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# Visualizing History through Virtual Archaeology -Emerging Trends

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Abstract: This paper examines the emerging trends of historical research through adoption of virtual archaeology experience. Virtual Archaeology. The virtual archeology supports researchers to reinterpret history. These visual technologies have newer opportunities towards cultural communication, dissemination of historical knowledge and historical awareness creation. Virtual archeology creates possibilities of communicating effectively about historical places, objects, and historical settings. It provides historical knowledge to a non history learner. or a common man. It creates virtual the environment of life, war, culture, expansions and expedition. Multi dimensional data sets are analyzed reconstruction of archeological sites are undertaken farthing investigations with the aid of computer analytics. Excavations are visualized using this technology. The creation of new perspectives in domain of data analysis data sharing data context making and cultural transmission. Every museum since artifacts sites and objects exist in relation and interaction with cultural processes.

**Keywords:** Visualizing history, Virtual archaeology, Opportunities, emerging trends

## I. Introduction:

There is increasing focus on inter linking relationships between History and technology. As museums, artifacts, digital technologies and the web and their role in the redefinition of the museum itself as communication engine. The interaction between real ontology the empirical perception of materials culture the digital representations.

Thomas, III, William G. (2004). "Computing and the Historical Imagination". In Susan Schreibman; Ray Siemens; John Uns worth A Companion to Digital Humanities. Oxford: Blackwell and Dollar, Charles, and Richard Jensen. Historians Guide to Statistics (1971), with detailed guide to older studies have focused on historical imagination through computer analysis in detail..

The Concept of Virtual Archaeology- Virtual Archaeology is an emerging term in historical enquiry. It is the collaborative study of archeological excavations with the simulation of computers and science. It was introduced by archeologist com computer scientist Paul Reilly in 1990s. This concept has been evolved as an offshoot of archeological study and today it has acquired a multi dimensional reading. Multi dimensional data sets are analyzed reconstruction of archeological sites are undertaken farthing investigations with the aid of computer analytics. Excavations are visualized using this technology.

There is increasing focus on inter linking relationships between museums, artifacts, digital technologies and the web and their role in the redefinition of the museum itself as communication engine. The interaction between real ontology the empirical perception of materials culture the digital representations. The creation of new perspectives in domain of data analysis data sharing data context making and cultural transmission Every museum since artifacts sites and objects exist in relation and interaction with cultural processes. Proceedings of the Second International Conference held at the State Hermitage Museum 1–3 June 2015 brought out new possibilities of historical research.

**Support to historical researchers**- The virtual archeology supports researchers to reinterpret history. These visual technologies have newer opportunities towards cultural communication dissemination of historical knowledge and awareness creation. Virtual archeology creates possibilities of communicating effectively about historical places, objects, and historical settings. It provides historical knowledge to a non history learner or a common man. It creates virtual the environment of life, war, culture, expansions and expedition. Based on accurate VR models of current archaeological landscapes and site scenes, it becomes possible to scientifically investigate the events that led to the current situation as well as to explore the underlying past archaeological structures and architecture, whose traces have been recorded by the non-invasive prospection methods or

unearthed during traditional archaeological excavations. Thus the simulation of archaeological landscapes through time becomes feasible and attractive within virtuality.

Topics of the virtual archaeology included

1.	Visualizing archaeology and heritage in 3D form,
2.	Virtual museums,
3.	Virtual, Augmented & Mixed Reality applications,
4.	Serious Games,
5.	Virtual curator vision centers,
6.	Narrative and Virtual Storytelling,
7.	Web 2.0 and Social Networking in cultural heritage,
8.	Interactive installations in museums and heritage sites,
9.	Data mining and digital archives,
10.	Digital Cultural Tourism,
11.	Digital preservation of historical & traditional practices,
12.	Virtual Educational approaches and much more.

Virtual archaeology is needed by

- 1. Archaeologists,
- 2. Cultural heritage professionals,
- 3. Engineers,
- 4. Ethnologists,
- 5. Historians,
- 6. IT specialists
- 7. Museum curators
- 8. Public and private museums curators
- 9. Scholars.
- 10. Students,

and others working on digital applications in cultural heritage.

**Emerging trends-** There is increasing focus on inter linking relationships between museums, artifacts, digital technologies and the web and their role in the redefinition of the museum itself as communication engine. The interaction between real ontology the empirical perception of materials culture the digital representations.

The creation of new perspectives in domain of data analysis data sharing data context making and cultural transmission. Every museum since artifacts sites and objects exist in relation and interaction with cultural processes.

Nowadays recent advances in 3D technology have led to increasing use of virtual methods of data collection in archaeology. Virtual archaeology is a bridge between the archaeology experts to bridge analytical skills. It is an inter disciplinary space where computer science and cultural heritage blend inter changeably as they work towards a common goal. Digital archeology is a visual art. It is a wonderful realm of photography, laser scanners, 3D modeling, augmented reality systems, and most recently, 3D printing. It is a way of replicating reality to preserve a record so that a site or artifact can be more efficiently and widely studied as a digital version or, with 3D printing, an actual copy of itself.

- 1. ADOBE DIGIT SERVE
- 2. ADOBE EDITOR
- 3. ADOBE FLASH
- 4. ADOBE XML EDITOR
- 5. STRUCTURED QUERY LANAGUAGE SQL
- 6. STRUCTURED QUERY LANAGUAGE SQL
- 7. WYSIWYG HTML
- 8. WYSIWYG HTML ADOBE EDITOR
- 9. XML EXTENSIBLE APPLICATION
- 10. XTML LANGAUGE
- 11. XML DIGIT
- 12. XTML MARKUP LANGAUGE

### II. Conclusion

Technology savvy Companies are making new and innovative technologies supporting historical research. Companies are developing and managing content and knowledge management web portals The companies are allowing visualization threads. They are providing the use of conceptual search engines. They are enabling users to analyse large volumes of data by means of data through data mining and text mining technologies. Its innovative multi channel and multimedia applications enhance interactions with the general public. They provide the best e -learning solutions by analyzing requirements. The creation of new perspectives in domain of data analysis, data sharing, data context making and cultural transmission has become a vital part of historical research. Virtual archeology supports to historical artifacts, monuments, sites and objects exist in relation and interaction with cultural processes this truth has to be borne in mind. Any policy towards historical research needs to include these inter-linkages..

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