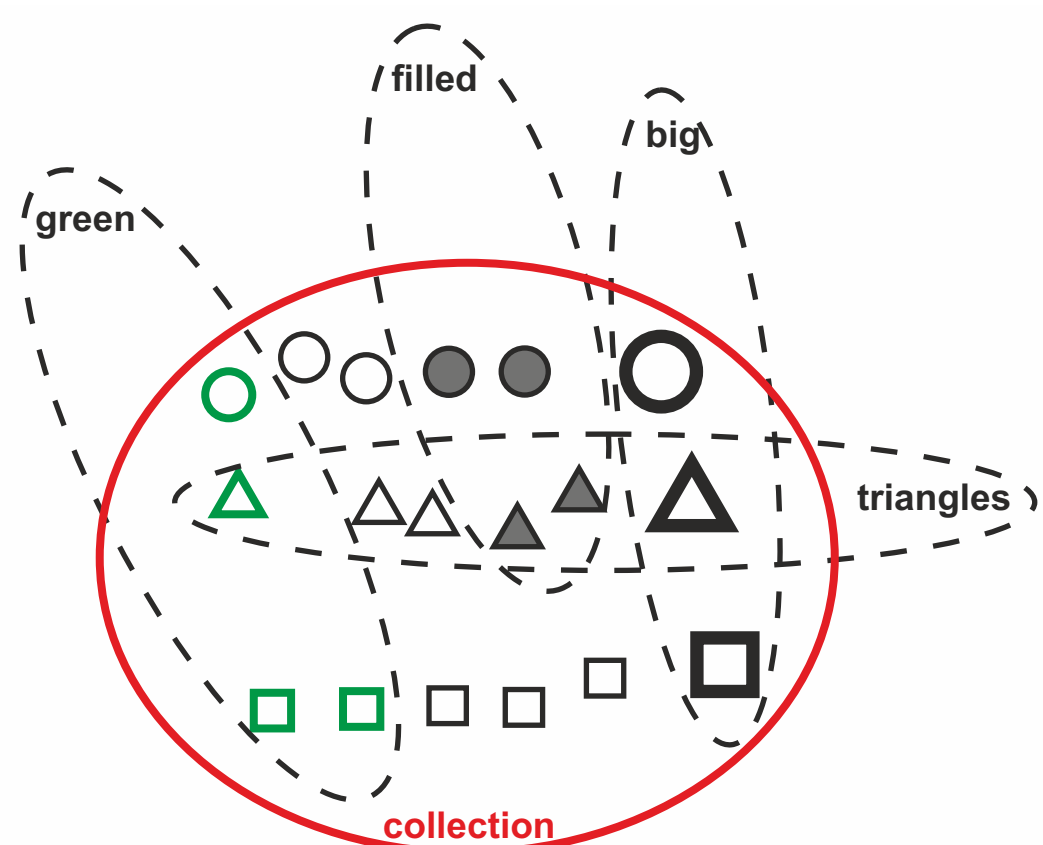


Can the “digital” reinforce a museum's mission - what information technologies to introduce into the planned exhibition?

INTRODUCTION

One of the most prominent roles museums play in our society is providing access to the vast collection of artefacts reflecting the natural, technological and cultural world that man inhabits and builds. Museums curate and conserve their collections, and display them based on creative selections called exhibitions. An exhibition is more or less an enlightened perspective on a collection, introducing one of its innumerable meanings, and manifesting by grouping the artefacts together in a particular way.



