

**THE UNIVERSITY OF HONG KONG
FACULTY OF EDUCATION**

B Sc (IM) Assignment Cover Sheet

Programme: B Sc (IM)

Year of Study: 2nd / ~~3rd~~ *

Course Code: BSIM0010

Course Title: Digital libraries: principles
and applications

Course Teacher: Dr. Sam Chu

Due Date: 29 April, 2010

Chan Lai Zing, Jan

Chan Lok San, Rosana

Cheuk Wai Man, Alice

Suen Cheuk Wing, Wilson

Student Name: Verena Henn

Student No: 2009640607

2009637973

2009639957

2009641936

2009910753

Student's email: laizing0821@yahoo.com.hk

loksan_c@yahoo.com.hk

alicecheuk@ymail.com

ktmcwing@yahoo.com.hk

vehenn@yahoo.co.uk

*please delete as appropriate

Assignment Topic:

Group Project – Evaluation of Naxos Spoken Word Library

Student Declaration:

This assignment is entirely my own work except where I have duly acknowledged other sources in the text and listed those sources at the end of the assignment; I have not previously submitted this work to this University or any other institution for a degree, diploma or other qualification; I understand that I may be orally examined on my submission.

Signed: Jan, Rosana, Alice, Wilson, Verena

Date: 29 April, 2010

Table of Content

| | |
|--|----|
| List of Appendices | 2 |
| 1. Introduction..... | 3 |
| 1.1 Introduction of Naxos Spoken Word Library | 3 |
| 2. Users’ needs assessment | 3 |
| 2.1. Existing and potential users | 3 |
| 2.2. Why assess? | 4 |
| 2.3. Areas of decision making encountered by digital library administrators..... | 4 |
| 2.4. Survey | 4 |
| 2.5. Evaluation | 5 |
| 3. Best practice benchmarking | 7 |
| 3.1 Type of benchmarking | 7 |
| 3.2 Competitor background..... | 7 |
| 3.3 Benchmarking criteria..... | 7 |
| 3.4 Benchmarking results..... | 7 |
| 4. Heuristic evaluation | 9 |
| 4.1 Usability analysis and suggestions..... | 9 |
| 4.2 Severity rating for usability problems..... | 12 |
| 5. Usability testing | 12 |
| 5.1 Methodology | 13 |
| 5.2 Findings..... | 13 |
| 6. Recommendation | 17 |
| 7. Conclusion | 19 |
| References..... | 19 |
| Appendix 1 Questionnaire for user needs assessment..... | 20 |
| Appendix 2 Benchmarking result..... | 23 |
| Appendix 3 Screen capture on heuristic evaluation | 25 |
| Appendix 4 Severity ratings for usability problems..... | 30 |
| Appendix 5 Appendix for usability testing | 31 |
| Appendix 6 Workload distribution table | 37 |

List of Appendices

Appendix 1 Questionnaire for user needs assessment

Appendix 2 Benchmarking result

Appendix 3 Screen capture on heuristic evaluation

Appendix 3.1 Loading audio book player

Appendix 3.2 Loading webpage

Appendix 3.3 Changing interface language

Appendix 3.4 Lengthy track list

Appendix 3.5 Consistent main menu

Appendix 3.6 Keyword search information

Appendix 3.7 Audio book player

Appendix 3.8 Buttons of sorting

Appendix 3.9 Interface design

Appendix 3.10 Keyword search

Appendix 3.11 Text search

Appendix 3.12 Help function

Appendix 4 Severity ratings for usability problems

Appendix 5 Appendix for usability testing

Appendix 5.1 Usability testing questionnaire

Appendix 5.2 Navigation bar provided/Show List used

Appendix 5.3 Player interface did not highlight text to show progress

Appendix 5.4 Content packed at central

Appendix 5.5 Content packed at upper part

Appendix 5.6 Multilanguage does not support whole page translation

Appendix 5.7.1 Suggestion on “no-result” page

Appendix 5.7.2 Suggestion on “no-result” page

Appendix 5.8 No suggested word for refining search

Appendix 5.9 Titles, author and volume number are combined in one line without clear indication

