

Variations2 Help: Moving Help Closer to Users

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Introduction

Throughout the design of the Variations2 system, we have constantly been reminded of the disconnect users often feel to traditional help. In response, as our own help system has evolved, we have sought to move help "closer" to the user. Although we do provide our users with traditional help items (e.g. a web-based user guide) we also recognize the value in better connecting users and help. To this end, we have successfully placed various help elements closer to users within existing system interfaces (e.g. within-window directive messages). We plan to incorporate similar elements into future system versions to encourage more transparent interaction between users and help.

Variations2

Variations2 is a testbed digital music library system that provides users with online access to recordings and scores from the collection of the William and Gayle Cook Music Library at Indiana University. User groups include students (music and non-music majors), music faculty, and researchers from U.S. and international satellite sites. The Variations2 system expands upon the capabilities of the current online music retrieval and listening system entitled Variations (see <http://www.dlib.indiana.edu/variations/>). Unlike Variations, the Variations2 system provides users with a search interface that is independent of the Indiana University library catalog system. A variety of user studies indicated that Variations users employ the system for a core set of activities which includes listening to audio reserves for an exam, preparation for lessons or recitals, and personal listening. As such, Variations2 enables those activities, but also offers innovative search, retrieval and integration functionality. With the current version of Variations2 users may:

- search for music by entering such search criteria as the name of a work, a performer's name, the key of a work, or preferred media format;
- view online scores;
- bookmark places within a recording or online score and reuse those bookmarks next time Variations2 is run;
- export bookmarks to a web page from which they can link directly to a spot in a recording or score;
- select a measure number and simultaneously listen to audio and view the correct score page within the Opus Window;
- analyze musical form using "bubble diagrams" with the Timeliner tool;
- experience audio playback over lower-bandwidth connections, e.g., 56kbs.

Help System in Variations2

The novel interfaces and increased functionality of Variations2 necessitated design and implementation of an accompanying help system. Since its inception, the help system has evolved significantly. In accordance with our commitment to user-centered design (UCD), our development process has been

heavily informed by user feedback via surveys, system satisfaction ratings, observed user activities in usability test sessions and contextual interviews.

In this paper, we describe current Variations2 help mechanisms, what we've learned about their use, and how we plan to evolve them.

1. Online Help

Early Versions

The initial Variations2 help system was a single web page that contained information structured in an FAQ-like format. This page was later modified to eliminate the FAQ format, but retained the one-page anchor-linked structure (Figure 1). Note that we did not invest too much time creating this document because we did not expect much initial use of the system. As Variations2 further evolved, however, it became obvious that a single web page was inadequate to support the extensive instructional needs associated with Variations2 (we quit editing the page when it was about twelve printed pages long).

