A Planning Grant Proposal for Exploratory Research, Community Building, and Technical Prototyping for the Digital Library of the Middle East

Council on Library and Information Resources
The Antiquities Coalition
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Summary Description

Correlate with the horrific suffering and loss of life in the Middle East and North Africa (MENA), the cultural heritage of many nations in the region is presently under severe threat from a combination of destruction, looting, illegal black market trafficking, and terrorism. The MENA cultural legacy spans thousands of years and is foundational for the collective intellectual and artistic expression of the modern world and includes the traditional library prototypes of books, manuscripts, and other written and printed material, as well as archaeological, historical, artistic, and intangible cultural objects. In this regard the horrific annihilation, extortion, and theft in the Middle East—labeled 'blood culture' by the United Nations because acts of terror committed against human beings has shifted to the exploitation of cultural objects—is a global challenge. At the Antiquities Coalition's Cairo Conference in May, 2015, UNESCO Director General Irina Bokova said, "The destruction of cultural heritage, the cultural cleansing, is being used as a tactic of war… we must consider it for what it is: a war crime." Compounding this challenge is the paucity of regional inventories of the cultural record; poor communication; porous borders; greed; and uneven technical infrastructure.

This planning grant proposal is framed by the strongly held belief that digital technology, specifically those technologies associated with the architecture, management, and sustainability of large-scale digital libraries—what we are calling the Digital Library of the Middle East (DLME)—offers compelling remediation for this crisis. Functions of a well constructed DLME include, among other factors, greater accountability and tracking of cultural objects through digital surrogates; improved security through multiple platform display, including mobile devices; broad exposure to the cultural heritage and its fragility; and facilitation of longer term research. It also offers the tangible opportunity for institutions and individuals to take a united approach that says no to the terrorists and ideologues who would destroy our shared heritage.

Support is requested that would make possible site visits, face to face meetings, and teleconferencing to convene a notable advisory council and build support among institutions and government entities across the MENA area, as well as support research and outreach that would guide us to better understand and articulate the costs and developmental steps requisite for an extensible, interoperable, open source platform to capture and sustain this extraordinary legacy and make it available to users around the world.

Background

Theft, looting, and the illicit trade in cultural artifacts is a major challenge in the Middle East, a region disrupted by war and political instability for decades. The problem is especially acute today; in addition to the theft of antiquities, many instances of the outright destruction of a nation's cultural legacy have occurred. And in a development

pioneered by Daesh (ISIS), the sale of cultural material is financing terrorism. One of the more important approaches used to impede the looting and illegal trade has been a reliance on two UNESCO conventions, written and adopted in 1970 and 1995. These conventions call for inventories, catalogs, and other methods of record keeping to locate cultural objects and confirm their ownership and legal status. The inventories provide the most value when they are shared internationally and consulted at the point of transfer or sale of an item of cultural or historical significance. The UNESCO conventions were developed before the florescence of digital technology, and challenges to the system of safeguards articulated by the conventions are numerous: paper based inventories are fragile; they are prone to loss if not backed up by many copies, making the updating of the multiple documents cumbersome; they are subject to forgery and "antiquities laundering." Inventories that are kept at a central location are difficult to share across borders and difficult to compare and analyze with information in other regionally located inventories.

Today, the analog based method of inventorying can be easily transformed, enriched, and extended by the integration with digital library technology. The advantages of digital technology are numerous: these libraries can be searched using multiple terms in multiple languages; they never close; many people can use the digital library simultaneously; they are safe because of redundant locations of the data, as well as secured against fraud and forgery through ease of access; they are easy to update; and in the case of an artifact's destruction the digital library serves as the sole visual representative that would otherwise be irretrievably lost. Digital libraries could serve as sophisticated tracking mechanism for governmental agencies. In addition, some elements of the libraries (images, brief descriptions) could also be made publicly available to encourage a greater understanding of the region's cultural legacy, encourage respect for the importance of the cultural commonwealth, and be used as an elegant educational tool of the region's history: a means to safeguard a fundamentally important expression of our humanity across generations.

Digital libraries constructed in service to the cultural heritage of the Middle East would consist of the detailed description of a cultural object—the original inventories—and digital images, or surrogates, of the object. Transposing inventories to the sophisticated environment of a digital library offers powerful, cost effective applications and systems logic. To date, numerous institutions have committed to working with us on developing a DLME, including several major university libraries in the United States, whose cultural objects relevant to Middle Eastern studies will be aggregated into the DLME. These include Harvard, Stanford, Princeton, Stanford, and Yale. In addition, we have gained support from leaders of Middle Eastern archeological digs (faculty at Penn, Johns Hopkins, and NYU); museums, including the Metropolitan Museum of Art; organizations with extensive programs in the region, including IFLA, the Salzburg Global Seminar, UNESCO, and the World Monuments Fund. We have a longstanding working relationship with the Bibliotheca Alexandrina (a charter member of the Digital Library Federation), and have inaugurated conversations about the DLME with the Ministry of Antiquities in Cairo, the Qatar Foundation, the American University at Sharjah, and other regional institutions.

