

IN Harmony: Sheet Music from Indiana Group Walkthrough Evaluation Plan

Indiana University (IU), the Indiana State Library (ISL), the Indiana State Museum (ISM), and the Indiana Historical Society (IHS) have received a grant from the Institute of Museum and Library Services (IMLS) to provide electronic access to Indiana-related sheet music from each of the institutions' collections. Approximately 10,000 pieces of sheet music will be available online as a result of this grant activity. One of the primary goals for this project is to provide robust, consistent browse and search access across all participants' collections or within a particular collection. To help achieve this, a flexible, modular metadata model and cataloging tool were devised and implemented based on earlier user studies. These studies, the Query Logs Analysis Study (final report dated May 10, 2005), Card Sort and Task Scenario Study (final report dated August 1, 2005) and the Email Content Analysis Study (final report dated August 15, 2005), though primarily designed to assess the metadata model and cataloging tool, also yielded findings that impact the interface. Based on these findings, low-fidelity, paper prototypes have been designed to assess the next phase of IN Harmony project, the design of the collection website.

Purpose of Study

The purpose of this study is to evaluate the low-fidelity, paper prototypes (i.e. "wireframes") of the IN Harmony website with a group of representative users. Departments targeted for recruitment include Music, Ethnomusicology, Sociology, Anthropology, History and Art History.

Issues to explore:

- Is the overall structure of the website intuitive? Is the site easily navigable?
- How would users conduct simple searches in the IN Harmony website? Do they expect to perform Boolean operations in a simple search? Would certain filters aid in conducting simple searches?
- How would users conduct advanced searches in the IN Harmony website? Which search fields and filters should be provided to facilitate access?
- When and how might users browse the sheet music collection by music title, composer name, publication year, etc.?
- Do users want to see their search history? What aspects do they want to be included? How might they utilize this feature?
- How should the results page appear? How do users expect to manipulate search results (sort, refine/broaden search results, selections to email, etc.)?
- How do we provide access to the actual sheet music? Would a document-delivery service meet user needs? What about downloading a document?
- How would faculty and students utilize an online resource like this for research, teaching and learning?

Scenario-based and open-ended questions concerning these issues (see Appendix D, Walkthrough Script) will be posed to the participants of this study as we explore the wireframes/prototypes. The information gathered will help refine the functionality specifications and general design of the final IN Harmony Sheet Music Collection website prior to development.

Setting

The study will take place in the Herman B Wells Library the week of October 23, 2006. One of several conference rooms in the Library will be reserved for the discussion.

The walkthrough evaluation session is scheduled to take no more than 2 hours. This includes time to review the Study Information Sheet (see Appendix A), complete background questionnaires (see Appendix C) and conduct the guided discussion (see Appendix D for script). Participants will be offered gift certificates (see section below for more information) so they will also be asked to complete a gift acknowledgement form (see Appendix E) for reimbursement purposes.

Participants

The representative users targeted for this study are teaching faculty/instructors and graduate students. However, librarian input is also welcome. Five-to-seven participants will be recruited for the study. They will be recruited by direct contact (email, phone or in-person) with students, faculty and librarians.

The recruitment message (see Appendix B) will be sent over email or addressed over the telephone or in person and will clearly outline the following:

- Project Description
- Purpose of Study/Call for Volunteers
- Description of the Study

Participation in this study is voluntary. If participants decide, after reviewing the study information sheet, that they do not wish to participate in the walkthrough assessment, they are entitled to withdraw from this study. If participants decide at any time during the study to decline further participation, they are free to leave the session with no penalty.

Participants will receive a gift certificate to a local bookstore, worth \$10.00, for their involvement in this study. Participants will not be compensated if they chose to forego participation after reading the study information sheet. Compensation will be given to those who remain for most of the session.

Data Collection, Reporting and Confidentiality

A note taker from the IU DLP project team will be present during the walkthrough session to document the participants' comments based on the prototype website and open-ended questions.

