

COSMOS. Cultural Osmosis - Mythology & Art

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Abstract

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The abundance of Greek mythology, combined with the need to preserve and spread both tangible and intangible forms of cultural heritage, constitute the incentive towards the exploration of new ways to depict and narrate these fascinating "stories". The **COSMOS** project aims at the wide diffusion and the better understanding of this complex and monumental work, by means of an interactive, user-friendly and easily accessible tool.

COSMOS application is developed in two interrelated levels: “Myths” and “Art”. The first focuses on myths as narratives, while the latter includes artworks that depict these stories. Each level is organized in three parallel windows, which visualize the correlations among their basic elements through a node-based design, and change dynamically offering a complete picture to the user.

More explicitly, “Myths” include: a) the stories, organized in a character-based approach, b) the participating characters and c) the places these stories are set in. Accordingly, “Art” includes: a) the representations of these myths in artworks, b) the depicted characters and c) the artworks original and present locations.

COSMOS will therefore achieve to overcome the usual practice of a linear narration, while at the same time, it will connect these myths to their depictions in works of Art that originate from different places and eras, and are now physically located across the world. The project offers the opportunity to record and present Greek mythology both in its written and visual forms. Furthermore, it constitutes a trigger for expanding this work internationally, with the inclusion of mythologies and artworks of other cultures, which will allow the comparative study of mythologies and art from geographically and chronologically remote civilizations.

The main functions of the COSMOS system are (a) the organization of knowledge deriving from texts; and (b) the presentation of this information through a dynamic environment. The implementation is realized by two respective systems: the Knowledge Management System (KMS) and the Knowledge Presentation System (KPS). Leveraging Machine Learning algorithms for Natural Language Processing, the KMS extracts knowledge (character names, locations, events) from Greek mythology texts and organizes it in a knowledge graph. This data is stored in a Relational Database Management System (RDMS), for easy and fast retrieval. The aforementioned knowledge is visualized in a dynamic, queryable 3D environment, providing the connected information in an appealing, innovative and interactive way, which facilitates understanding and incites the users' engagement.

The final product is intended to address to a vast audience: a) as a study aid for anyone interested, b) for educational purposes, by teachers and students, c) as a reference tool in the field of the Social Sciences and the Humanities, for the production of research projects (a tool produced by Research, to be offered to Research anew), and d) as a scientific documentation tool, for exhibition curating purposes.

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COSMOS app, level Myths. The three parallel visualization windows