

A tentative Roadmap to MADIL Project

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Most Maghrebi historical and cultural materials are not known to the world because they are so hard to access by local citizens and foreign scholars. Even when access is granted to local researchers, the collections are rather incomplete and scarce. This is coming from my own experience as a North African former student who had to leave her country 25 years ago in order to further my studies abroad because of the lack of scholarly material in university libraries. Even though a lot of progress was accomplished since then with the advent of computers and Internet, Maghrebi scholars are still complaining about the limited access to knowledge in their countries. Most local and national libraries and museums have now their own online catalogs or databases with different software and standards, but very few are linked and made accessible outside the institution where the physical holdings are kept.

The Maghreb Digital Library project (or MADIL for short) is the perfect solution to aggregate all these isolated collections and consolidate them into a single digital library with distributed resources. In order to create and sustain such an initiative, the basic infrastructure should be robust and flexible at the same time, and the basic cataloging and metadata should be kept simple to reach the lowest denominator without compromising quality of access and retrieval. Fast transfer and adaptation of the existing material into the new MADIL can be done efficiently if metadata standards are quickly defined and kept to a minimum, with the option to expand further once the growing contents are better understood as a Maghreb knowledge repository. So, the first phase would make existing resources quickly available to use on MADIL, but not necessarily easily searchable; However, the next phase would upgrade/refine the metadata for more accurate searching, while expanding digitization to non-library material.

Having planned, implemented and managed library, information & knowledge projects at the World Bank for so many years, it is very difficult for me to cover a specific topic without first picturing the global approach of MADIL project. Since this project is still at the vision/mission stage, I am taking the liberty to offer my own pragmatic perspective of MADIL, after reading the excellent scholarly Alexandria workshop papers. The attached roadmap is a summary of all the steps to be taken for the planning and implementation phases, along with challenges and issues that need to be addressed. The project is a continuum of distributed tasks performed in parallel in close coordination by all the regional constituents and international partners, even though the table shows three distinct phases on the roadmap for planning purposes. Because the digital library infrastructure and contents of each participating country are not at the same level, the deliverables might not be achieved by all countries at the same phase in the same timeframe. We should assess the present state of the digital libraries in each country of the Maghreb to find a common starting point.

Each roadmap step/issue can be expanded into a paper in order to be addressed in depth and discussed with the stakeholders. However, I believe that we can implement MADIL quickly and efficiently by keeping it simple and cost-effective, based on solid common standards, and by delivering fast and substantial results that will motivate the participating entities to pull

A Paper submitted for the Digital Library for the Maghreb Workshop

Held in Rabat, Morocco, January 25-27, 2007

resources together. Since the cost of building digital libraries is expensive and ongoing, it is crucial to get the buy-in from all the local and national governments in the Maghreb, and to obtain the collaboration with appropriate partners to build the technological infrastructure that will give access to Maghreb resources, and to provide the capability for ongoing input and digitization from the various entities with Maghreb holdings. The upcoming Rabat seminar is a positive indicator of the future success of MADIL project, particularly if there are lessons learned from the previous Alexandria, Egypt workshop. A regional framework for Middle East and North Africa Digital Libraries could be defined in close cooperation with both regions, and substantial savings could be made, particularly in the Arabic metadata area.

I should confess that since I left Algeria to study Library and Information science in the US, it has always been my dream to help scholars and researchers from North Africa by facilitating the access and sharing of knowledge needed for their success and for the development of the region. I would also like to contribute to making available all the cultural, social, literary, and historical knowledge unique to Maghreb societies, and about Arab and Muslim heritage, to foreign scholars and to the general audience interested to learn more about this part of the world. An added value would be the participation from other regions and countries that have important materials on North Africa, for example France detains most archives and historical documents on Algeria; Turkey has lots of Maghrebi artifacts and manuscripts from the Ottoman Empire period, and Spain has a great collection on Muslim Audalusian era, culture and religion, including art, and architecture.

My ultimate goal is to help quickly and easily provide everybody with the relevant information when needed for any purpose and without having to pay for it. I would like to thank the Rabat workshop organizing committee for this opportunity.