The materials (notes and questionnaires) gathered will not be directly associated with identifying participant information. Documents such as notes and questionnaires will use a generic identifier, e.g. Participant #1. Forms with identifying information such as the gift reimbursement form will be saved in a separate file and later turned into the Libraries Budget Office for accounting and reimbursement purposes.

All materials will be kept in restricted access in the IU Digital Library Program offices and will only be made available to the researchers of this study. All materials will be destroyed at the time of the scheduled completion of the IN Harmony website, January 2007.

The final report is based on aggregated responses. When individual responses are included they will be done so as quotations to reinforce findings and recommendations. The report will not contain any identifying information when direct quotations are used (we are not monitoring who said what during the discussion—just what was said). For example, “One participant said such and such. . .” Again, the final report will focus on aggregated data. Quotations, responses and observations are only noted for emphasis.

Methodology: Group Walkthrough

The group walkthrough study will entail the following:¹

Completion of forms: background questionnaire.

The background questionnaire (see Appendix C) is used to gather general information about the participant such as academic affiliations, computer experience, etc. Only a generic identifier will be used for that form such as Participant #1.

The group walkthrough is a guided discussion based on scenarios and open-ended questions in response to the demonstrated wireframes/prototypes. The open-ended questions will address a specific area of the prototype: home page, search page, results page, etc. The wireframes/prototypes are in paper form and will be ordered and bound together to facilitate individual review for group discussion.

Debriefing. After the final questionnaire has been completed, participants may ask any final questions about the study or the IN Harmony prototypes.

¹ For more information about the Group Walkthrough methodology, read Randolph Bias', then an IBM affiliate, chapter entitled “The pluralistic usability walkthrough: coordinated with empathies” found in *Usability Inspection Methods* (edited by Jakob Nielsen and Robert Mack). See also:
<http://sunrise.nada.kth.se/usor/jml.cgi/Methods/pluralistic.jml?graphics=true>

Risks and Benefits

There are no identifiable or potential risks connected with participation in this walkthrough evaluation session. Participant contributions are no different than what they may experience in a regular work day.

Participating in this study will ensure that other potential users of the IN Harmony Sheet Music Collection website will have available the features and functionality needed to support discovery, teaching and research. Participants have an opportunity to share their experiences and impressions, which will directly and positively impact the final design of the IN Harmony website. In short, it is an opportunity for representative users to contribute to the design process that will, in the end, ensure optimal usage for other users like them.

The findings from this study will contribute to an enhanced design of the IN Harmony: Sheet Music From Indiana collection website. Based on this study, the IN Harmony website will be able to meet the needs of potential users with scholarly or general interest purposes. Information gathered will also be shared in the form of presentations and publications to help inform other digital library projects with their approach to designing their own sheet music collection websites.

APPENDIX A

Study # [will be assigned by the HSC]

INDIANA UNIVERSITY - BLOOMINGTON STUDY INFORMATION SHEET

IN Harmony: Sheet Music from Indiana Group Walkthrough Evaluation Plan

You are invited to participate in a research study. The purpose of this study is to learn how you interact with sheet music collections and your evaluation of the IN Harmony website prototype.

INFORMATION

If you chose to participate, you will be part of a group walkthrough that will explore how you would potentially use an online digital image collection. There will be 6-8 others participating in the evaluation session. Also present will be the facilitator and two note-takers.

You will be asked to complete a short background questionnaire before the website evaluation commences. You will also be asked to complete a satisfaction questionnaire upon completion of the evaluation.

The session will last no more than 2 hours. You will be asked to comment on various prototype web pages. Specific questions related to the function or design of the pages you are viewing will be posed, as well as general questions regarding your previous use of online image collections.

The questionnaires and session notes of your responses will be used strictly for the development of the IN Harmony: Sheet Music from Indiana website.

RISKS

There are no known risks associated with this kind of study. However, at any time, you are free to take a break during the discussion.

