

Multimodal Interfaces

Project

Didier Aeberhard
Pascal Gremaud
Ismail Senhaji

Outline

- Introduction
- Modalities
 - CASE/CARE
- Problems
- Evaluation
- Conclusion
- Video

Introduction

- Immersive game

AaaaaAAaaaAAAaaAAAAaAAAAA

- Free-fall simulation

Our project

- Use of human body to control the game
- No game controller
- Body movements
 - Head Oculus Rift
 - Hands Power glove
 - Arms Kinect

CASE and CARE

CASE (machine-site)

- Concurrent (mostly)
- Synergistic (combination glove/kinect)
- Exclusive (first open/close glove)

CARE (human-site)

- Complementarity (glove/kinect)
- Assignment
- Equivalence (friendly gesture)

Challenges

- Create the glove
 - Arduino Micro Pro
 - Building
- Calibration
- Fusion
- Assembly

Evaluation

- With our inputs vs joystick
- 10 participants pool
- Participants feedback

Participants results

- Almost no one was able to even complete a level
- Tired after several minutes
- No results obtained

Participants feedbacks

- Immersive
- Fun
- Innovative
- Uncomfortable
- Inefficient
- Proposition
 - Oculus, joystick and glove
 - Sit instead of lying

Conclusion

- Multimodal
- No improvement in player score
- Improved experience
- Possible improvement

Video Demonstration

Questions?