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Maghreb Digital Library Project (MADIL) Roadmap

Implementation Plan		Deliverables / Goals			
Steps (Requirements & actions)	Tasks (Focus areas & challenges)	Phase 0 Assessment of present DL state in each participating country/institution 2007	Phase 1 Consolidation & integration of existing collections 2009	Phase 2 Expansion to larger, broader scope & reach 2011	Phase 3 Dynamic ongoing process to maintain & expand Maghreb resources
DEFINE MADIL SCOPE					
Seminar participants to discuss & finalize decisions on defining mission, audience, applications, contents, & access					
Mission: 1. <i>Dynamic distributed repository of Maghreb knowledge resources</i> 2. <i>Digital preservation of cultural heritage</i> 3. <i>Provide access for all to facilitate education & scholarship</i> 4. <i>Collaboration & cooperation</i>	<ul style="list-style-type: none"> • Agree on vision & mission • Creation of a virtual working group to assess and define contents: • Assess present state of technology in each participating country. • Compare digital collections of each country. • Identify standards, tools & processes being used • Share understanding of target MADIL functions & services. 	<ul style="list-style-type: none"> • Institutional access to a few collections for scholars & students • Local access of small collections for scholars • Other isolated holdings • Bibliographies 	<ul style="list-style-type: none"> • Integrate existing scholarly digital contents into web-based portal to provide local, regional and international access to existing collections in Maghreb & elsewhere • Online catalog searchable by collection, subject, institution, geo., etc. • Training, classrooms 	<ul style="list-style-type: none"> • Expand collections; create new digital resources into a common MADIL structure. • Local & Regional access to historic documents and rare materials • Preservation of archives & museum artifacts • Full text contents • Make Maghreb regional knowledge base accessible and available for all • Collaboration among Maghrebi scholars 	<ul style="list-style-type: none"> • Sustain dynamic platform with growing collection • International access to all collections, materials & artifacts • Preservation & security of rare materials • Consolidation of topical materials in larger MENA region • Add tools for better searching, retrieving, analyzing • Contemporary info • Collaboration work among scholars, researchers, teachers. • Community based work • Some commercial use
Target Audience 1. <i>Academe</i> 2. <i>Individuals & institutions around the world</i>	<ul style="list-style-type: none"> • Define primary users and others who might benefit from this project 	<ul style="list-style-type: none"> • Institutions • Scholars • Scientists • Educators • Students 	<ul style="list-style-type: none"> • Academic Institutions • Scholars • Content providers 	<ul style="list-style-type: none"> • Researchers • Historians • Curators • Individuals 	<ul style="list-style-type: none"> • Private sector • Foreign researchers & scholars • General public
Applications 1. <i>Education & culture</i> 2. <i>Research</i> 3. <i>Training/teaching</i> 4. <i>Professional</i> 5. <i>Access/dissemination of info</i>	<ul style="list-style-type: none"> • Define main applications and uses of MADIL in priority order for value and impact 	<ul style="list-style-type: none"> • Higher education • Education • Some research 	<ul style="list-style-type: none"> • Education • Culture • Research • Teaching • Institutional repositories 	<ul style="list-style-type: none"> • Training • Professional • Publishing • Preserving 	<ul style="list-style-type: none"> • Access for all to any Maghreb information for any purpose • Knowledge transfer • Collaborative authoring