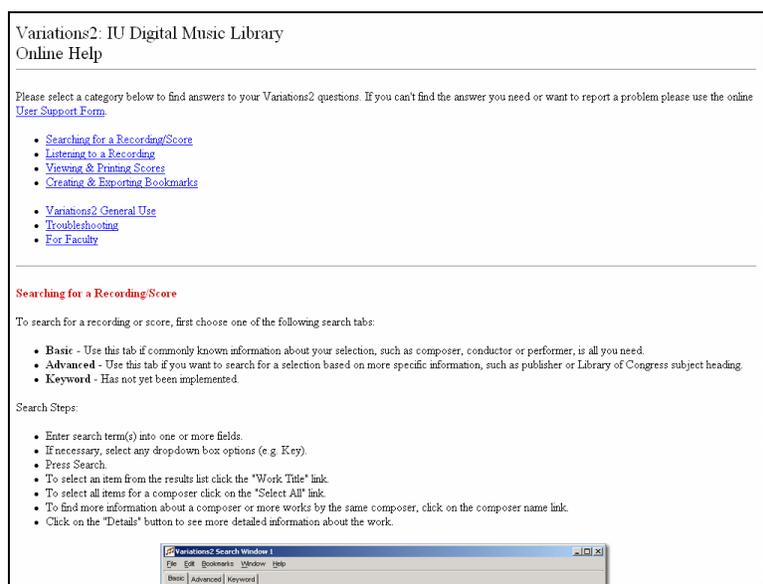


Figure 1 - Earliest Variations2 Help System, a single webpage

Current User Guide

A major shift in the initial help system arose with the development of the online user guide. The online user guide is the most comprehensive help item available to Variations2 users. To date, three alternate versions have been designed, each of which corresponds to a particular version of Variations2. The most significant changes across versions have involved restructuring the navigational categories, eliminating the use of an FAQ format, and streamlining the way in which the pages are generated. For the first version, each page and its contents were built manually. Starting with the second iteration, a Perl script was written to automatically include recurring page elements (e.g. header, footer, navigation bar) so that main content was the focus of edits as well as a printable version of each page. Within the user guide, users may get an overview of the Variations2 system, learn how to use the various components of Variations2 (e.g. Audio Player, Bookmarking), access previous guide versions, request help or submit suggestions. A special section for instructors contains suggested ways to incorporate Variations2 into classroom assignments and provides online forms for requesting digitization of musical works and system installation. Finally, to account for the wide range of Variations2 users, the user guide covers both PC and Mac versions of the software and makes extensive use of contextual screenshots and images with “call-outs” to provide both visual and textual guidance (Figure 2).

2. Contextual Help

While using the Variations2 system, users may access contextually-based help pages that address issues with the particular component they are using. For example, while using the Audio Player, a user

may click on the Help menu and choose the “Help with Audio Player” option (Figure 3). This action will open a Webpage that contains information about use of the audio player. In the same menu, users also have the option to go to the online user guide. However, the information contained in the contextual help pages for a component is identical to that found in the user guide for the same component.

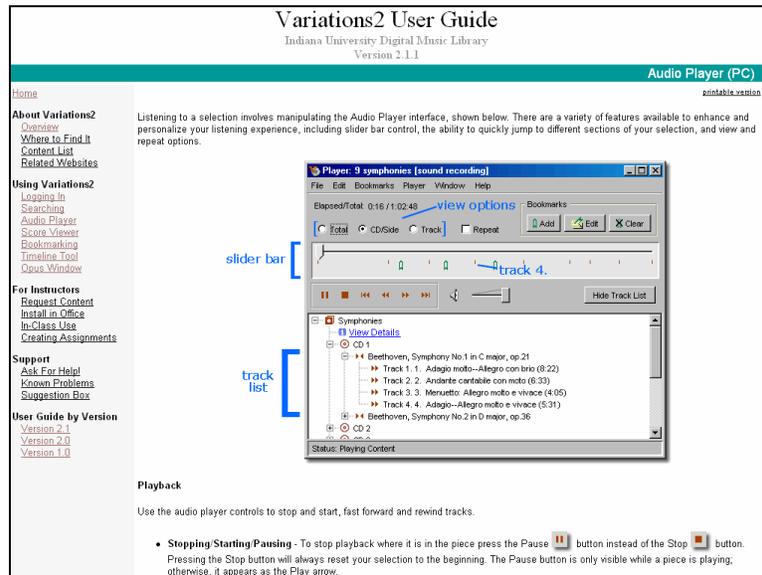


Figure 2 - Variations2 online User Guide, version 2.1.1, PC Audio Player help page.