There are multiple keys for selecting items from a collection



Enlarged 3D printed replica of a cuneiform tablet for hands-on experience

THE EXHIBITION

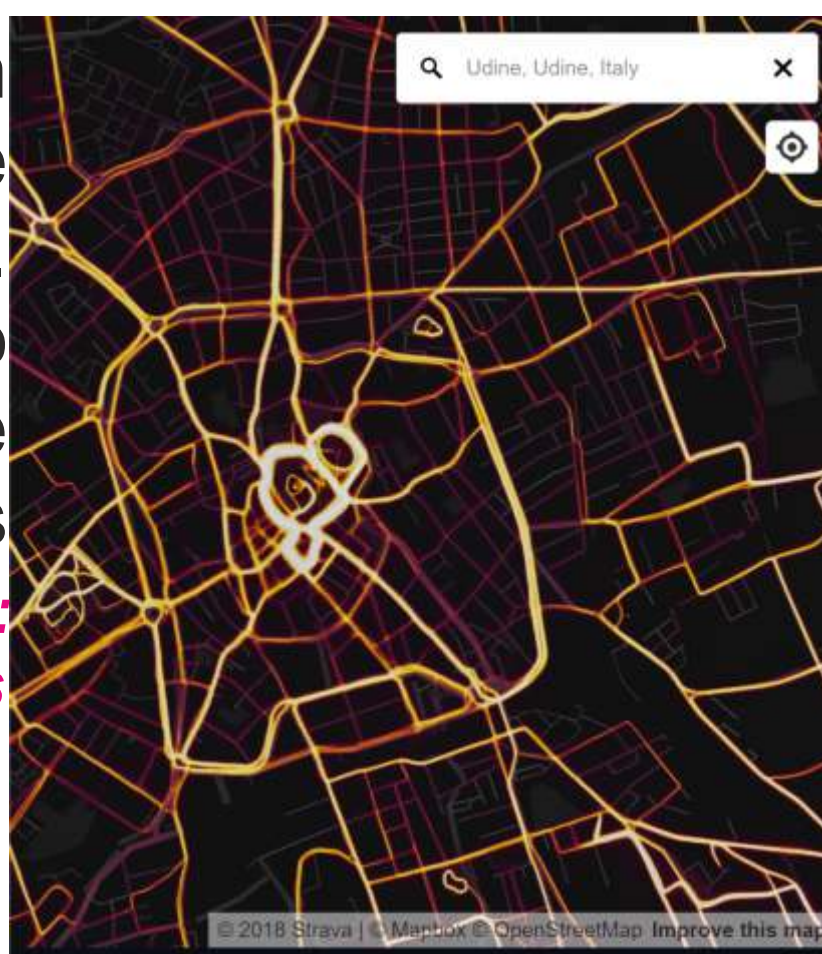
The exhibition's primary goal is to present the results of a five-year research project called 'Analysis, description and archivation of aggregate information on properties of cultural heritage artifacts and usage of such data in restoration, conservation and research'. It will open at the end of the project in 2020. As one of the main aims of the project is to build a comprehensive multi-disciplinary database covering Prague's cuneiform tablets collection, the exhibition will utilize data acquired by various methods and stored in the database. The exhibition will also explore opportunities for presenting the project's accumulated knowledge on its subject.

The second narrative line of the exhibition will be in some sense a meta-exhibition: the steps from buried object via excavation, through introduction into a collection, and finally, to an exhibition. Another point is a reflection of visitors' interest in the exhibited objects in a heatmap as a dynamically changing exhibit.

USE OF AUGMENTED REALITY TO FACILITATE THE GOALS OF THE EXHIBITION

As only a fraction of what is known about an exhibit can be written in the caption associated with the exhibit. Therefore, the curator has to painfully choose what is to be displayed, while the rest remains

An inspiration for the exhibition's “self-awareness”: a concept of a “heatmap” of favorite running routes in Udine (the boldness is related to frequency) can be adopted into the exhibition showing visitors' most common “trajectories” and popular spots .



Acknowledgements

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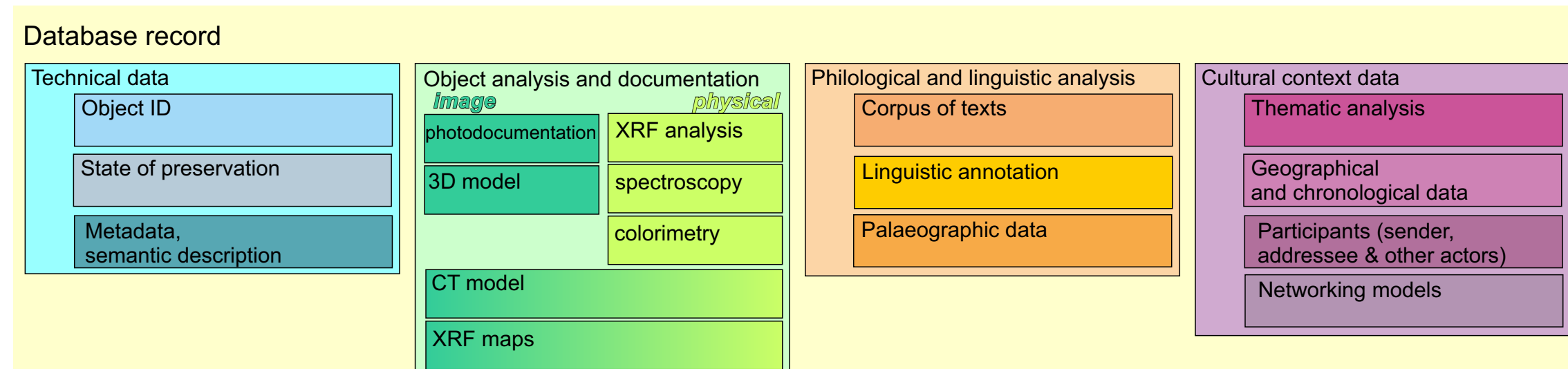


