Systems

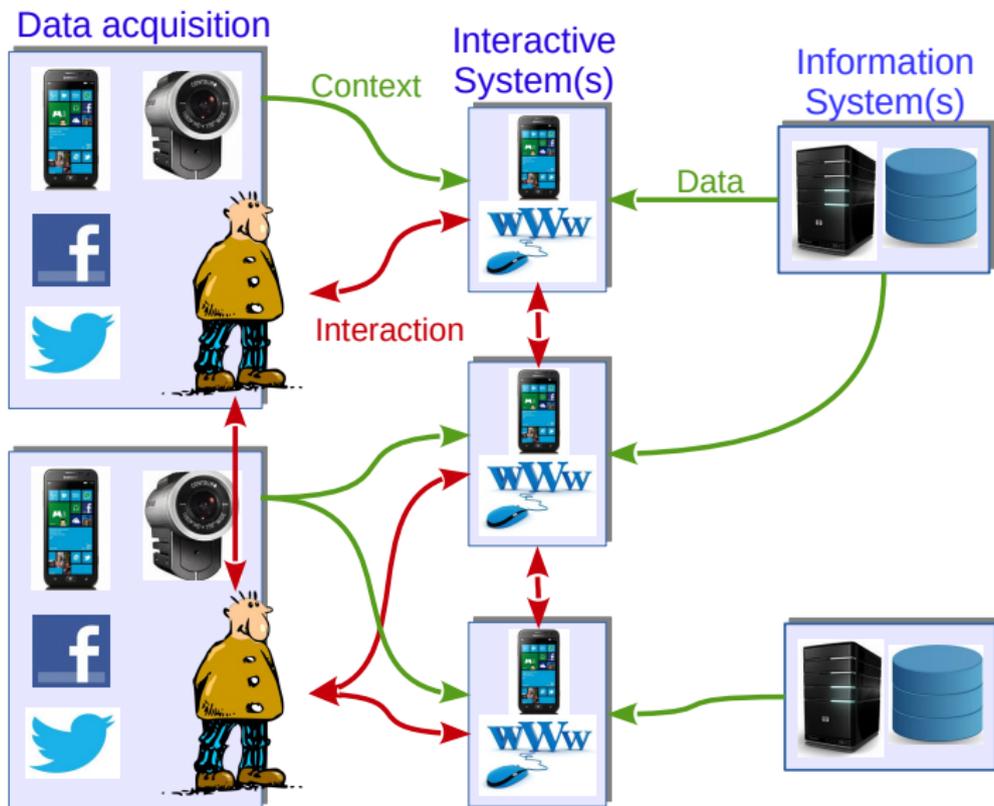


- Complex H-M interactions
 - Various modalities (written/oral dialogue, gestures, actions, ...)
 - Various captures of activity (text, video, microphone, ...)
 - System adaptation (to users, to humans, to contexts, ...)
- Various computer systems
 - Interface (capabilities of agent(s))
 - Number of interacting agents
 - Heterogeneity

Example

A smart building, with several users, robots, virtual characters, devices, ...

Purpose and goals of IDA and AHMI



Planning

Interaction Data Analysis / Advanced Human-Machine Interaction

- Introduction + Automata
- Mining and learning interaction data (x2)
- Textual interaction analysis
- Social Network Analysis
- Seq2seq learning on interaction data
- Exam

Advanced Human-Machine Interaction

- Multiagent Systems (x2)
- Embodied Conversational Agents (x2)
- Affective Computing (x2)
- Personalized Information Retrieval

Evaluation

AHMI Exam (1/3) + bibliographical survey (1/3) + Project (1/3)

IDA Exam (2/3) + bibliographical survey (1/3)

PAO Project

- Projects: X proposals, teams of 2-4 students
- Survey: X proposals, 1-3 by topic, 2 articles provided as starting point. 2 pages (double column) or 3 pages, ~ 10 – 30 articles.