We envision the DLME to consist of phases: converting free standing analog/paper-based existing inventories to searchable, digital databases; new digitization of objects in the Middle East and the creation of linked metadata for them; and the aggregation of existing digital assets relevant to the regional legacy held in U.S. and European institutions, resulting in the revelation, management, and long term sustainability of poorly accessible or hidden collections on an unprecedented scale. If successful, over

time future digitization of materials and descriptions of cultural significance to the Middle East would be executed within an agreed upon framework of best practices, standards, and protocols.

Also worth noting is that time is a formidable adversary. Each year, more and more cultural heritage material is lost. The Antiquities Coalition estimates that cultural racketeering has cost approximately $3 billion in Egypt alone since the 2011 revolution. And in Syria and Iraq, no price tag can be put on the irreplaceable sites and objects that the terrorists have destroyed or continue to sell into the black market.

Rationale

This proposal requests funding for a series of focused research projects; meetings, webinars, and other methods of education and outreach; identifying and convening of a notable advisory council; and travel to on site locations in the Middle East and North Africa preparatory to explore potential partners and projects that may fall within the purview of the DLME. Information and insight gathered through these means will frame a final report that will either corroborate the efficacy and cost effectiveness of creating a DLME, or articulate why the concept is not at this time feasible.

The elements of this proposal are designed to test some of our prevailing assumptions regarding the construction of a Digital Library of the Middle East. As preliminarily envisioned, based on extensive experience with digital libraries over the past decade, both local and those of international scale, a DLME should be defined by the following characteristics:

- a compelling, dynamic, reusable, extensible, sustained, and customizable exhibit of the objects and artifacts of significant cultural and historical importance for our world heritage
- a means by which to track the provenance, history, transaction records, and legal status of all cultural objects in its database
- an aggregation of hundreds of digitization efforts and resources, in cooperation and collaboration with similar institutional activities in the region and around the globe
- a source of rich, detailed, and linked inventory information/metadata for each object
- a well-designed organizational governance, which will include a description of the governing organization and representative institutions and agencies, estimated staff size and staff expertise, funding, and other aspects that reasonably guarantee its sustainability

Through international support, the DLME will

- incorporate the most advanced open source and cost effective tools and applications available
- serve as a model for national and international cooperation: an exemplar for similar undertakings in other regions of the world
- provide a worldwide response to the terrorists who would destroy our shared heritage

The DLME, if designed wisely, will

- have the advantages of the considerable benefits of digital technology, which include low costs, minimal space requirements, ubiquity, multiple access capability, and preservation of the cultural heritage
- serve as a means to train skilled workers, create new jobs, and strengthen the local economy
- serve as a means to educate a very wide audience on the importance and sophistication of Middle Eastern cultures
- help to instill respect for and deeper understanding of this imperiled record of our humanity
- create peer to partnerships and collaborations among members
- activate a population that believes that our shared cultural heritage plays a critical role in our understanding and uniting people around the world

This project requires a shared digital architecture that ensures each nation comply with standards, protocols, and sharable applications. A preservation program to assure sustainability of the data and a plan to routinely migrate the information to current software platforms is requisite, as is an administrative structure for governance and continuity, though this need not be expansive or expensive.

It is also important to note that all items of cultural significance should eventually be included in the DLME. While there is a natural emphasis on those items considered at highest risk, such as those held and curated at museums, libraries, and archives directly exposed to political and military instigated instability, warehouses of ancient treasures have also been targets of theft. Without records and catalogs of the warehoused items, there is no proof that anything was stolen and no recourse to identifying and returning the stolen artifacts. One of the goals of the planning grant is to define the recognized eras of cultural florescence in the Middle East and try to prioritize digitization activities within those timeframes. We are assuming that artifacts ranging from the Neolithic period to the late nineteenth and early twentieth century will be reviewed as an aspect of this assessment.

While it is saddening to describe, the DLME would also serve as the record of last resort should a cultural object be destroyed. While looting proliferates in the Middle East, the instances of outright destruction are significant. Without a digital copy of those objects and a linked inventory description, these historical artifacts would be forever lost.