Appendix 5.10 Help icons are not eye-catching/Not all functions instructed

Appendix 5.11 Unrecognized code appeared

1. Introduction

Digital library has become a trend to access information for years. This report is aimed on evaluating the audio books digital library, Naxos Spoken Word Library (Naxos). An introduction is given to the digital library and its collection, followed by the users' need assessment to analyze the information needs and behavior of the target and potential users. A best practice benchmarking is conducted to compare Naxos with Christchurch City Libraries (CCL), which is also majoring in audio books, in order to figure out the rooms of improvement for Naxos. For the usability study, a number of participants are committed into the heuristic evaluation and usability testing, in order to investigate the shortage of Naxos and give suggestions for improvement. After the mentioned tasks are done, a number of recommendations are given to improve the performance of Naxos. Appendices are attached at the end of the report for reference.

1.1 Introduction of Naxos Spoken Word Library

Background of Naxos Spoken Word Library

Naxos Spoken Word Library (Naxos) is an online resource for audio book materials. This digital library is constantly expanding its collection focusing on literary classics and texts with educational value. Access to Naxos requires subscriptions while free access is available through Hong Kong Public Library.

Collections and features of Naxos Spoken Word Library

Naxos promotes online audio collections which can be accessed anywhere at any time. It contains a collection of full-fledged recordings in English and German titles, some of them are accompanied by on-screen text which can be printed out. The audio collections are streamed in 64Kbps or 20Kbps to suit the needs of users. Some records also include image files of covers and/or booklets and some additional notes about the literature recorded. The collection of Naxos can be browsed by categories or in alphabetical order by author, reader. There are also keyword search as well as text search. Naxos support Multilanguage but most of the content, item description and metadata are still encoded in English. It also offers the possibility to share items via social networking sites such as Facebook, Twitter, Myspace, etc.

2. Users' needs assessment

2.1. Existing and potential users

The main users of Naxos are primarily involved in education, thus students, lecturers and teaching staff or those involved in academic/educational support e.g. library administrators and staff, and the general public are seen as potential users. Furthermore, potential users of Naxos are expected to have a certain degree of expertise in technology and new media since this online resource requires some familiarity with the use of online materials.

2.2. Why assess?

In order to design a purposeful, functional product, creators need to learn about the "needs of the target group" (Chu, 2007, p. 242) first. These needs may vary to a high extent and it is not always possible to fulfill all of them. However, knowing what the users want and need enables a highly focused development process and increases the probability that the finished or revised product will be widely accepted by the users. Administrators of digital libraries are involved in a constant decision making process to secure that the digital library fulfills users' needs in the best possible way at all times. These decisions may involve many different aspects such as design, technology, content etc. Hence, these different areas need to be evaluated before significant decisions can be made. An extensive list of evaluation criteria is given by Chowdhury and Chowdhury (2003). In this users' needs assessment we will focus on five main areas designers may look at and whether the users' feedback provokes a need for them to make changes.

2.3. Areas of decision making encountered by digital library administrators

i) Technology and functionality:

Is the technology working smoothly and on different platforms? Is technical support guaranteed?

ii) Structure/design/user-interface:

Is the structure of the digital library clear? Is the user-interface appealing and functional? Does it serve its purpose?

iii) Usability (especially of the search function):

Simplicity of the search function: Can users search/browse easily? Are they able to find what they are looking for?

iv) Collection:

Are users satisfied with the collection? Should the collection be enlarged? What are the criteria for the selection of items?

v) Effectiveness in fulfilling information needs:

What are the reasons for using the digital library? What are the users' expectations of the digital library? Does it fulfill their information needs?

2.4. Survey

The users' needs will be assessed by conducting a survey among university students allowing them to provide feedback on Naxos (please see appendix 1 for the survey). In total 36 students have participated in the survey. Their answers are evaluated below.

