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Shared challenges and in a networked cultural space

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In "Digital Libraries and their Challenges" (henceforth, "Digital Libraries") the author reported on a tour of leading US research libraries that are investing significantly in (and have significant experience of) innovative online collections and services.[1] This paper supplements that report with observations about challenges confronting cultural heritage organizations more generally; that is libraries, museums and archives.[2]

"Digital Libraries" reported five key challenges that are briefly summarized below.

❑ Architectural and technical. Two related changes both relying on shared effort to:
- o design systems that enable libraries to manage (and manage access to) heterogeneous and distributed mixed media collections; and
- o investigate potential applications of new technologies in libraries.

❑ Standards and best practices. Again conceived as some kind of shared effort capable of meeting library needs for:

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[1] See Daniel Greenstein, "Digital Libraries and their Challenges", *Library Trends* 49:2 (Fall 2000). A pre-print edition is also available from http://www.clir.org/diglib/ltrends.htm
[2] Visits to individual libraries so important to "Digital Libraries and their Challenges" have continued and added new perspectives. More crucial, however, was discussion at a recent meeting involving the directors of museums, archives, and libraries convened jointly by the Council on Library and Information Resources (CLIR) and the National Initiative for a Networked Cultural Heritage (report of the meeting is forthcoming from CLIR).

- o information sharing sharing e.g. about how to develop, maintain, and support use of digital libraries collections and services;
- o community-wide agreements about minimum-level data standards that ensure interoperability and persistence of digital information; and
- o agreed "benchmarks" against which to evaluate different digital library collections and services.

- ❑ Strategies for developing sustainable and scaleable digital collections. Documentation of current policies and practices focusing on those that appear to be particularly effective.

- ❑ Getting good information about uses' information seeking behaviors and needs, not just with library resources but with scholarly information more generally.

- ❑ Securing long-term access to digital information, crucially by gaining some practical preservation experience and focusing that applied effort on electronic scholarly journals as a matter of priority.

The piece concluded that progress in these areas was likely to be beyond the means of individual libraries and library consortia and associations and as such would require new organizational forms.

When looking at the challenges confronting cultural heritage organizations generally, a slightly different set of priorities emerges. The remainder of this papers introduces these challenges under four heads: guidance in strategic planning; provision of key infrastructure; provision of mechanisms that enable individual institutions to take full advantage of planning guidelines, infrastructure, etc.; and review and reassessment of the roles, goals, and values of cultural heritage organizations. The paper concludes with asn indication of some initial next steps that may help confront these challenges.

1. Strategic planning. Cultural heritage organizations are thinking a great deal about fundamental questions, notably about why, how, and to what end they are (or should be) harnessing information technology. The need for some guidance in strategic planning is felt particularly in the absence of planning, decision-making and risk-assessment tools that may help senior managers take decisions that will shape their investments in online collections and services. Targeting senior managers, these tools would act as issue-oriented guides aiding decision-making while pointing to more detailed technical or implementation guides. Descriptions of some of the key decision-making tools that senior managers require are supplied below.

- ❑ Business planning frameworks. Cultural heritage organizations are increasingly being asked to justify investment in online collections and services in terms more familiar in commercial than in not-for-profit and charitable sectors. This is not tantamount to saying that professionals in the heritage sector do not recognize or think in terms of value, cost, and benefit. Rather, they are not as familiar with the tools used in the commercial world to formalize that thinking. Accordingly, they seek business-planning frameworks –toolkits that explain the component parts of a business plan and how those parts relate to one another (how, for example, decisions about product development constrain but also may reflect

thinking about marketing). A particularly effective business-planning framework will also outline some of the key options available to an organization as it fleshes out any component of its business plan.

❑ Benchmarks of institutional readiness. Using these benchmarks senior managers could assess their organization's progress with regard to its development of online collections and services. They would aid managers in making decisions, for example, about whether to overhaul the institution's information technology infrastructure, rethink its organization and management, or enter into strategic alignments with other cultural heritage organizations, associations, etc.

❑ Risk assessment tools. Following on directly from benchmarks of institutional readiness, risk assessment tools would assist senior managers in assessing the level of risk involved in undertaking strategic initiatives such as those indicated in the preceding bullet.

❑ Cost-benefit evaluation of different organizational forms. Small- and middle-sized cultural heritage organizations are more interested than large ones in exploring the different organizational forms with which they might proceed into a networked space. They are especially interested in organizations that involve two or more parties in some kind of partnership. Numerous and innovative collaborative and partnering ventures exist and supply a rich source of empirical data about the efficacy of these arrangements. That data needs to be collected and brought together in decision tools that reflect on practical experience to supply information about fiduciary, legal, and other attributes of the various partnering, collaborative, membership, commercial and other organizational forms that innovation might take.

As the reference to organizations implies, decision tools needn't be based on speculation. Rather, they should be based on empirical evidence gathered from the substantial experience that libraries, museums, and archives are already developing with online collections and services.

2. Provision of key infrastructure. The absence of key infrastructure is seen by all as an impediment to innovation in a networked cultural space. Some high-level community-wide agreements about the application of data standards and information architectures are seen as essential for ensuring some minimum common level of quality, consistency, persistence, and interoperability across online cultural collections and services. Beyond this, however, there are key differences between the large research libraries and the broader cultural heritage community. The large libraries seek to share research and development effort with a view to developing key infrastructure locally within their own institutions. In a broader group, discussion turns to self-sustaining utility services that enable individual heritage organizations to get more mileage for every dollar they spend on building a networked environment. Some of the utilities are listed below alongside reasons for considering their development. A fuller list is available in a recent number of *CLIR Issues*.[3]

❑ Digitization services. Cultural heritage organizations are actively producing digital surrogates for their rare and special holdings and making these available as online exhibitions or databases. One wonders whether these institutions would get more value for their investment

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[3] Daniel Greenstein, "The Digital Library and B2B Services", *CLIR Issues* 17(September/October 2000)

if they could outsource production to utilities developed specifically to serve the sector, rather than relying as they often do now on one or two key members of staff supported by transient graduate student labor or its equivalent.