Some of the more salient components of the DLME at this planning stage include:

The inventory as prequel to shared metadata schema. The inventory and visual database of cultural objects represented would be linked together, but it is easier to describe them separately to convey the various steps of creating the component parts. Current inventories would most likely have descriptive fields that would include the title of the object, known or estimated date of composition, place of origin, key words to describe it, its current location, its provenance, a history of the object over time, and other topics relevant to understanding the object. The advantages of creating a digital inventory, which would serve as a major element of the metadata scheme, are several. A digital inventory allows for cross searching against many different terms; it can be easily updated; it is inexpensive to manage; it can be easily shared; it can be linked to other inventories to provide a larger regional context for the cultural heritage at risk.

The visual database. The visual database would comprise high-resolution images of the physical objects. The visual representations would offer a beautiful, engaging window to

the world of antiquity and other historical periods, displaying the unique artistic quality of the original. The visual database would also be searchable by all the terms used in the inventory of the object: in this respect the inventory and the images are inextricably linked, with the sum greater than the separate component parts of the library. A tranche of the database would be used to test advanced imaging techniques, like 3D recording.

Security advantages. A well-maintained and shared collection of national digital repositories of artifact images linked to detailed inventory information can also be programmed for access via mobile devices, including cell phones, iPads and other tablets, portable readers, and new versions of wrist watches. The advantages of this technology are several fold: customs agents and border guards would have immediate access to clear images and descriptions of objects that may help identify artifacts that are being transported across borders. Agents can check identification and authentication records instantly; pictures of objects at the border can be taken and sent back immediately to museums, antiquities organization, and governmental offices for analysis. The ability to use mobile and portable devices in securing the cultural heritage creates a kind of international dialogue that is far easier to maintain than under current conditions. Each inquiry, picture, and correspondence then becomes a part of the database so that the digital library and its users can continue to learn in a process that evolves and is augmented over time. The data available to customs, border, and security personnel will also serve as a typology of items to be on the alert for, especially along established illegal trafficking routes. This will aid authorities seeking to thwart the illicit trade in undocumented and uninventoried material. Representatives of both Interpol and UNESCO emphasized this advantage at meetings attended this week by the Antiquities Coalition at the United Nations and the German Consulate in New York. Both organizations are strengthening their databases of stolen and missing cultural objects as well as "Red List" taxonomies of objects that are likely to be found in the black market. Aligning those efforts with easily accessible records from the DLME would greatly expand the capacity of security services to identify both specific objects and types of objects as well as for market players seeking to perform due diligence.

Economic advantages. Should a DLME become feasible, many jobs will be created—hundreds, if not thousands—in pursuit of a compelling regional, interoperable system. These jobs will vary from basic level positions for scanning images and entering inventory information, to more sophisticated jobs requiring skills for architecting large data bases, search engine development, developing tools for visualization, data mining, and pattern recognition, among others. It is likely that this training program will become multinational at a large scale. Training local men and women for these positions is a solid investment not only for the creation of a new system for safeguarding the cultural heritage, but also the future, as these skills would have very wide application beyond this project. This advantage should have great appeal to national governments.

Collaborative advantages. The creation of the DLME will be leveraged to develop a peer-to-peer network of members for the purpose of institutional collaboration and mentoring. Among the opportunities are library-to-library, museum-to-museum, and university-to-university collaborations on projects, inventories of best practices, and scholarship.

Activities

Research topics include:

- a technical survey of selected existing projects in the Middle East focused on the cultural heritage of the region

- identification of leading scholars and technical experts in the Middle East who can become collaborators if the DLME is constructed

- summaries of political issues and challenges in the MENA region pertinent to the execution of DLME

- identification of funding agencies in the United States and abroad that could be enlisted for support of the DLME

- a comprehensive model for governance and administration

- research, plan, and cost a series of produced videos/and or motion graphics to engage a very wide audience

Outreach and communication include:

- identifying and convening an Advisory Committee and a Steering Committee
- organizing an outreach campaign to promote the DLME to institutional, private, and national partners in the region
- recruiting national government partners in two countries in the region
- continuing communication with potential partners
- outreach to additional institutions and individuals of interest
- promoting and publishing essays, articles, blogs, and webinars on the concept and goals of the DLME

Expected Outcomes

The following are among the desired outcomes of this planning effort:

- a rigorous assessment of the technical specifications to build out the DLME
- a more sophisticated understanding of the costs of the DLME
- a registry of existing domestic and international related digital resources, assets, and projects
- a registry of partnering institutions and individuals, and specific areas they can contribute to over time
- a timeline of component activities, benchmarks, promulgation, and phasing of work over 5 years
- a list of potential funders, public and private
- a more sophisticated knowledge of the cultural, political, and technical challenges working in the Middle East
- a description of methods of project assessment and evaluation
- a working concept of governance and administration of the DLME

If, at the end of this process, the DLME is not considered feasible, the information gathered should be of value to others who are planning similar projects in support of our collective cultural heritage.