STSM Report Template

REFERENCE: Short Term Scientific Mission, COST TD1201
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Period: from 09/02/15 to 13/02/15
Place: Faculty of Elecronic Engineering, University of Sarajevo, Bosnia and Herzegovina
Reference code: COST-STSM-TD1201-24981

1. Purpose of the STSM

The purpose of the STSM visit "*Analysis, evaluation and comparison of 3D modelling workflows in CH as a basis for guidelines and vocabulary*" in Sarajevo was to identify similarities and differences of typical working processes and methodologies in the field of CH 3D modelling. The methodology was to review heritage visualizations of the HOST institute in Sarajevo. The results of this STSM visit will be matched with results of another STSM visit at King´s College London (see project report COST-STSM-TD1201- 24978). Based on this a further purpose is to define general phases of a process and strategies in the methodology as well as a definition of different CH visualization typologies.

2. Description of the main results

2.1. Introduction

The work and the approach of the investigation were characterized by two sequential parts:

- Practical part: Analysis, evaluation and comparing of different project of the HOST- institute
- Theoretical part: Workshop and discussion with the HOST institute

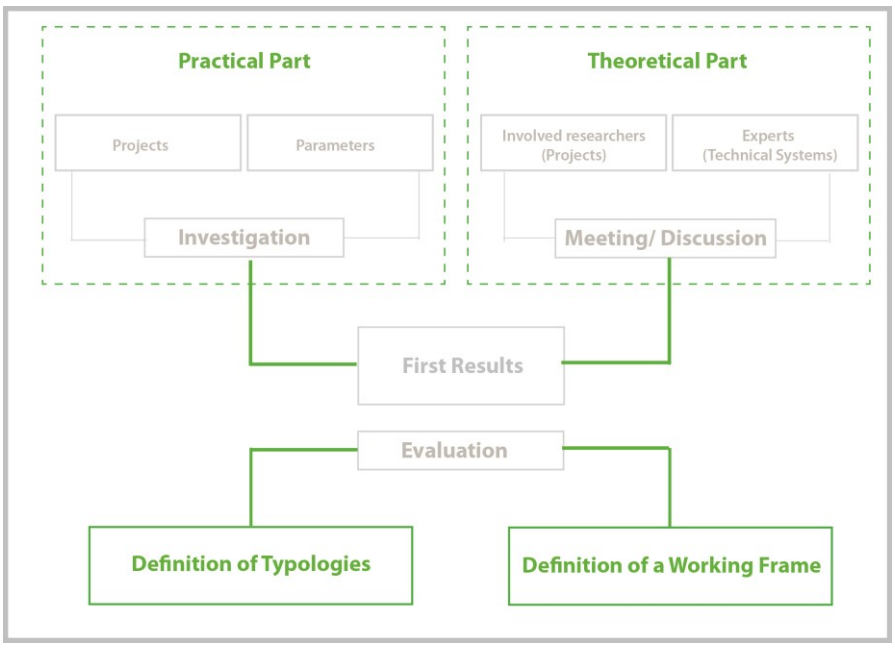

Figure 1 - Visualisation Project Process

4. Description of the main results obtained

4.1. Investigated projects

As a first step of her work, the applicant investigated the following 15 projects of the HOST institute:

Stecak; Virtual presentation of Sarajevo City Hall; Information Perception in Virtual Heritage Storytelling Using Animated and Real Avatars; Virtual Sarajevo – Baščaršija project; Virtual National Museum of BH; Isa-begova tekija project; The Church of the Holy Trinity in Mostar; Bosnian Traditional Objects; Interactive digital catalogue of Stecaks; Multimedia presentation of Saborna Church in Sarajevo; Virtual Museum of Sarajevo Assassination; Sarajevo Survival Tools ; Sarajevo Time Machine;Isa bey's endowment; Keys2Rome exhibition

4.2. Parameters

The investigation of these projects based on the defined objectives parameters, e.g. background, context, timeline as well as intention of the project; involved people; application field and possibility; type of 3D visualisation method; technical system/aspects; methodology and steps of the working process.

