Findings and Recommendations of a Review of MOBIUS Development, Operations, and Financial Model

Prepared for the MOBIUS Consortium Office & the MOBIUS Executive Committee
by Joseph B. Ford, Joseph Ford and Associates, Inc.

This document reports findings and recommendations for a two-part consulting project that the author has been conducting for the MOBIUS Consortium Office. The project has focused on these two MOBIUS topics, identified in this report as the MOBIUS Development Track and the Financial Assessment and Reporting Track. The consultant has identified a third area of recommendation, related to ensuring that public and elected officials continue to understand the value contributed by MOBIUS to the citizens of Missouri.

- **MOBIUS Development** analyzes MOBIUS's growth in relation to the original MOBIUS plan's guiding documents. Interviews with MOBIUS Executive Committee members revealed some additional issues that are incorporated into this report.

- **Financial Assessment and Reporting** analyzes the methods used for deriving annual MOBIUS member assessments and then communicating those assessments to MOBIUS member institutions. In reviewing the financial assessment process, the consultant became aware of some related issues and those are incorporated into this report.

- **Public, official, and legislative information** recommends steps to maintain and renew essential understanding of MOBIUS's role and contributions.

The audience for this report is the MOBIUS Executive Committee and MOBIUS Consortium Office personnel. The intent of the report is to review and summarize MOBIUS's development, identify successes, and identify opportunities for MOBIUS to reinforce its services and support.

MOBIUS Development and Operations Track

In conducting the review and analysis for this track, the consultant reviewed a wide variety of documents from the MOBIUS Consortium Office (MCO) web site and from background materials related to developing the original MOBIUS planning documents. The consultant interviewed members of the MOBIUS Executive Committee, the MOBIUS Executive Director, and had contact with representative staff of MOBIUS libraries. All materials reviewed, interview comments, and related material support this overall conclusion: MOBIUS has succeeded in developing the services structures envisioned in its foundation documents.

These specific planning goals were fundamental to MOBIUS as the initial development plans for a statewide catalog of academic libraries were made.

- Use of existing Innovative Interfaces, Inc. (III) systems at University of Missouri, Columbia; Washington University; and several other institutions within Missouri as the basis for MOBIUS's Common Library Platform.

- Clustered member institutions sharing computer servers, software, and databases, for a total of 50 charter member institutions organized into 11 clusters.

- Use of the III Inn-Reach software to create software linkages between the various clusters and member institutions.
- A "server farm" housing almost all the clustered servers in a single location in Columbia, with a few institutions operating on hardware housed elsewhere.
- Use of the Missouri Research and Education Network (MOREnet) high-speed data networking backbone to link individual member institutions and libraries to the MOBIUS servers.
- Governance and financial assessment methods that provided for equal governance participation by all member libraries, with costs apportioned based on usage.
- Development of the MOBIUS Consortium Office as the support organization.
- A multi-year development and operations plan, beginning in July 1998, that focused on creating clusters of MOBIUS libraries each sharing servers and software, converting data from existing integrated library systems, and then implementing the new clusters using a phased approach.

All available evidence reviewed in September through December 2003 makes it plain that MOBIUS has succeeded in meeting its planning targets. Virtually every indicator shows success in planning, implementing, and operating MOBIUS and the Common Library Platform.

Despite the overall high level of performance in meeting these initial planning goals, MOBIUS could accomplish some additional planning and support functions. The interviews with Executive Committee members, materials made available from MCO, and conversations with MCO Executive Director George Rickerson lead to these conclusions.

Observations and Comments:

- First, there is universal agreement among the persons interviewed that MOBIUS is a complete success, and that the MCO has been supportive, technically skilled, and has remained on target with MOBIUS development.
- Perhaps because of the pressures of implementing a statewide network of academic libraries, there is no annual strategic or services planning, other than the informal involvement of the MOBIUS Council and Executive Committee. Opportunities for member libraries' individual staff members to provide input to MOBIUS are limited.
- Several persons interviewed had experienced performance problems with the "last mile" of tail circuit networks that were stressed by on-campus demand, with the result that MOBIUS services were slow and occasionally "timed out," forcing staff to re-start a process such as checking in materials. The campuses experiencing these problems appear to have insufficient bandwidth or network capacity to handle MOBIUS-related traffic and other campus network traffic. Further analysis revealed that all such comments came from private institutional members, whose institutions have not had the preferential pricing or state funding for tail circuits that are available to state-supported institutions.