❑ Distribution services. Online collections and services require networked servers and often very complex access management applications. One wonders whether there are economies (and functionality) to be had in some other organizational model more akin to traditional utilities (power, water, etc.) than to consortia or membership organizations?

❑ Alerting services and open software libraries. Can cultural heritage organizations do more than they are currently doing to keep one another informed about effective applications or developments of new technology?

3. Provision of professional development opportunities. Cultural heritage organizations need to recruit and keep information professionals who are appropriately skilled to support forays into a networked information space. Here there are any number of challenges which must be met if cultural heritage organizations are to take full advantage of emerging decision tools, standards and best practice guidelines, utility services and the like. Such challenges include:

❑ thinking in new ways about recruitment and professional qualification and developing new processes to appoint and maintain the professional staff needed to develop and maintain an innovative network presence;

❑ ensuring information professionals on staff are afforded appropriate training opportunities (mounted on a professional or semi-professional basis) as well as opportunities to engage with colleagues at other institutions so they may keep abreast of new developments and new approaches; and

❑ providing guidance in change management to senior managers and leadership training to the next generation of senior staff.

4. Re-assessment and review of the cultural heritage organization's mission and values. Any discussion of the challenges confronting cultural heritage organizations in a networked space ultimately arrives here. It is hardly surprising. Fundamental understandings of mission and value act as touchstones against which potential new directions are evaluated. Indeed, they are the stuff with which new directions and opportunities are ultimately defined and articulated in the first place. An organization's mission and its values will even inform very practical and detailed implementation decisions. Recent research on institutional strategies for developing sustainable digital collections, for example, suggest there aren't any formula, for sustainability so much as options that serve the cultural heritage organization more or less well as it seeks to promote and advance its own developmental agenda.[4] Even the most specific methodological questions (e.g. about the analytical techniques appropriate for assessing users' needs and interests and the selection of metadata standards and data formats for digitizing special collections) are unlikely to be resolved with reference to any absolute standard so much as with a reference to institutional mission and values.[5]

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[4] See forthcoming DLF reports by Tim Jewell, Lou Pitschmann, and Abby Smith (from http://www.clir.org/diglib/collections.htm). The reports document collection development strategies for electronic commercial resources, for gateways to third party public domain Internet resources, and for digitized surrogates of holdings in special and rare collections. The theme is apparent in reports by Smith and Pitschmann.
[5] See Denise Troll, "How and why are libraries changing" (February 2001) from http://www.clir.org/diglib/use/whitepaper.htm" and Neil Beagrie and Daniel Greenstein, "A strategic policy

There are several interests in this fundamental reassessment and review. Somewhere at their heart are the costs involved to cultural heritage organizations in developing a niche in a networked space and the competition that heritage organizations experience in that niche from various commercial entities. The combination underpins a wish to re-examine the fundamental principal that has applied so far in the development of networked cultural collections and services, notably that such collections and services, derived as they are from public institutions, must be free at the point of use. It opens out as well onto a range of ancillary question:

❑ about how to balance not-for-profit service goals (so familiar in the sector) with the need to think about cost-recovery and sustainability for the high-cost networked collections and services;

❑ about the prospects for cultural heritage organizations in transcending their current and highly constrained (perceived) role as "digital content farms" and evolving value added networked services the likes of which compete viably with commercial instantiations; and

❑ about whether there is room in a networked space for the cultural heritage sector as a whole or only for certain organizations whose pride of place is determined by endowment, collection depth and scope, or fund-raising capacity;

Though undoubtedly long, this list of challenges produces a concrete agenda for heritage organizations, their associations, and funding bodies. The requisite development effort, for example in the creation of key infrastrutral services, is clearly beyond any single institution and is likely to depend on innovative partnering arrangements which overcome the severe constraints that impinge on more familiar consensus-based associations when they take up operational services.[6] Still, one is impressed with how much may be accomplished in advance of such new organizational forms actually emerging. Applied research seems a particularly fruitful area, one that could take off in vital new directions with joint input from libraries, museums, and archives. The decision tools and data that can support strategic planning, for example, do not require expensive or complex organization. Research may go as far in identifying the good or at least effective practices that experience developing networked cultural heritage collections and services is beginning now to reveal in libraries, archives, and museums. Although the utility services will require significant organizational and business planning (not to mention considerable capitalization), the development of service requirements is an essential starting point that is research based. Any reassessment of the heritage sectors' goals and values could be a drawn out, painful, inconclusive, and potentially even demoralizing process. Very promising if limited first steps may none the less be taken through some careful consultation with our various using publics and through some investigation into their expectations and needs and how they are met by various sources of information, education, and cultural enrichment. Here the aim is not simply to assess how users engage with online services mounted by cultural heritage organizations, but how they engage with information sources generally and how their contact with cultural heritage organizations fits into whatever broader picture emerges. Although this too brief forward look does not promise much for professional development, one cannot help thinking that these issues will be tackled more easily by cultural heritage organizations that take this more pro-active role in determining the dimensions and shape of their networked future.

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framework for creating and managing digital collections" (1998) from
http://ahds.ac.uk/manage/framework/framework.htm
[6] "The Digital Library and B2B Services", op. cit.