2.3. Results

Based on this investigation it was possible to generate results in two main topics:

1. Definition of types of CH visualization
2. Definition of a process as an input-output-schema
3. Correlation between the parameters

2.3.1 Definition of different types of CH visualization

Based on the investigation during the STSM visit, earlier research of the applicant and her experience in 3D models in CH the applicant defined seven types of CH visualizations (figure 1).

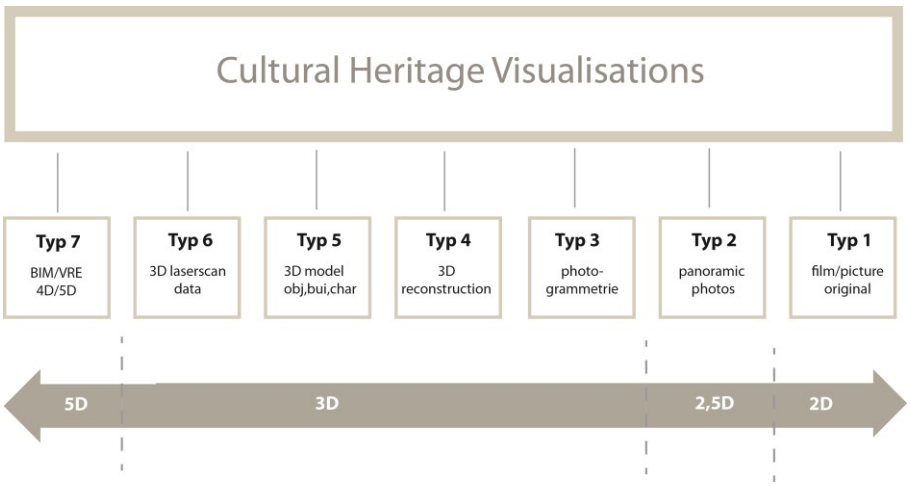

Figure 2: Types of CH visualization at UNSA (schema), M. Pfarr-Harfst

Typ 1: 3D data resulting from laser scanning as a preservation and recording method

Typ 2: 3D model of an existing building or objects;
3D model of character as an avatar

Typ 3: 3D reconstruction of a no longer existing building or object

Typ 4: 3D data resulting from photogrammetry
Typ 5: 3D imagine or panoramic photos as a 2,5D visualization
Typ 6: Images, renderings or films resulting from a 3D dataset; Original film or image as a Cultural Heritage object itself
Typ 7: BIM and VRE as a 4D application for the visualiszation of CH

These types were a basis for further research during the STSM visit in London. Based on the investigation in London the applicant enhanced these results and adopted the defined types of CH visualization.[1]

2.3.2 Definition of a process as an input-output-schema

It was possible to define four similar phases of a project as an input-output-schema. Depend on the background and the context of the project the method within the four phases are different. Because of the main phases, the Data processing, a digital dataset arose, which could be used in different ways.

The similarities are the four projects phases: preparation, data collecting, data processing and finishing. Within the working process a digital data set (2D or 3D) is developed. The differences are the different method e.g. for collecting and processing the data in CH visualisations and the final finishing phase, which is depend on the technics, the intension and the purpose of a project. The main causes for the differences and similarities are the intensions and the purpose of the projects as well as the Heritage objects or buildings. Based on the investigation and the used parameters it was possible to find out some dependencies between properties, potentials, and application scope and possibilities for the investigated projects of UNSA.