- Several persons interviewed noted the impacts on local library workstations and networks of the Java client that Innovative Interfaces, Inc. (III) provides with its Millennium system. Interviewees wished for some form of monitoring Java and Wide Area and Local Area Network performance.

- The consultant discussed with several of the persons interviewed the extent of MOBIUS's transition from a start-up to an operations organization, and some interviewees offered ideas related to increasing the administrative support capability within MOBIUS as demand for initial technical support wanes.

Operations Recommendations:

O-1. MOBIUS could and should develop an annual planning process, with input from persons involved in a planning retreat, from web-enabled sources (See Recommendation O-2), and from experts or colleagues from other academic library networks. The result might be an annual planning paper whose priorities are the focus of MOBIUS Executive Committee and MCO review and approval.

O-2. It would be useful for MOBIUS to use a survey process, perhaps based on one of the several web-enabled survey instruments, to gather comments, appraisals, and service opportunities.

O-3. MOBIUS could support, in conjunction with MOREnet, a more powerful technical monitoring capability, to help ensure Quality of Service levels through the MOBIUS–MOREnet backbone, as they relate to Millennium and Java.

O-4. Explore the potential of extending reduced cost telecommunications to MOBIUS's private institutional members in support of public institutional use of private institutional resources.

O-5. As an alternative, develop a "minimum network" paper that outlines the requirements that MOBIUS needs to have to ensure robust network features, provide the paper to private institutional members to assist them in specifying and acquiring sufficient tail-circuit capacity.

O-6. As an additional alternative, develop strategies in conjunction with MOREnet for prioritizing network traffic using routing and subnetting techniques.

O-7. Seek opportunities to improve Java performance within the Innovative Millennium client software. See the following website for information on Java performance monitoring software. http://www.khelekore.org/jmp/

O-8. Interact with MOREnet and SBC to further emphasize on-campus Quality of Service measures to ensure that MOBIUS libraries are not competing with the latest campus Internet fad.

O-9. As MOBIUS moves from a startup and implementation organization to an operations and support organization, identify an opportunity to re-cast MCO staffing to include more operations support, for example, financial manager.

MOBIUS Financial Track

The initial sources of information for the findings and recommendations regarding the Financial Track were the Microsoft Excel spreadsheet used to apportion MOBIUS member assessments, and interviews with George Rickerson of the MOBIUS Consortium Office (MCO). These were then supplemented by review of documents provided by MCO and the MOBIUS website, and by interviews with members of the MOBIUS Executive Committee. All interviews were conducted on October 1, 2, and 3, 2003, in Springfield at the Missouri Library Association.

Observations and Comments:

These are the summary findings that emerged from the analysis of the documents and interviews. The findings are sorted into three discrete components.

MOBIUS Annual Assessment Process

- There is ample evidence of a detailed process related to assessments. No one with whom I spoke felt there were problems with how the assessments are developed.
- In the consultant's opinion, the methods used to assess the MOBIUS members are objective and thorough. The methods are direct outgrowths of the original "Gold Book" formulas used to develop a funding formula for MOBIUS, based on the same apportionment attributes used in the original MOBIUS funding plan.
- While there are no specific problems with how the assessment model is used, several persons interviewed mentioned having reservations regarding how financial assessments are communicated.

