ProvokArt

Speech-based interaction in a VR art gallery for HTC Vive

Manuele Veggi, manuele.veggi@studio.unibo.it

"Laboratorio di VR & AR", Prof. Gustavo Marfia

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The context. MakArt Project

- Translation of the **MakartNow project** (Hamburger Kunsthalle) into an immersive virtual environment

- Each painting is commented by a set of **"provocative" questions**

- Cognitive goal: **stimulate the visitor** and catalyze **personal reflection** on crucial themes

Hans Makart, The Entry Of Charles V Into Antwerp, 1878

The environment and the hardware.

- 3D gallery based on the room of the Kunsthalle

- Exploration of the environment through **HTC Vive**
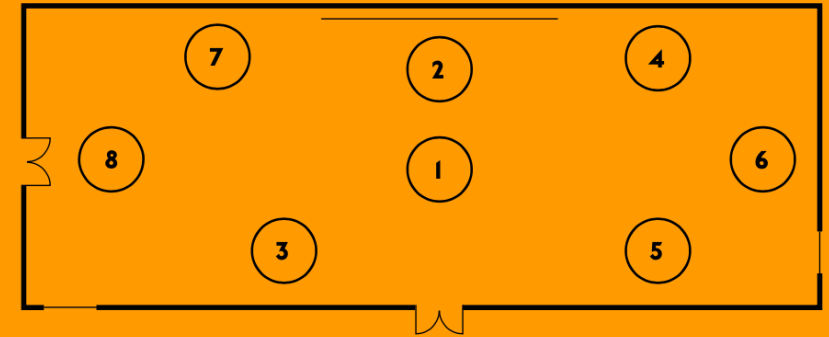
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EINFÜHRUNG
INTRODUCTION

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HANS MAKART, *DER EINZUG KARLS V. IN ANTWERPEN*, 1878
HANS MAKART, *THE ENTRY OF CHARLES V INTO ANTWERP, 1878*

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GESCHICHTE HAUTNAH. ZUR HISTO-RIENMALEREI IM 19. JAHRHUNDERT
HISTORY UP-CLOSE. HISTORY PAINTING IN THE 19TH CENTURY

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AUF ZEITREISE. DAS GENRE ZWISCHEN AUTHENTIZITÄT UND INSZENIERUNG
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MYTHOS ANTIKE.
DAS IDEAL AUF DEM PRÜFSTAND
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GEFÜHLSWELTEN. VON TRAUER, SCHMERZ UND ABSCHIED
WORLD OF EMOTIONS. SORROW, PAIN AND PARTING

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FASZINATION FREMDE.
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STÜRMISCHE ZEITEN. DAS ENDE DER KLASSISCHEN LANDSCHAFT
TURBULENT TIMES. THE END OF THE CLASSICAL LANDSCAPE

Modelling the interaction

Painting (or area of the room)

