Cultural Computing: the ALICE project

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Past, Presence, and Future of HCI
What is Culture?

Culture is the integration pattern of human behavior that includes:
- attitudes,
- norms,
- values,
- beliefs,
- actions,
- communications and
- institutions of a race, ethnic, religious and/or social group.

The word culture comes from the Latin root *colere* (to inhabit, to cultivate, or to honor). In general, it refers to human activity; different definitions of culture reflect different theories for understanding, or criteria for valuing, human activity. Anthropologists use the term to refer to the universal human capacity to classify experiences, and to encode and communicate them symbolically. They regard this capacity as a defining feature of the genus Homo.

Cultural Computing: Kansei mediation

**Culture: the East**

Lao-Tse  
**TAO TE KING**  
c.604 - c.521 BC

Siddharta Gautama  
563 – c.480 BC

Bodhidharma  
479-543 AC

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**ZENetic computer (2003)**

Naoko Tosa

Seigo Matsuoka

(link to video clip)
Culture: the West

René Descartes
1596-1650

Immanuel Kant
1724-1804

res cogitans - mind
res extensa - body, matter, etc

synthetic a priori knowledge:
- time
- space
both pure forms of intuition and pure intuitions.

Culture in the East and West

Cross-cultural psychologist's juxtapose Eastern holistic and Western analytic reasoning.

Eastern reasoning embraces contradictions among objects in a yin–yang field of constant change.

Western reasoning tends to focus on objects and categories, and is driven by formal logic.

What would be a Western equivalence to ZENetic Computer?

Possible Answer:

- an interactive experience based on the story of Alice in Wonderland

Stage-1: Down the Rabbit Hole

link to video clip

Flow stair lift
Stage-2: Drink me – Eat me

Stage-3: The Cheshire Cat
Architecture

Translation of user actions
Integration of MR and R platforms
Intermediation between agents
Real-time adaptive narrative and plot
Heuristic interaction

Experience generator

Narrative & Plot
Translation of user actions
Integration of MR and R platforms
Intermediation between agents
Real-time adaptive narrative and plot
Heuristic interaction

Mixed Reality (MR)

I/O Manager Rendering Engine
Agent for avatar control
Scripts for avatar behaviour
Virtual Environment

Robot (R)

I/O Manager Behaviour Engine
Agent for robot control
Speech output
High-level robot performance scripts

Software Packages

Autodesk® 3ds Max® 8 software builds on our promise to deliver state-of-the-art tools for creative and media professionals. Developed as a total animation package with a deep, productive feature set designed to accelerate workflow, 3ds Max is the leader in 3D animation for game development, design visualization, visual effects, and education. TU/e-ID site license.

Academy Award® winning Maya® software is one of the world’s most powerfully integrated 3D modeling, animation, effects, and rendering solution. Maya also adds to the quality and realism of 2D graphics. That’s why film and video artists, game developers, visualization professionals, Web and print designers turn to Maya to realize their creative vision. Price ca 7000 EUR.

Goblin is an innovative platform for developing 3D augmented and virtual reality applications and games. It is written in C# and uses Managed DirectX. The platform leverages the unique capabilities of the .NET Framework to provide innovative features such as Edit-and-Continue. Free download.
Schedule:

*Month 1-2:*
Scenario writing and technical layout for stage-1, stage-2 and stage-3.

*Month 3-4:*
Setup stage-1 and development of prototype

*Month 5-6:*
Setup stage-2 and development of prototype

*Month 7-8:*
Setup stage-3 and development of prototype

*Month 9-10:*
Fine tuning and testing

*Month 11-12:*
User studies and writing report.

Expected Results:

- A research platform for cultural computing
- A prototype for interactive experiences
- Design guidelines:
  - Kansei mediated interaction
  - Robot behavior scripting
Our Team:

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Thank you for your attention.