

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 has 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 and 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 people located at Measure's UNC office. Measure's project members traveling abroad, major subcontractors located in Washington, DC and New Orleans, LA, and USAID administrators have no direct access to the financial information system.

The Phase I financial information system will not be actively maintained after Phase I of the project concludes on 31-Jul-2004. Up to now, Measure Phase II began without a similar system in place to track the project's finances. Phase II could continue using a variation on the existing Access-based system, but its inaccessibility to geographically dispersed project members makes it an unappealing option.

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. The design of the existing relational database and business logic would remain relatively unchanged, while the graphical user-interface (GUI) and underlying application programming (originally implemented using Microsoft Access and Visual Basic for Applications) would have to be reconceived, redesigned, and implemented 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.