The Questionnaire can also be found using the following link:

<http://spreadsheets.google.com/viewform?hl=en&formkey=dEJTVWtpd0VOa2dSSThIc2NsQXkxdGc6MQ>

2.5. Evaluation

i) Technology and functionality:

When being asked to listen to a recording, the player was working smoothly for almost every participant. Only in two cases the users encountered problems playing the recordings. One participant received the status notice 'loading playlist' but the stream would not play. The second participant could not open the player at all. However, the high number of successful plays indicates that the technology functions smoothly and helps to fulfill the users' needs. As a recommendation, participants suggested that parts of the on-screen text could be highlighted while being read so that users can follow more easily.

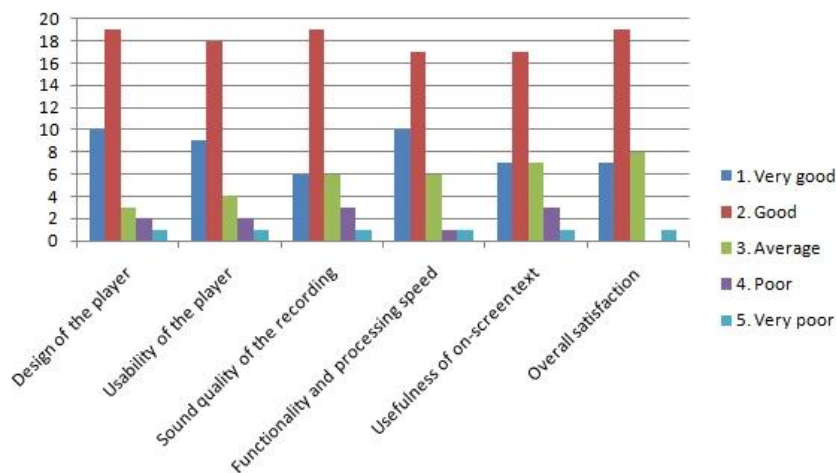


Figure 1: Technology rating

ii) Structure/design/user-interface:

Most participants gave positive feedback on structure and design. Users said that Naxos is clear and easy to navigate, well organized and generally simple to use. Most users liked the design. It has even been stated that the digital library bears some familiarity with commercial websites like amazon.com. When giving their first impressions the terms 'clear', 'easy', 'simple' were used repeatedly. Only one participant complained that the design was too bare making the website look unfinished.

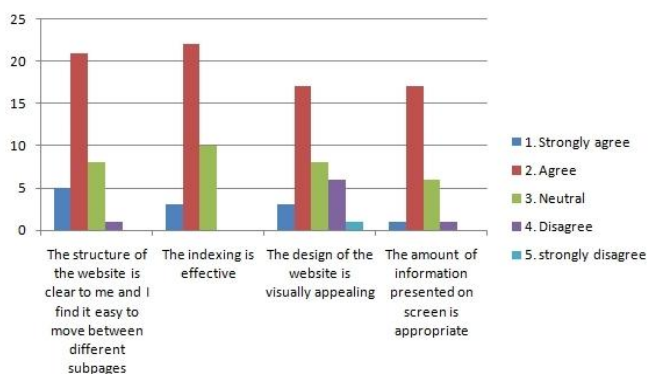


Figure 2: Design rating

iii) Usability (especially of the search function):

After the participants had been given some time to browse Naxos freely, they were instructed to perform a specific search and look at a specific item. About 80% of the participants did not have any problems to carry out these tasks. They were able to enlarge the cover image, read the additional information and open the booklet. 15% of the participants could not perform these tasks. The remaining 5% did not give any feedback on the issue.

