Introduction to Multimodal Interaction (M1 HCID-251)
Intelligent Multimodal Interaction (M2R Interaction)

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Interaction, Multimodality, Intelligence

- Nowadays interfaces
  - Poor use of Human communication abilities
  - Predefined static behaviour
  - Insensitive to context
- Futur Interfaces
  - Use of different communication modalities
  - Intelligent dynamic behaviour
  - Adaptation to interaction context

First part

- Multimodal Interaction
  - Characteristics of Human Communication Modalities
  - Fundamental aspects of multimodal interactive systems
    - Modality theory
  - Input Multimodality
    - Fusion Methods, Software Architecture, Tools
  - Output Multimodality
    - Fission, Adapation Models
  - Application domains
    - Ambient Intelligence
    - Interfaces for impaired people

Second part

- Models of context and actions
  - Semantic models : what to represent and how
    - Data, entities, actions, activities
  - Symbolic representation, model of activity
- Reasoning about context and activities
  - Reasoning about actions
  - Planing activities
- Using context information for Ambient Intelligence
- Conversational agents and assistant agents

Evaluation

- Project (50%)
  - Design and implement an intelligent multimodal interface
- Research paper study (50%)