BENEFITS

There will likely be no direct benefits to individual participants, but it is hoped that the results of the study will benefit all future users of the online IN Harmony sheet music collection. Your input will help us ultimately design a website that meets the needs of people like you who may utilize the website for scholarly or general interest purposes. In addition, the findings from this study will help in the design of future digital library projects that rely on the basic principles and methods of information access and retrieval.

CONFIDENTIALITY

The survey should be completed anonymously. You should not write your name or any other identifier on the survey. No one except the research team will have access to the completed surveys. Reports of the study will be made using aggregated information.

All the data collected will be done so in an anonymous fashion. The survey you will complete is identified with a participant number, e.g. # 5, not your name or any other unique identifier such as Social Security Number.

All the data collected will only be reviewed by the investigators of this study. It will be kept in restricted access until completion of this IN Harmony website in January 2007, at which time they will be destroyed.

COMPENSATION

You will receive a gift certificate to a local bookstore worth \$10.00 for participating in this study. If you chose to forego participation after reading this consent form, you will not be compensated.

CONTACT

If you have any questions about the study or the procedures, you may contact the researcher Nikki Roberg, at the Digital Library Program, Indiana University-Main Library, 1320 East 10th Street, Room E-170, Bloomington, Indiana 47405, 812-855-1261 and nroberg@indiana.edu

If you feel you have not been treated according to the descriptions in this form, or your rights as a participant in research have not been honored during the course of the project, you may contact the office for the Human Subjects Committee, Indiana University, Carmichael Center L03, 530 E. Kirkwood Ave., Bloomington, IN 47408, 812/855-3067, iub_hsc@indiana.edu

PARTICIPATION

Your participation in this study is voluntary; you may refuse to participate without penalty. If you decide to participate, you may withdraw from the study at any time without penalty and without loss of benefits to which you are otherwise entitled. If you withdraw from the study before data collection is completed your data will be returned to you or destroyed.

CONSENT

I have read this form and received a copy of it. I have had all my questions answered to my satisfaction. I agree to take part in this study.

Participant's signature _____ Date _____

Investigator's signature _____ Date _____

Information Sheet date: 10-04-06

{<http://www.research.indiana.edu/rschcomp/samples/SISipsurvey7-01.doc>}

APPENDIX B

Recruit Email

Introducing IN Harmony: Sheet Music from Indiana

Indiana University (IU), the Indiana State Library (ISL), the Indiana State Museum (ISM), and the Indiana Historical Society (IHS) have received a grant from the Institute of Museum and Library Services (IMLS) to provide electronic access to Indiana-related sheet music from each of the institutions' collections. Approximately 10,000 pieces of sheet music will be available online as a result of this grant activity. One of the primary goals for this project is to provide robust, consistent browse and search access across all participants' collections or within a particular collection. Low-fidelity, paper prototypes have been designed to assess the next phase of IN Harmony project, the design of the collection website.

The purpose of this study is to evaluate the low-fidelity, paper prototypes of the IN Harmony website with a group of representative users. For more information, feel free to visit the IN Harmony project website: <http://www.dlib.indiana.edu/projects/inharmony/>.

Call for volunteers

We would like to feedback from graduate students and faculty. We are especially interested in feedback from students and faculty in Music, Ethnomusicology, Sociology, Anthropology, History and Art History. We welcome volunteers from these or other disciplines to participate in our group evaluation.

What, when and where?

Our goal is to schedule testing the week of October 23, 2006. The date and time are flexible so that we may schedule an optimal time for all those attending. The session is scheduled to take no more than 2 hours of your time.

The paper prototype testing will be held in the Herman B. Wells Library. The exact room, day, and time are to be announced. Reminders will also be sent the day before the scheduled evaluation.

The paper prototype testing procedure includes: 1) completion of study information sheet and brief background questionnaire; 2) the actual group walkthrough session which is similar to a focus group; and 3) time for final questions.

We will take notes during the session. All information recorded will be kept confidential.