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<i>& exchange of ideas</i>					
Contents 1. <i>Size & scope</i> 2. <i>Subject matters</i> 3. <i>Types & formats</i> 4. <i>Sources & locations</i> 5. <i>Access rights</i> 6. <i>Gaps in contents</i>	<ul style="list-style-type: none"> Content providers control their resources Assess level & depth of existing collections in Maghreb. Assess technology Assess intellectual organization of materials. 1st step is to contribute digital images of the existing physical holdings Identify & assemble Maghreb contents from other countries (mainly Europe, US, Middle East, Turkey) Agree on international standards for scanning, imaging, cataloging, & metadata for Arabic digitization 	<ul style="list-style-type: none"> A few small collections in local databases Local library online catalogs on higher education & history Some networked collections References, abstracts & bibliographies Local universities are the content providers E newspapers Gaps in coverage. 	<ul style="list-style-type: none"> All bibliographies in university libraries & research centers Education, Science, history Some full-text contents Regional online catalogs Sources of primary resources: Maghreb, Middle East, France, Turkey, international 	<ul style="list-style-type: none"> All existing resources Education, Science, Art, Culture, History Archives & Museums Professional journals in e-format Manuscripts, historical documents Regional digital library Regional portals & websites Maghreb, Europe, Middle East, US, 	<ul style="list-style-type: none"> All Subjects Full text historical books & articles Regional digital library and cultural historical materials Regional & international contents on Maghreb Worldwide, access to knowledge of Maghreb for all, anytime, anywhere, anybody Current affairs
Access / Dissemination 1. <i>Geographical scope</i> 2. <i>Languages</i> 3. <i>Intellectual property & Copyright issues</i> 4. <i>Users</i> 5. <i>Communication</i> 6. <i>fee /free</i>	<ul style="list-style-type: none"> Make collections of primary sources more accessible by digitizing books & manuscripts about Maghreb. Multilingual access Equity of access 	<ul style="list-style-type: none"> Institutional Local Some national Collaboration among local scholars French, Arabic Free 	<ul style="list-style-type: none"> Local Regional Maghreb collaboration programs French, Arabic, English 	<ul style="list-style-type: none"> Local & Regional, international collaboration Multi-lingual metadata Research projects Knowledge Management 	<ul style="list-style-type: none"> Optimize access Everybody worldwide Group chat Access to remote scientific tools & instruments Metasearch utilities Gateway to Maghreb knowledge
DEFINE SHARED INFRASTRUCTURE & COMMON TECHNICAL STANDARDS					
<i>Experts to agree on standards, protocols, & policies for infrastructure and metadata</i>					
Infrastructure Technology & platform 1. <i>Telecoms / cyber</i> 2. <i>Technical equipment: hardware, software, network</i> 3. <i>Storage / Security</i> 4. <i>Search engines</i>	<ul style="list-style-type: none"> Assess and compare existing technology: Bandwidth, Interoperability Determine appropriate network to be used Develop technical architecture appropriate for MADIL. Open access, open standards for a distributed Digital Library Authentication & Authorization to modify holdings; Privacy Service Oriented Architecture 	<ul style="list-style-type: none"> Databases Online catalogs Small digital libraries Some internet access Cyber cafes Cell phones Televisions Iods/MP4s 	<ul style="list-style-type: none"> Technical infra to deliver text-based collections Networked digital libraries Internet access Distributed computing Web-based portal Easy to use system via internet 	<ul style="list-style-type: none"> Technical infra to deliver images & sound Maghreb Portals Cyber infra networks for research Streaming audio, visual E-learning MIS Open-source platform 	<ul style="list-style-type: none"> Social infra for collaboration International portals Very high speed networks for distribution of large quantities of data, images Distributed network digital repository
Intellectual organization of materials 1. <i>Metadata / thesauri</i> 2. <i>indexing /Cataloging</i> 3. <i>searching</i>	<ul style="list-style-type: none"> Service providers harvest resource metadata in order to provide a central aggregation service & quality metadata sharing. Compare intellectual organization of catalogued materials in the region Develop common metadata, taking into 	<ul style="list-style-type: none"> Basic cataloging & indexing: Some abstracting Bibliographies References French & Arabic 	<ul style="list-style-type: none"> Dynamic mapping of metadata Categorize contents More description of printed collections, e.g. region, institution of 	<ul style="list-style-type: none"> Categorization of archival materials such as manuscripts, musical scores, maps, etc. More description for resources to be 	<ul style="list-style-type: none"> Maghreb metadata Use of new AI-based software to map metadata in MADIL. Taxonomy Ontology