Financial Reporting and Other Financial Issues

While the overwhelming evidence is of appropriate member assessment methods applied uniformly, the consultant's review led to some additional observations:

- The Excel formulas and spreadsheets used to develop the assessments rely on complex and technical statistical methods. Documenting and communicating such methods require that both the preparer and the consumer of the information be reasonably conversant with statistical sensitivity and variance theory to be fully comfortable with the results.
- Only one person—George Rickerson—has responsibility for and knowledge of the assessment methods and the formulas as they operate in Excel.
- George Rickerson has clearly developed skills in financial management and reporting, but his credentials are limited. He has no education in accounting, budget analysis, or financial reporting.
- There is no credentialed financial manager employed within MOBIUS backing George Rickerson up. While the University of Missouri system is ultimately responsible for financial management, their hands are far from the daily operations of the MCO.

- There is no formal financial reports package available to MCO. When such reports are requested, George Rickerson creates a MS Excel sheet showing whatever details are requested.

Ports as Basis of Assessment

- One library director interviewed during the initial phase of the consulting project noted that the assessment issue was less a problem than the number of ports assigned to that director's library as a result of the initial MOBIUS survey. This institution has more ports assigned to it than it currently needs. Since ports are one element of the assessment formula, reducing the assigned number of ports would affect recurring costs for that director's library.

- The MCO does not accrue or maintain contingency or reserve funds. There is no strategy for assessing funds over and above operating expenses such as MCO staff salaries, and contracted expenses such as the maintenance charges paid to Innovative Interfaces for software and hardware support. Any extraordinary event—need to relocate on an emergency basis, for example—would require developing a funding source at the time of the emergency.

Financial Recommendations:

The consultant believes that the recommendations offered here are prudent measures. The intent in all the recommendations is to create and operate administrative functions such as financial reporting as successfully as the MCO has operated the Common Library Platform.

F-1. Hire at least a part-time credentialed financial manager, or contract with a person or agency to have those skills available to MCO on a regular and recurring basis.

F-2. Acquire a financial records accounting and reports software package and install it within the MCO operating environment. Use the package to generate the requested financial reports, including assessments.

F-3. Include among the duties of a financial manager responsibility for maintaining and reporting financial data, including assessments, current status, and responses from external sources regarding MOBIUS finance.

F-4. Explore the concept of an annual "open season" prior to annual assessment, to permit libraries wishing to add or reduce ports to trade or for individual MOBIUS libraries to order additional ports or turn back unused ports.

F-5. Begin developing some long-term financial reserve strategies. A 2.5 percent annual surcharge would generate approximately $41,000 per year, which could be held in reserve if needed to fund the following items:

- Contingency plans and funds for "rainy day" requirements.

- Additional hardware funds, to amortize costs of equipment upgrades and replacements.

Public, Official, and Legislative Information

The consultant's final recommendation regards maintaining and renewing—among the public, state officials, and legislators—essential understanding of MOBIUS's role and contributions. The original MOBIUS development plan, the "Gold Book," received a wide distribution in Missouri legislative, budget, and academic settings and was the primary public document justifying the effort to create MOBIUS and to invest in the Common Library Platform.

Since the publication of the Gold Book, a combination of turnover in legislative and budget analysts, term limits for Missouri's statewide elected offices, and retirements, have all contributed to a large-scale reduction in personnel outside MOBIUS who were involved in or knowledgeable of MOBIUS at the time of its founding.

This circumstance could dilute or erode the support that MOBIUS has received, since the good will MOBIUS earned with its initial supporters will diminish as the supporters leave their positions. The consultant recommends the following steps to renew the understanding and support that MOBIUS has earned and experienced.

Public Information Recommendations:

P-1. Conduct cost-benefit analyses of the MOBIUS organization, comparing its costs to non-Common Library Platform operations.

P-2. Identify the costs for individual campuses of operating in the MOBIUS environment, then compare those costs to the costs of operating 50-plus stand-alone systems.

P-3. Conduct cost-benefit analyses of MOBIUS's access and Library Delivery Systems, comparing them to national norms identified by bodies such as the Association of Research Libraries.

P-4. Present the resulting analytical information in a non-technical format and non-technical language for a lay audience.

The expectation, of course, is that an analysis of MOBIUS after five years of operation will show very clearly how cost effective MOBIUS is, helping ensure ongoing support for the MOBIUS organization.