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exhiSTORY: Smart exhibits that tell their own stories

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Highlights

- In exhiSTORY exhibits know and tell their own stories.
- Smart, self-organizing exhibits that cooperate with each other.
- Multiple stories told by a single set of exhibits.
- Comprehensible, rich, diverse, personalized and highly stimulating experiences.
- Exhibits can be moved freely and the exhibition will be reconfigured automatically.

Abstract

Museum exhibitions are designed to tell a story; this story is woven by curators and in [its context](#) a particular aspect of each exhibit, fitting to the message that the story is intended to convey, is highlighted. Adding new exhibits to the story requires curators to identify for each exhibit its aspects that fit to the message of the story and position the exhibit at the right

place in the story thread. The availability of rich [semantic information](#) for exhibits, allows for exploiting the wealth of meanings that museum exhibits express, enabling the automated or semi-automated generation of practically countless stories that can be told. Personalization algorithms can then be employed to choose from these stories the ones most suitable for each [individual user](#), based on the semantics of the stories and information within the user profile. In this work we examine how opportunities arising from [technological advances](#) in the fields of IoT and semantics can be used to develop smart, self-organizing exhibits that cooperate with each other and provide visitors with comprehensible, rich, diverse, personalized and highly stimulating experiences. These notions are included in the design of a system named exhiSTORY, which also exploits previously ignored information and identifies previously unseen semantic links. We present the architecture of the system and discuss its application potential.

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Keywords

IoT; Cultural heritage; Self-organizing exhibitions; Semantics; Quality of experience (QoE); Personalization

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Costas Vassilakis is an associate professor in the Department of Informatics and Telecommunications of the University of the Peloponnese, in the subject of Information Systems. He has received his degree from the Department of Informatics of the University of Athens in 1990 and his Ph.D. from the same department in 1995. During the period 1991–1995 he received a scholarship from the Greek State Scholarships Foundation. He has conducted research in the subjects of information systems, systems software and netcentric systems, having published over 130 relevant papers in international scientific journals and conferences. He has participated in more than 25 international and national research and development projects. His scientific interests include information systems,

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Manolis Wallace was born in Athens in 1977 and serves as an assistant professor of the Department of Informatics and Telecommunications. In the past he was with the Athens Campus of the University of Indianapolis, where he served as the chair of the Department of Computer Science, as Biographies (Text) well as at the Foundation of the Hellenic World, where he served as a project manager. Manolis specializes in the merging of knowledge engineering, fuzzy systems and uncertainty management and has created the Knowledge and Uncertainty Research Laboratory to organize the departments work in the field. He has authored more than 70 journal, magazine and conference articles in the above fields; he has co-authored one book and co-edited eight more. He is the co-founder of the Semantic and Social Media Adaptation and Personalization (SMAP) series of workshops and serves or has served as the organizing committee chair, program committee chair or program committee member in more than 30 more conferences. Manolis is a senior member of the IEEE.

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