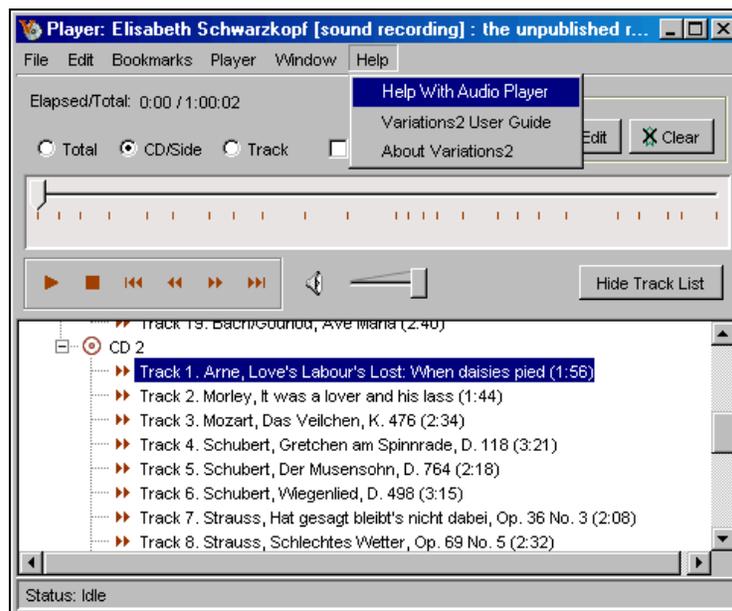


Figure 3 – Contextual help options available in the Variations2 Audio Player window

In addition to providing context-sensitive access to off-screen help information, Variations2 also provides immediate user assistance using such techniques as tool tips, instructional prompts and sample queries (the latter two in the search window).

3. Library User Guide

The most recent addition to the Variations2 help system is a 4-page color handout that is available to users in the music library. The guide serves as a quick introduction to Variations2 and includes instructions on how to access and start the application on both PC and Mac. Short tutorials are provided

for the Search interface, Audio Player, Score Viewer, Bookmark capabilities, and the Timeline Tool. This guide exists as a supplement to the online user guide that users may take with them.

User Observations & Log File Data

Via usability testing of Variations2, we have been able to observe how much (or how little) users actually consult help pages. Of course, in a lab-based setting, user actions may be skewed because users are uncomfortable being observed, they do not want to appear inept, etc. In our observations of tests of Variations versions¹, though, we saw that users typically only consulted help pages when they were very frustrated with a task (e.g. printing). Users who did consult our help pages generally had positive things to say about them and were surprised when they found helpful information.

Variations2 logs user actions to a log file on the server, allowing us to count the number of help or user guide accesses. In a six-week period during which several pilot projects were running and students were using Variations2 in the music library, there was very little use of either help or the user guide. Of the 418 user sessions logged, three sessions accessed the window-specific help, two sessions accessed the general help menu item, and three sessions accessed the user guide. The overall utilization of "off-window" help or the user guide was approximately 2%.

Maintenance Issues

A significant difficulty is that the system's constant evolution causes breakdowns in maintainability. Functionality changes with each version, necessitating changes to content that may need to be applied over several mediums. Since the online user guide incorporates lots of screenshots, any small change in the interface requires extensive time to retake those screenshots (on both PC and Mac) and reformat them in an image editing program. As well, the contents of the contextual component help pages are stored in a different place on the project server, even though the content is identical to that in the user guide. Therefore, a change to the user guide sections on components (e.g. Bookmarking, Score Viewer, Opus Window) necessitates a second change to the contextual help pages and vice versa.

End User Benefits

Some aspect of help is always available to users. For example, both the user guide and the library handout are accessible if the software breaks down. Or, if online access is not possible, the handout may be consulted. A second benefit is the speed with which users may access a contextual help page if they have problems with a particular aspect of the system. Since the Help menu is universally available from each window, the information is right at a user's fingertips. Third, the information contained in the help system is quite detailed and task oriented, providing *process* information rather than just describing each component.

Conclusions

As we develop Variations2 and its help system, we continue to pursue our goal of moving help closer to the user. Currently, this sentiment is realized by placement of within-window instructions, provision of tool tips, and specific directive elements such as sample search queries. For our more complex windows such as the Timeliner, we are considering providing context-sensitive within-window instructions to help users evaluate what state they are in and know what reasonable next steps might be. In our search window we could provide a message about the current state of a search request followed by a screen which indicates which terms are more or less relevant if the query retrieves no results. One future approach that we have discussed for minimizing the gap between users and help is detecting first-time logins and subsequently offering a "tour" or other sort of introduction to Variations2 for first-time users. We hope that by providing "closer" ways for users to get started using a system that may be complex or unfamiliar we can both tighten up the connection between user interactions and help access in Variations2 while also reducing the mistrust users seem to feel for help systems generally.

¹ See Variations2 usability testing reports that address help page usage at <http://variations2.indiana.edu/pdf/v2v1-early-test.pdf> and <http://variations2.indiana.edu/pdf/v2v1-test.pdf>