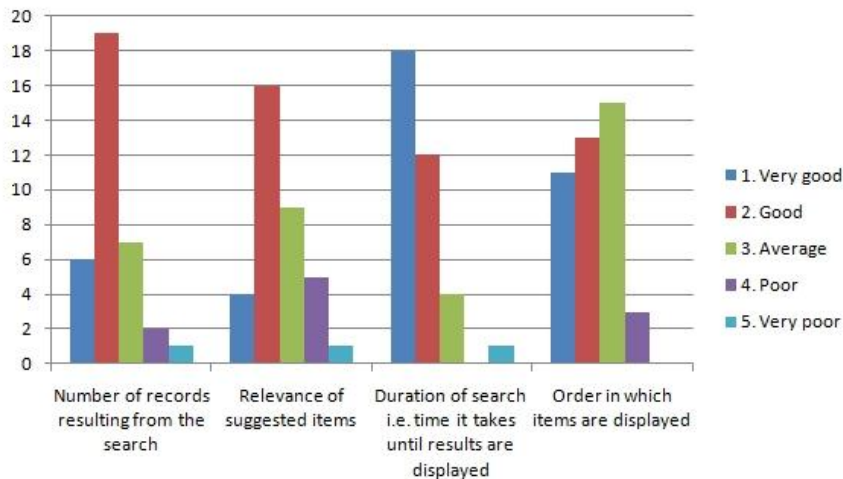


Figure 3: Directed search rating

Additionally, a few users complained that the digital library was not bilingual and that it was difficult for them to use English only.

iv) Collection:

Several users complained about the limited size of the collection. When participants searched for authors of well perceived classics such as William Shakespeare or Mark Twain, they got many search results. However, when looking for more recent authors like Dan Brown or J.K. Rowling the search could not provide any results. In the comment section of the survey participants suggested that more books should be added to the collection.

v) Effectiveness in fulfilling information needs:

From a total of 36 participants 31 had never heard of this digital library before, 3 knew about it and only 2 had used it before. Participants would choose this digital library for both leisure and learning purposes. They expect Naxos to provide them with book details and help them in learning English and improve listening skills and pronunciation. Furthermore, several participants indicated that Naxos is a good resource for visually impaired people.

80% of the participants stated that Naxos fulfills their information needs, 20% were not completely satisfied. 61% of the participants would use Naxos again.

3. Best practice benchmarking

Benchmarking is a process of measurement when a benchmark is a measure. (APQC, 1993, p.4). It is an ongoing process and the purpose of a benchmarking study “*is not only comparing for the sake of evaluation, but learning for achieving improvements*”. (Andersen & Pettersen, 1996, p.4) The results of benchmarking should be “*increased customer satisfaction and improved competitive position*”. (APQC, 1993, p.4) In this section, benchmarking will be conducted with Christchurch City Libraries (CCL), to investigate the strengths and weaknesses of Naxos Spoken Word Library, (Naxos).

3.1 Type of benchmarking

The type of benchmarking we choose is competitive benchmarking. It focuses on the best competitors. It measures the performance against that of competing organization and tends to “*concentrate on the relative performance of competitors using a select set of measures*” (APQC, 1993, p.4)

3.2 Competitor background

Christchurch City Libraries (CCL) was opened in 1859. It operates the largest network of public libraries in New Zealand, including 19 libraries, a mobile library and digital library all supported by 11 network services teams. Its audio book digital library is powered by Overdrive Digital Library Reserve which provides the digital library platform.

3.3 Benchmarking criteria

The benchmarking criteria are based on the web evaluation checklist provided by Gerry Gaffney (Gaffney, 1998). It includes eight areas for evaluation: navigation, functionality, control, language, feedback, consistency, error prevention and correction and visual clarity. Each area contains several elements which describe the criteria of the corresponding area. Naxos and CCL will be scored and the final score of each area will be sum up to reflect their performance. The benchmarking table is designed as follow:

3.4 Benchmarking results

| Table 1. Benchmarking results | | |
|---------------------------------|-----------|-----------|
| | Naxos | CCL |
| Navigation | 10 | 10 |
| Functionality | 5 | 6 |
| Control | 10 | 12 |
| Language | 4 | 4 |
| Feedback | 12 | 12 |
| Consistency | 8 | 8 |
| Error prevention and correction | 5 | 8 |
| Visual clarity | 7 | 8 |
| Total | 61 | 68 |

The highest score of each area are highlighted in Table 1. Based on the total score of the benchmarking, Overdrive scores higher than Naxos and therefore it is become the best practice.