If you are interested in participating, please send available days/time options for the week of October 23, 2006. Please respond as soon as you can with multiple time options so we can schedule the walkthrough accordingly.

Thanks!

Your participation will benefit all future users of the IN Harmony website! As a token of our appreciation, we will be offering \$10.00 gift certificates to a local bookstore.

Thank you very much for your time,

Michelle Dalmau (mdalmau@indiana.edu, 812.855.1261)

APPENDIX C

Participant Background Information for IN Harmony: Sheet Music from Indiana – Group Walkthrough Evaluation

1. IU Status: Faculty Graduate Student Undergraduate Student Librarian Staff
a. Area(s) of study, expertise or professional practice:

-
2. Please indicate with an “x” how frequently you use the following sheet music collections:

Indiana University Sheet Music Collection

Not at all _____ All the time

Sheet Music Consortium

Not at all _____ All the time

Library of Congress Sheet Music Collections (any)

Not at all _____ All the time

Duke's Historic American Sheet Music

Not at all _____ All the time

Johns Hopkins' Lester S. Levy Sheet Music Collection

Not at all _____ All the time

- a. List other sheet music resources you use:

3. Describe why and how you typically use sheet music in your teaching, research or musical performance.

- a. If you use online sheet music images for class assignment or lectures, can you explain how you use them?

4. Are you more interested in sheet music cover art or in the musical content? Please explain under which circumstances you would search for either cover art or content.

- a. How do you search for cover art (e.g. list example search terms or summarize searching style/approach)?
-
-

- b. How do you search for musical content (e.g. list example search terms or summarize searching style/approach)?
-
-

Thank you for completing this questionnaire.

Page 2 of 2

APPENDIX D

Walkthrough Script for the IN Harmony: Sheet Music from Indiana Website

[Overview of the Walkthrough]

The IN Harmony: Sheet Music from Indiana website is in the **early design stages**. We are here today to hold a **guided group discussion** of the prototype site, which is in paper form. The **discussion will be prompted by specific questions that address the prototype**. I will show the group pages that represent various pages of the website so that you can see what we have mocked up. The idea is to **refer to the prototype site when answering the questions** posed. Feel free to bring up related sites where you can search and browse for sheet music (or music, in general?), if you wish to illustrate a certain feature that you find helpful in other sites.

[Overview of the IN Harmony Collection]

Partnership between:

- The Indiana University Digital Library Program
- IU Lilly Library
- Indiana State Library
- Indiana State Museum
- Indiana Historical Society

to create a single Web site to provide access to approximately 10,000 pieces of digitized sheet music by Indiana composers, arrangers, lyricists or publishers as well as sheet music about the state.

[Discussion Protocol]

I will pose questions to the group and collectively we will explore them.
Feel free to ask your own questions.

[Introductions]

Let's go around the table and introduce ourselves before we begin. Mention your role, your departmental affiliation and a brief statement in how you use sheet music in your teaching or research.

I can start.

[Michelle introduces herself. On to my left ...]

Do you have any questions about the walkthrough process?

OK, let's get started.

The “website” we will soon review is a paper prototype site. They are mocked up **with examples** to illustrate how they could work. This means that we are looking for feedback not only on the way the information is presented on the page but also on what you might expect/infer to happen or not happen based on the design. Keep in mind these are paper-based designs. Nothing has been built. We can alter the design easily based on your experiences and suggestions.

The wireframes are arranged in a packet and are numbered. Please don’t skip ahead. I will sometimes preface the actual wireframe review with questions and I don’t want your answers influenced by what you see. Thanks!

Before we start, can you each give me an example of how you have used other online sheet music collections in lecture presentations, class assignment or your own research. I am curious to know specific details on how you integrate and utilize the online content in your own work.

[Start with first wireframe]

At any time, feel free to reference or mention online sheet music collections or other sites that you may use to illustrate or support your points.