User — can enter → Collision box

Set of questions

Random selection of → Question

Storage **2**

answer through → Speech-based interaction — transcription → Speech-to-Text **1**
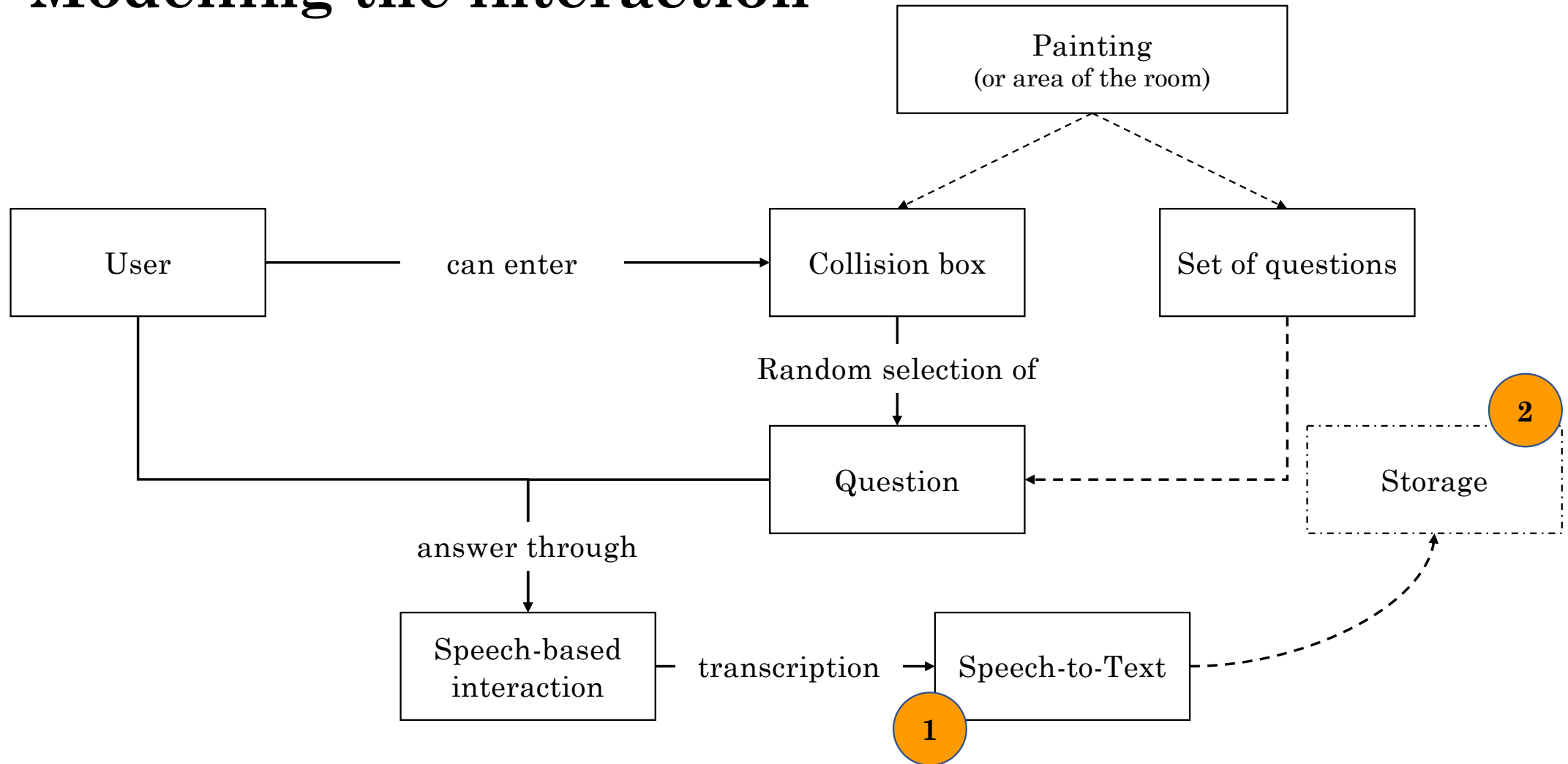
Open issues and possible solutions

① **Speech-to-Text**

- Google Speech-to-Text
- Cognitive Speech SDK
- Voice input in Unity

② **Saving the transcription**

- Possibility of creating a **corpus** collecting all the interactions?
  - Possible advantage: NLP analysis on the corpus
- …

Related projects

See, Hear, Play Kandinsky! – Hamburger Kunsthalle

- VR experience through HCTVive
- Same institution of MakartNow: Hamburger Kunsthalle
- Acoustic interaction with the work of art

☰ Home

MoMA Exhibitions
MoMA - The Museum of Modern Art

Here are the exhibitions you asked for.

Bouchra Khalili: The Mapping Journey Project, April 09, 2016 - October 10, 2016

Bruce Conner: It's All True, July 03, 2016 - October 02, 2016

A case study on using voice technology to assist the museum visitor (Moore et al 2017)

- Non-immersive technology
- Speech-based interaction with the user (Alexa)

Natural Experiences in Museums through Virtual Reality and Voice Commands (Ferracani et al 2017)

- Immersive experience for a museal context (OculusRift for VR)
- Use of speech to give commands
- Relies on Microsoft Speech API

Possible bibliographical references

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