

Formative Evaluation Plan
BioMedTech Exhibition at the Great Lakes Science Center

September 29, 2006

Description of What Will Be Evaluated

All of the exhibits that are part of the *BioMedTech* exhibition will undergo some type of preliminary testing. In most cases, this will be proof-of-concept testing undertaken by Quatrefoil with results incorporated directly into their designs without additional formal documentation. In addition, prototype versions of selected exhibit units and some exhibit text will be further tested on-site at Great Lakes Science Center (GLSC). This evaluation plan covers the prototype testing that will be done at GLSC only.

Type of Evaluation and The Research Question

This will be a formative evaluation study. The research question will be:

What can we find out by testing exhibit text and prototypes with GLSC visitors that will help maximize their effectiveness?

Project Team Roles and Responsibilities

The core evaluation team will be comprised of Eric Gyllenhaal (lead researcher), Katherine Ziff (liaison between SRA and GLSC, and lead data collector), and Val Davillier (client). Additional members of the project team will include Blake Andres (co-PI of the *BioMedTech* project at the GLSC), Deborah Perry (project manager), and Scott Perich and Paul DeCamp (exhibit designers for the project). SRA or GLSC may bring on additional data collectors as necessary.

Eric Gyllenhaal will guide the evaluation process and provide training for Katherine Ziff and other GLSC staff as appropriate. He will also be responsible for the write up and sharing of the evaluation results from the two site visits (described below). He will also provide on-going phone consultation to Katherine as appropriate.

Katherine Ziff will represent the GLSC in her communications with SRA. She will also work with Eric to collect, analyze, and write up the site visit data, and will be primarily responsible for collecting, analyzing, and writing up the subsequent GLSC prototyping. Katherine will also ensure there are adequate materials (including labels) to prototype.

Val Davillier will serve as client, reviewing the findings and giving appropriate feedback and input in a timely fashion. He will also be responsible for ensuring the construction of selected prototypes by GLSC.

Blake Andres will stay in touch with the evaluation process, review findings, and provide input and feedback as appropriate.

Deborah Perry will oversee the evaluation project, manage the timeline and budget, and ensure SRA's work is of high quality.



Scott Perich and **Paul DeCamp** will be responsible for providing mechanical and visual-content prototypes for testing at GLSC during Site Visit Two (described below). They will also be responsible for conducting mechanical and proof-of-concept testing of exhibit mockups as described below under *Study Design*.

Communications and Relationships

Selinda Research Associates is committed to a collaborative relationship with clients where expertise, information, and concerns are shared, and decisions are jointly made. Depending on the activity the major responsibility for a particular task might rest with the client, project manager, lead researcher, or liaison.

In order to maintain frequent and open communication, we will have weekly phone meetings throughout the duration of the formative evaluation. These meetings will be held on Tuesday afternoons at 2pm/1pm (eastern/central). While all team members will be welcome at all meetings, it is not anticipated that every member will be at every meeting, with the exception of the three core team members.

Study Design

Three types of prototyping will be undertaken: (a) proof-of-concept and mechanical testing done by Quatrefoil at their site; (b) in-house testing—by GLSC staff—of exhibit labels and prototypes at Great Lakes Science Center; and (c) testing of exhibit labels and prototypes—by SRA—at Great Lakes Science Center. The following description covers only the prototyping done at GLSC.

- **Site Visit One** **10/4-10/5**

This will be a two-day site visit to test selected exhibit text and interactive units with visitors. The focus of this round of testing will be on maximizing the potential of the exhibit label to communicate its intended messages, and to stimulate and facilitate the intended visitor engagements. A secondary purpose of the site visit will be to provide one-on-one training/experience for Katherine and selected GLSC personnel so that they will be able to carry out in-house prototyping on an as-needed basis.

In preparation for this site visit, Katherine will prepare five draft exhibit labels. During this site visit Eric will walk Katherine through the steps of (a) articulating intended engagements and exhibit messages; (b) preparing for testing with visitors; (c) selecting and approaching respondents; (d) collecting data (observing and interviewing); (e) debriefing and analyzing; (f) documenting the results; (g) making revisions; and (h) sharing results.

- **Site Visit Two** **11/3-11/5**

This will be a three-day site visit to test exhibit prototypes with visitors. The focus of this prototype testing will be on maximizing the potential of each exhibit unit to communicate its intended messages, and to stimulate and facilitate the intended visitor engagements. A secondary purpose of the site visit will be to provide additional one-on-one training/experience for Katherine and selected GLSC personnel.



In preparation for this site visit, Katherine will work with Quatrefoil to ensure there are three exhibit prototypes for testing and that documents listing intended engagements and exhibit messages have been produced for each of them.

• **In-house Testing** **11/6–12/15**

Katherine will head up the in-house prototyping process whereby exhibit mock ups are constructed by GLSC and tested with visitors.

• **Consultation** **On-going**

Drawing on their background in visitor research, SRA will be available to review and give feedback on selected design concepts as appropriate. In addition, Eric will review and discuss the results of on-going prototype testing conducted by GLSC staff, and will be available by phone to provide any necessary guidance.

Description and Selection of Respondents

As in the previous study, the majority of respondents will be small intact casual social groups that are visiting the Great Lakes Science Center. They will be purposively selected, with special attention paid to maximizing the ethnic diversity of the sample, especially Hispanic or Latino visitors.

Deliverables

The primary deliverables for this study will be a brief mini-report for each exhibit tested during the two site visits. These mini-reports will be completed after each visit to GLSC, and will serve as reporting templates for future prototype testing by Katherine and the GLSC staff.

Timeline

Planning

September 2006

- ~ weekly phone meetings
- ~ develop evaluation plan and topical framework
- ~ select exhibit units to be built and tested
- ~ develop draft data collection protocols and site visit materials

Data Collection & Analysis

October – December 2006

- ~ weekly phone meetings
- ~ test exhibit labels with visitors during Site Visit One, October 4-5
- ~ test exhibit prototypes with visitors during Site Visit Two, November 3-5
- ~ write up and share with team the results of prototype testing
- ~ on-going phone consultation as appropriate

Operating Budget

20 people days and \$1,200 in expenses



Logistics

Eric and Katherine will work together on logistics. GLSC will provide a space to test the prototypes with visitors, an office space for the evaluators to write up debriefs, and small gifts for visitors who participate in testing.

Ethical Treatment of Respondents

GLSC, SRA, and the National Institute of Health (the funders) are committed to the ethical treatment of respondents. We will adhere to standard professional practices for conducting research in informal educational settings.

Project Closure

After the formative evaluation is completed, we will have a project closure meeting to reflect on the processes used and the lessons learned during both the front-end and formative evaluations.