Petra Štefcová

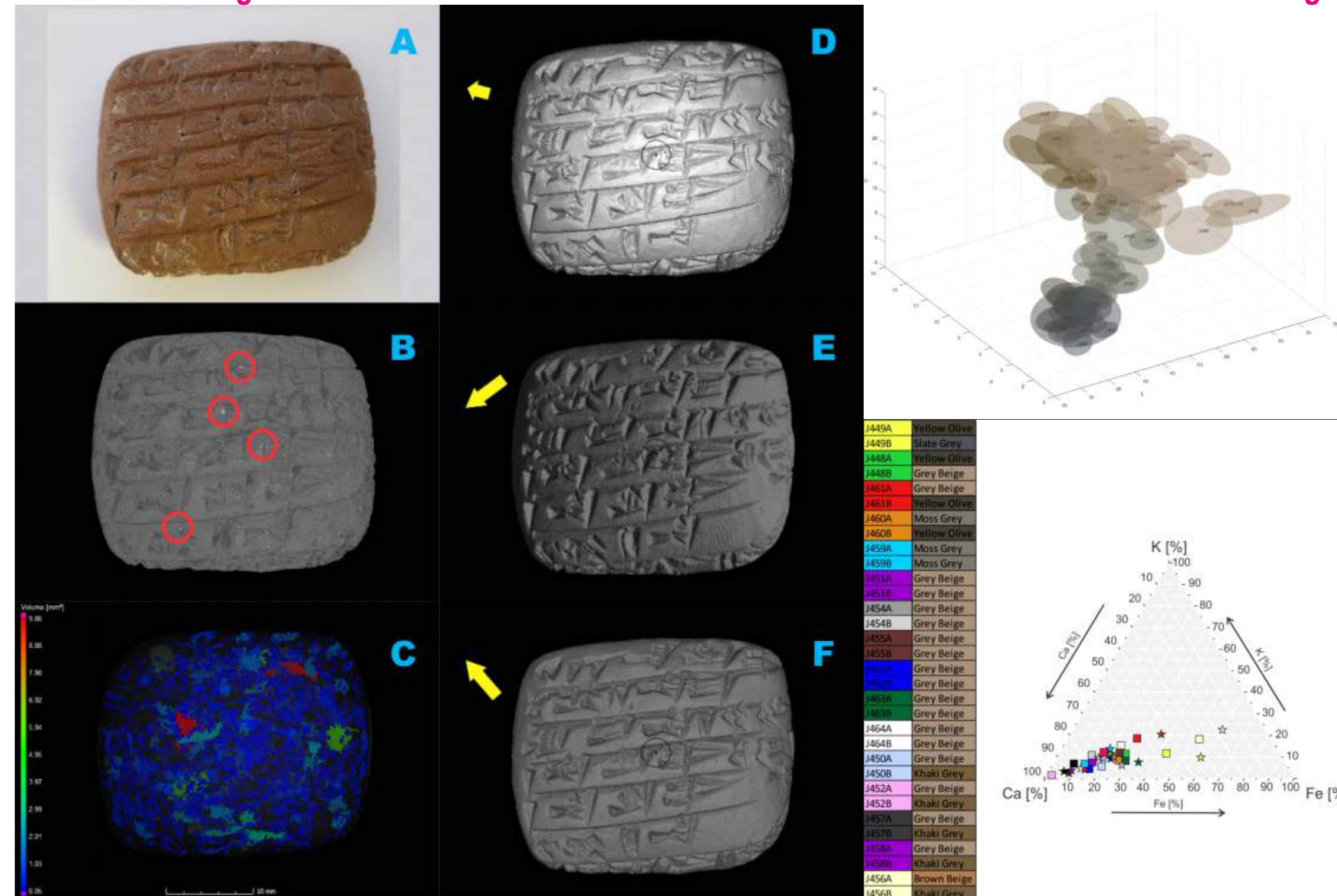
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unrevealed. Nowadays, technologies and tools of AR enable visitors to access all facets of information connected to the object and let the visitor discover what interests them. One can see the conflict between whatever knowledgeable storyline given by the exhibition's curator on the one hand and the wealth of individual



Database of Prague's cuneiform tablet collection unifies data from several fields of knowledge.



Authentic object (A) can be by means of AR and VR enhanced by several layers of available knowledge - depiction of heterogeneous particles (B), visualization of inner pores and voids (C), structureless depiction of grooves for cuneiform reading facilitation under various simulated illumination conditions (D-F).

Distribution of tablets' colors in color space helping to group the tablets by color.

Determination of tablet's provenience based on composition depicted in a ternary diagram

paths to learning and discovering enabled by AR on the other hand. Layers of knowledge available for exploration through AR could be for example map data from the excavation site, a transcript of the cuneiform message, the material composition of the tablet, the wider context of other objects found at the excavation site, etc.

SUMMARY

New opportunities enabled by information technologies bring about an expansion of the exhibition space in directions previously unthinkable. However, it is necessary to control this expansion in order to protect the message intended to be communicated in the concept of the exhibition and not to have the artifacts overshadowed by technology.

The project dealing with the collection of cuneiform tablets shows that the integration of comprehensive data coming from various fields can be useful in several ways:

- The digitization of the collection means also the opportunity of sharing the collection.
- Combined data from humanities and science domains bring intriguing possibilities.