Navigation

Navigation refers to the ability to find one's way within the web site. It is important to help users not to get lost. In this area, Naxos and CCL have the same score. Both of them provide navigation bar which show the route users have taken, and therefore show where they are. The common weakness they have is that, site map is not provided.

Functionality

Functionality refers to the support of all the activities which may be carried out on the site. In this area, CCL scores higher than Naxos. The difference is that some functions are not clearly labeled in Naxos. For example, the help function of Naxos and the back to home function are shown in graphic, without indicated by alternative text, and they are too small that can hardly be found.

Control

Control means customers should feel that they are always in control of the interaction. In this area, CCL scores higher than Naxos. The "Home" button is not clear on each page, and there is no alternative text for the "Home" and "Help" function buttons, they are only shown in small graphic, which is not eye-catching.

Language

It is important to speak the language of the user, in order to prevent confusion and frustration. In this area, both Naxos and CCL perform well and scored full marks. They both use simple language and words used are easily understand, no jargon are used.

Feedback

Feedback refers to the provision of information about what is happening at any time. Both Naxos and CCL perform well in this area. Whenever there are errors, both of them provide error message immediately. Help function is available in both website. Also, users can give feedback and receive feedback through email.

Consistency

Using consistent language and visual cues can help users use the site successfully without learning any new techniques. Both Naxos and CCL use consistent language and graphic on each page.

Error prevention and correction

Errors should be prevented from occurring. It is important to provide clear explanation of what has happened and clear instructions for how to recover when errors happened. In this area, CCL scores higher than Naxos. Errors sometimes occur with Naxos. For example, blank list in the category, graphic cannot show up. If wrong word is type in search field, error message is shown for keyword search but not for text search. The error message does not provide an exit point, but suggestions are provided to refine the search.

If wrong word is typed in search field in CCL, although there is no suggestion provided, there is always a link for users to go back to advanced search. Both Naxos and CCL do not provide contact details for assistance in their error message.

Visual clarity

A clear layout would definitely facilitate users to use the site. In this area, CCL scores higher than Naxos. The main problem of Naxos is that some links, such as “Home” and “Help” function, are only available in tiny graphic without alternative text. Users can hardly locate them. Also, Naxos has too much space on the screen and texts are too small, it is not comfortable for users to read the content.

The screen of CCL is relatively comfortable for its layout. Texts are large enough, and most icons are clearly shown in text, alternative texts are also provided for graphic.

4. Heuristic evaluation

According to Nielsen (2005) heuristics evaluation is the most popular usability inspection method. It is a quick, cheap, and easy method to evaluate a user interface design so we use this method to evaluate Naxos. And we applied Nielsen’s 10 Usability Heuristics to do the heuristic evaluation. Following is the summary of the evaluation.

4.1 Usability analysis and suggestions

1. Visibility of system status

Naxos takes a long loading time to open the audio book player, especially when user chooses more than one audio track. The browser froze at the audio tracks browsing page. And it does not show any message or notice to notify the users that the audio book player is being loaded. (*See Appendix 3.1*)

Moreover, sometimes Naxos takes a long loading time to turn into a new page. While the page is loaded, the browsing page just stays at the current page, no notice to notify the users that the page is loading. Users can only rely on status bar which is original installed in web browser to notice that the page is loading. (*See Appendix 3.2*)

Suggestion:

Naxos should add notice or message of opening an audio book player and loading a new page rather than freeze or stay at the original browsing page. This helps users identify what is going on to the page.