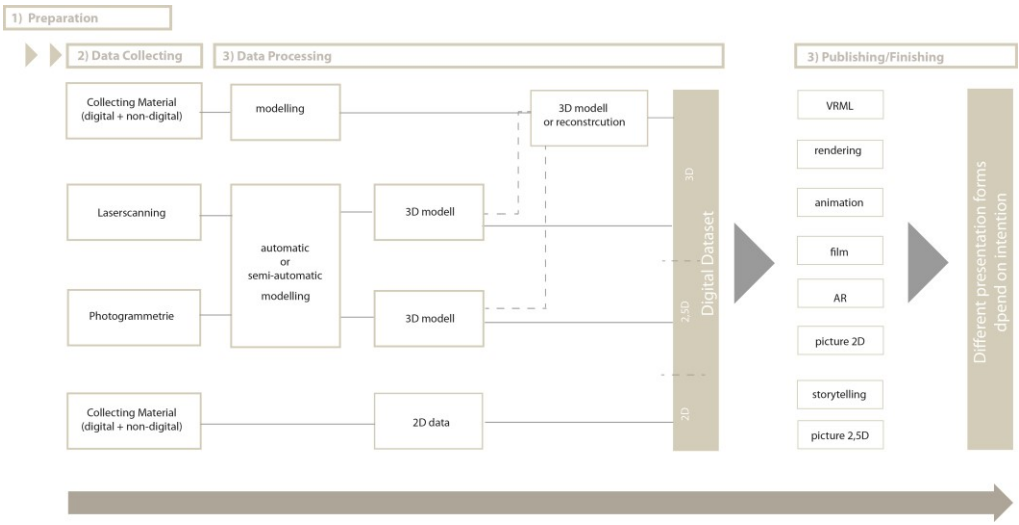

Figure 3: Working process at UNSA (schema), M. Pfarr-Harfst

2.3.3 Correlation between the parameters

Due to the defined objective parameters as a basis for the investigation, it was further possible to find out some correlations between these following topics: application field; intention, aims, purpose; type of CH; form of application/ presentation; application possiblity

[1] See report of STSM visit in London, reference code: COST-STSM-TD1201- 24978

a.) Correlation for the application field: Transfer of knowledge

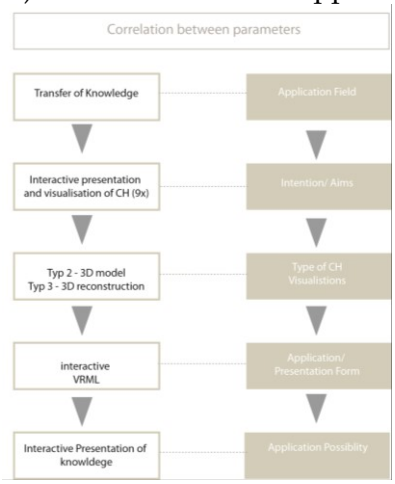

Figure 4: Transfer of knowledge at UNSA (correlation schema), M. Pfarr-Harfst

b.) Correlation for the application field: Research

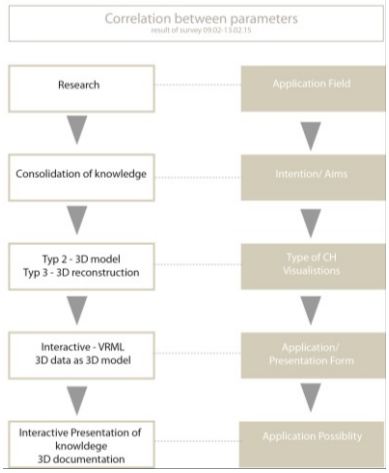

Figure 4: Application "Research" at UNSA (correlation schema), M. Pfarr-Harfst

c.) Correlation for the application field: Recording or preservation

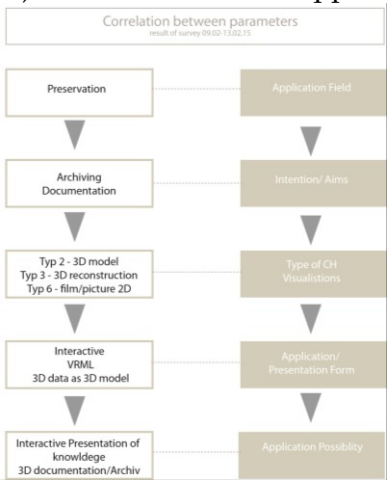

Figure 5: Application "Preservation" at UNSA (correlation schema), M. Pfarr-Harfst