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4. <i>retrieval</i> 5. <i>Analysis</i>	account holdings in Arabic and French languages, and different types of materials. <ul style="list-style-type: none"> Establish metadata standards for interoperability & resource sharing Use metadata best practices for authoring and processing needs Agree on level of description Need for close collaboration among institutions in the region Collaborative cataloging effort 	languages	origin, etc.	identified in a larger digital collection, e.g. Creation date of material, latitude/longitude for maps, name of place in photos, etc. <ul style="list-style-type: none"> Media type 	•
Digitizing equipment & tasks 1. <i>Internet / telecom</i> 2. <i>Computers, Servers</i> 3. <i>Scanners, Printers</i> 4. <i>Cameras, video cameras</i>	Tasks to digitize materials: <ul style="list-style-type: none"> Identifying, Scanning, Imaging, Processing, Entering documents. Cataloging, indexing, abstracting Describing artifact, Taking photos, Archiving 	Basic equipment & tools to select, organize & digitize collections: <ul style="list-style-type: none"> Computers, Scanners, Printers 	Tools to consolidate distributed collections & display/retrieve them: <ul style="list-style-type: none"> Internet / telecom Computers, Servers 	Tools to archive material/artifacts & integrate into MADIL: <ul style="list-style-type: none"> Internet / telecom Computers, Servers Scanners, Cameras 	Tools to disseminate Maghreb knowledge: <ul style="list-style-type: none"> High speed network Computers, Servers
Dr. Samia BenidirSHARE COSTS & MANAGEMENT					
Institutional/national and regional/international responsibilities for financing and managing MADIL					
Governance & Management structures 1. <i>Key constituents & Stakeholders</i> 2. <i>Roles & Responsibilities</i> 3. <i>Content providers</i> 4. <i>Service providers</i> 5. <i>Contributors/ collaborators</i> 6. <i>Management / Administration</i> 7. <i>Policy leadership</i>	<ul style="list-style-type: none"> Agree on human resources & collaboration Define regional collaboration among and between institutions; memberships, etc. Manage expectations Role of local & national governments as content providers and intellectual property owners Agree on role of service providers for integration of online resources- Across a country, (between universities, museums, libraries.) - Across different education sectors; - Across different media (text, sound, images, video) 	Content providers: <ul style="list-style-type: none"> Government agencies Universities & research institutes Responsibility: of local library managers: <ul style="list-style-type: none"> Admin Creation & digitization Use 	Content providers: <ul style="list-style-type: none"> Universities & research centers with Maghreb collections Responsibility: of library & info managers <ul style="list-style-type: none"> National Service providers: <ul style="list-style-type: none"> Regional coordinators: Aggregation Dissemination 	Content providers <ul style="list-style-type: none"> Ministries of culture, history, & information Museum curators Regional International Regional Service providers <ul style="list-style-type: none"> Aggregation Dissemination 	Long term sustainability of Maghreb resources Advisory & financing role of <ul style="list-style-type: none"> Private institutions International orgs Regional & International institutions World Digital Library
Costs & Financing 1. <i>Budget & Costs</i> 2. <i>Sources of finance</i> 1. <i>Ongoing funding</i> 2. <i>Grants & fund- raising</i>	<ul style="list-style-type: none"> Determine cost for each task by country (e.g. Algeria), process (e.g. cataloging) or topic (e.g. Ottoman empire) Cost of metadata, Infrastructure, Organizational, Administrative Agree on cost-effectiveness & economies of scale for common tasks Agree on budget Negotiate with grant making orgs to obtain funding for regional work 	Budget for <ul style="list-style-type: none"> Selecting contents Digitizing materials Managing intellectual property Collaboration Cost of <ul style="list-style-type: none"> Equipment Telecoms 	Identify financing sources for: <ul style="list-style-type: none"> Metadata Architecture Integration of contents Coordination 	Obtain grants to help with: <ul style="list-style-type: none"> Preservation Aggregation Dissemination Training 	Contribute funding to sustain this operation for <ul style="list-style-type: none"> Maintenance Additional collections Content creation on digital media News & contemporary info; Business intelligence

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		• Staff			
<i>Training & Expertise</i> 1. <i>Expertise & technical skills required</i> 2. <i>Training costs</i> 3. <i>Digital managers</i> 4. <i>Users</i>	<ul style="list-style-type: none"> • Design training program for the digital managers and for technical staff. • Train librarians and other interface staff to train the users. • Training technicians in Arabic text digitization 	Local staff: in countries: <ul style="list-style-type: none"> • Librarians • Catalogers • Subject specialists • Language specialists • Database specialists • Computer programmers 	Experts needed: <ul style="list-style-type: none"> • Digital Information scientists • Maghreb region scholars • Librarians/catalogers • Metadata experts • Telecom. specialists 	Facilitators needed: <ul style="list-style-type: none"> • Coordinators • Managers • Digital integrators • Communications specialists 	Technical staff <ul style="list-style-type: none"> • Digital data experts • Digital photographers • Digital managers • Service orientation architecture experts • Digital news indexers • User needs assessors