2. Match between system and the real world

Naxos provides language options to users for interface display, such as traditional Chinese or simplified Chinese. When viewing the content, some of the English words are translated into traditional Chinese or simplified Chinese words. However, most description and metadata still remain in English. (*See Appendix 3.3*) Actually all the content of collection are in language of English or German, however some title or author can be displayed in Chinese words for the digital library, the information are not appear in a natural and logical order, it is not consistency and make confuse to the user.

Suggestion:

If Naxos uses English as its interface language and its collection are mainly in English language, it should not let the users change the language displayed in the interface. It will confuse the users that he/she can search or browse with collection of these languages.

3. User control and freedom

If there are numbers of disc and track in a title, Naxos required users to scroll down the page to browse the entire audio track list. (See Appendix 3.4) After users select the track, they need to scroll up to click "Play Selections". It is time consuming and not convenience for the users.

Moreover, if users want to listen to other audio book title, the original audio book player would close to allowed the new select track list open. It is quite inconvenience if the users want to keep listen to the previous tracks.

Suggestion:

It is recommended Naxos should add "Play the selection" and "Add to play list" for each track at the right hand side. "Play the selection" is used when no audio book player is opened. "Add to play list" is used when the audio book player is in operation. It can facilitate users to control and choose his/her selections.

4. Consistency and standards

For Naxos, consistency and standards of user interface is high. It only uses one design style throughout the platform conventions, no matter which page are we browsing for. The main menu and navigator designs are consistent. (See Appendix 3.5) Exception is the instruction on keyword searching is opened in a new window. (See Appendix 3.6) For each audio book record, it provides consistent information to describe the works. When users open the audio book player, a consistent design is used to let users familiar with the features and function of the player.

Suggestion:

It would be better to show the instruction on keyword searching in the same manner to other pages, which means the content is displayed on the current window. By doing this, users can directly enter into different sections in Naxos instead of closing the window of keyword search information.

5. Error prevention

When users enter a blank query in keyword search or text search, it allows the user to click the button "search" and no such pop up window or message to indicate the users that he/she has not entered any words.

Suggestion:

It would be better for Naxos to give notifications when users have not entered any words in the search. It can let the users know the problems before they commit to the action.

6. Recognition rather than recall

It is blamed that Naxos doesn't change the color of links when users are browsing the pages under the categories or links. No recognition is given to users about where in the library they are locating at. Users need to remember which pages he/she has visited or has not visited by themselves.

Besides, if users want to bookmark an audio book chapter, the bookmark function only appears inside audio book player (See Appendix 3.7). It is not eye-catching and is quite difficult to locate by the users. Users are difficult to bookmark an audio book chapter if they are not familiar with the audio book player. They need to spend some time to find the bookmark function if they want to bookmark it.

Suggestion:

Naxos is recommended to change the colour of links after users visited the relevant pages, so to let them know where they are browsing. Also, it is advised to add "How to use audio book player" in its help function, especially for the function "bookmark". Or the book mark icon can be simply labeled with words so that users can easily locate and use the bookmarking function.

7. Flexibility and efficiency of use

In the "Bookmarks" pages or title browsing pages of Naxos, the collections can be sorted in ascending or descending order by catalogue ID or title etc. However, the icons are too small and not clear to the user to notice. (*See Appendix 3.8*) Users are confused about how to sort the collection if they do not pay attention to the direction of triangle besides the field name such as "Catalogue ID" and "Title".

Furthermore, Naxos only provides keyword search and text search in its website. If users want to form a search query with the name of title and author, it can only be done in keyword search but the retrieved records are not always relevant.

Suggestion:

Sort function and relevant font size in "Bookmarks" page or title browsing pages should be enlarged. An alternative is to provide an selection box for the users to choose what field they want to sort by. Besides, Naxos should add advance search in its website to let users search by multiple criteria.

8. Aesthetic and minimalist design

Naxos only uses the center part of the webpage to show its content. Some words or icons are too small due to limited space. In addition, the navigators of "English Titles" and "German Titles" are duplicated in the interface. (*See Appendix 3.9*) They are not necessary to displayed twice in the interface and it occupies extra space. Although it helps users to locate "English Titles" and "German Titles" easily, however, it competes with the main content which is the audio book record information. The duplicated information, English and German titles, occupied the space on the left side of the interface, so the core information, audio book content, can only appear at right hand side with relatively smaller font size.

