Master's Project Proposal
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MEASURE Evaluation, known informally as "Measure," is a project funded by the United States Agency for International Development (USAID) and based at the Carolina Population Center (CPC), a research department of the University of North Carolina at Chapel Hill (UNC). Measure consists of two overlapping efforts, as a result of two separate but related cooperative agreements with USAID:

- Phase I, which began 1-Oct-1997 and will end on 31-Jul-2004
- Phase II, which began on 1-Oct-2003 and will end on 30-Sept-2008

Measure Phase I uses a custom financial information system which augments UNC's Financial Records System (FRS), giving Measure the flexibility to meet USAID's wide-ranging financial reporting requirements as well as the control to manage the project's finances internally. The system, implemented in Microsoft Access (an end-user and small business relational database management system), provides rich graphical user-interfaces and extensive reporting capabilities—but is only accessible to project members physically located at Measure's UNC office. Project members traveling abroad, major subcontractors located in Washington, DC and New Orleans, LA, and USAID administrators have no direct access to Measure's financial information.

Measure Phase II, which began without a financial information system in place, could continue to use a variation on the Phase I system, but Microsoft Access's inaccessibility to geographically dispersed project members makes it an unappealing option. On the other hand, recasting the Phase I financial information system as a web application in Phase II would provide authorized on- and off-site project members with the ability to access and update Measure's financial information directly, provided they had basic web-access. The essential design of the underlying database and business logic would remain relatively unchanged, while the graphical user-interface (GUI) and application programming (originally implemented using Microsoft Access and Visual Basic for Applications) would have to be reconceived, redesigned, and reimplemented for the web.

The Phase I financial information system evolved over time, yielding a jumble of interface design, business logic, and architecture-specific application programming. The major objective of this master's project will involve the design and architecture of Measure Phase II's web-based financial information system, relying on industry standard software design practices such as the Rational Unified Process (RUP) and the Unified Model Language (UML).

Deliverables will include the application design artifacts and documentation, a functional implementation based on the design, and a write-up on the design and implementation, including reflections on the process and plans for future system development.