[Home Page]

1. Let's look at **Page 1**, home page.

- General impressions?
 - What is your general sense of the navigation structure? What do you think of the groupings? Of the labels?
 - What kinds of useful information should we display on this page?

[Browse]

We have identified several browse access points as you can see from the navigation:
Name, Title, Year and Subject.

*Subject browse has not been mocked up because we are waiting
for a critical mass of cataloged records to determine the frequency of subject cataloging
across institutions.

We will explore these one at a time.

[Year Browse]

2. Let's look at **Page 2**, Year browse.
 - Does this layout make sense to you (links, groupings, columns)?
 - Would you want the option to browse sheet music that was not dated?
 - i. Is the ‘unknown date’ link a satisfactory access point to that material?
 - What, if anything, would you expect to happen if you “clicked on” a year span?
 - Would you like to browse an entire decades worth of sheet music that could potentially yield hundreds of results or would you like to restrict your browsing somehow? How?

[Title Browse]

3. Let's look at **Page 3**, Title browse [no results]

This is just a small sampling of titles of sheet music in the IN Harmony database.

- How do you expect to interact with this screen?

- What if you don't know the entire title of the song? Like 'Dance of the *something* Danube'? What would you do?

- What do you think would happen if you entered the word "celtic" in the browse box?

Let's look at **Page 4** [Title Browse with results and browse box]

This is one way we could layout the results.

- Does this make sense to you? [Talk about how it matched up or didn't with expectations]

- If you were unsure of the song title, what else could we provide to help you identify the correct title?

We have another layout we could use for browsing titles.

Turn to **Page 5** [Title Browse with A-Z list at top (no results)]

- How might you browse using this interface?

- What do you expect to happen if you click on a letter?

- Can you think of ways to help limit the large number of titles under common letters using this interface?

Turn to **Page 6** [Show Title Browse A-Z with results]

- Does this make sense to you?

- What do you think of subdividing by two letter ranges?

- Do you have a preference between the two title browse interfaces you have seen? Why?

4. Let's go to **Page 7**, [Name Browse with browse box (no results)]

- What sort of names do you expect to be able to browse here?

Let's go to **Page 8**, [Name Browse with results with browse box]

- Is it helpful to show the roles including multiple roles next to the names?

Turn to **Page 9**, [Name Browse A-Z list with results]

This is an alternative similar to the title browse.

- What do you think of how the names are listed here? [Trying to get at long page, scrolling]
- Do you have a preference between the two name browse interfaces you have seen? Why?

Turn to **Page 10**, [Cover Art Browse]

This is an alternative similar to the title browse.

- What do you think about browsing the cover art?
- How should the thumbnails be sorted by default?

[Basic Search Page]

5. Turn to **Page 11**, ‘basic search’ page.

- How would you use this search page?
- How do you think your search results would change if you selected to “search digitized music only”?
 - What would be a better label for this feature?

[The page also features an area for search tips.]

- What sort of tips might be helpful to you when you are searching?
- How often do you use Advanced Search pages when searching?
- Can you give examples of Advanced Searches you have constructed recently?

[Advanced Search]

6. Let's look at **Page 12**, advanced search page (simpler one).
 - Would you use this search page? If so, how? If not, why not?
 - Let's have a look at the field search options. Are they clear? Are they satisfactory? Any comments about their groupings?
 - Assuming we have sufficient subject-related metadata, we can add these to the Adv. Search page. How do you expect to use these elements (genre/form, instrumentation, range) as part of your query?

Turn to **Page 13**, [more complex advanced search page]
This is another wireframe of the Advanced Search screen.

- Any general impressions?
- Is it clear to you how to construct a query using this interface?
- Are all the field options apparent to you? How would you search by language or institution?
- If you wanted to conduct a search for a genre, say Ragtime, how would you do it using this screen? [get at whether to make that a filter or “browse-like” option]

[review fields one by one]

- Which field options would you add or remove?
- What do you think of the **date range search**?
- How do you typically enter dates when searching?
- Which of the two advanced search interfaces do you prefer and why?

[Results Pages]

Before we review the results pages, can you talk a little bit about how you expect the results page to appear including what kinds of functionality it should have? I encourage you to think about websites you have recently used (Amazon, Google, Library of Congress, etc.) and talk specifically about features you find important or annoying when sifting through results.

7. Turn to **Page 14**, no results pages.

[bring up No Results page]

From advanced search, it may happen that you have refined your search to the point where there are no results to display. In this case, a page will appear stating “No Results Found”. But it will also display other variations of your search that may have results.

- Would this type of page be helpful to you?

- Does the information displayed on this page make sense?

- If you conducted a basic search and did not receive results due to misspellings, typos, no matches, etc., what kind of information would help you redo your search?

After submitting a browse or search, you'll see a page of results.

Turn to **Page 15** [search results page, mock 2]

- What is your initial reaction to this page?

- What information would you like displayed in the results page in terms of feedback?

- What information would you like displayed in terms of the record information?

- What kinds of functionality do you consider helpful that is not represented?

- For the display, there are 3 options: thumbnail only, thumbnail & record (not caption) and record only. Which one would you expect as a default display format?

- What sort options would be most useful to you?

- What would be an acceptable default result sort order, for instance chronological by publication date, alphabetical by title, alphabetical by composer?

- What do you think is the purpose of the left-hand side of this page? How would you imagine interacting with these options and how do you think they will affect your results?

- Have you ever narrowed/altered your search results from the results page? If so, what online database or collection have you used that allows for this type of refinement?

- If you want to narrow or expand your search based on the results from this page, how would you do it?

- What might you expect to happen if you “click” on “Remove” from one of your search categories?

- What might you expect to happen if you search for another word or phrase, in the “Refine your search” box?

- If you clicked on “Bluegrass” under “genre/form” what would you expect to happen?

- What do you expect to happen if you “click” on the “More” button?
- What do you expect to happen when you click on “View detail” within the search results?

[Result Detail]

8. Let's look at **Page 16**, result detail.
 - What information would you like displayed in the detail results page?
 - What do you think the underlined text means?
 - What do you think of linking subject headings?
 - If multiple copies of the sheet music existed, how would you expect to view a version of the sheet music? What do you expect would happen when you select to "view sheet music"?
 - What do you think the purpose would be of adding this record to "My Selections"?
 - What might be a helpful indicator that you have selections saved already?
 - Any other comments about this page?

[My Selections]

9. Let's look at **Page 17**, My Selections page.

- Does the information about your selections make sense to you? Is there anything missing that you would like to see listed? Any additional functionality?
- What do you think happens after you click on “send selections”?
- How do you expect to see the information just sent formatted?

[Search History]

10. Turn to **Page 18**, “Search history”

- Have you ever used an online collection or database that offers that or a similar feature? Do you use this feature?
- What are your general impressions?
- What “save search” capabilities are important to you?

Final question ... Based on what you have seen and suggestions you have provided, how would you use this website to help you with your teaching or research? What additional features do you need to facilitate your teaching or research process?

This wraps up the analysis of the IN Harmony walkthrough.

Do you have any comments or questions that we did not address about this IN Harmony prototype or other online databases/collections- especially sheet music collections- that you have used that will help us with the design?

Walkthrough completion

Thank you for your comments.

Debriefing

Once again, I'd like to thank you for coming today. Your participation will help us design a sheet music collection that addresses your needs.

Do you have any questions or comments about today's session?

We have a small thank-you gift [hand over certificate]. Please take a minute to sign this sheet as acknowledgement that you received this gift.

[Gift Acknowledgement Form.]

APPENDIX E

Gift Acknowledgement Form

By signing below, I certify that I participated in a usability evaluation of the *IN Harmony* prototype website for Indiana University's Digital Library Program and received a
_____ gift certificate in the amount of \$10.00 in exchange for my participation.

Signature: _____

Print name: _____

Date: _____

Email: _____