Suggestion:

It is suggest that Naxos can use the entire part of interface, besides the top part of navigators, to display its content. More information such as words and graphics can be shown and the size of those can be enlarged for easy recognition. Moreover, The category "English Titles" and "German Titles" on the left side of interface can be deleted, so the core information can be placed at the center and allows users to view the content easily.

9. Help users recognize, diagnose, and recover from errors

Naxos provides keyword search and text search in its website. However, both searches have it strengths and rooms for improvement. For keyword search, when users enter a blank query, a blank page is displayed and does not notify the users that they have not entered any words. (*See Appendix 3.10*) If mis-spelled words are entered, Naxos will suggest a possible word for the user. For text search, when users enter a blank query, A notification is shown to inform the users that they have not typed in any words. However, when users type a mis-spelled word to search, the system cannot recognize nor suggest possible word for the user. (*See Appendix 3.11*)

Suggestion:

Both keyword search and text search need to improve. For keyword search, when user enters blank query, it should show a warning message “Please enter your query” rather than show a blank result page. For text search, when user types a mis-spelled word, recognition and suggestion of possible word should be provided to user.

10. Help and documentation

The help function of Naxos is difficult to locate from the view of user. It is just a small question mark at the upper right corner of the menu bar and it is not eye-catching. (See Appendix 3.12) There is limited information which can help users to get familiar to use the digital library. Only information about how to get start, browse and search functions is stated. Additional information such as instructions of using the audio book player and description of icons is not showed.

Suggestion:

It is suggest that the help function icon can be enlarged or described with a plain text “Help” rather than appeared as a small question mark. By doing so, users can easily locate the Help function page. Besides, the “Help” page should include more useful information to users such as instructions of using audio book player, the function and methods of bookmarking etc.

4.2 Severity rating for usability problems

According to severity rating for usability problems (See Appendix 4), we rated “help and documentation” as the most serious problem. Follow are “recognition rather than recall”. These two problems needed to be concerned and took actions to improve them as soon as possible. Help function is very important to allow a user to learn and know how to use a digital library, especially for novice users. It should be easy to locate by a user and provide sufficient information. Moreover, digital library should provide enough and clear notice to the users where he/she has visited and let the users bookmark collection easily.

In fact, the other problems that Naxos occurs are needed to be concerned and settled down later. By fixing these problems, digital library can be more user-friendly and thus can attract more users.

To sum up, Nielsen’s 10 Usability Heuristics is useful for evaluating a user interface design of a digital library. After evaluation, the digital library can be improved based on the evaluation results and suggestions.

5. Usability testing

According to Dumas and Redish (1993, p.4), usability means users can use the product to finish their task quickly and easily, and therefore it means focusing on users. Usability testing is a “user-centered design” process which collects qualitative and quantitative data about the development a product. (Norlin, Winters, 2002, p.2) Its primary goal is to improve the usability of the product. Understanding the goal of usability testing, this part is to evaluate Naxos by using this method.

5.1 Methodology

The test is divided into three parts. The first part, participants are asked to finish four tasks. These four tasks are developed based on the "Spool's Four Questions" (Spool, 1999, p.144-146). The second part, participants are asked to search on Naxos based on their interests or information needs. These two parts are conducted with using the "think aloud protocol" to take notes of every action and thinking of the participants when doing the tasks, in order to interpret the result objectively. The third part, participants are asked to fill in a questionnaire about Naxos in four areas, Interface, "Help" function, Searching and Content. (*See Appendix 5.1*) After the test, a post-test interview is conducted with participants to let them elaborate their feelings and comments on using Naxos, and also let the observer ask questions to investigate the reasons behind the performance of the participants.

The testing is first done with two university students as a pilot test. After that, the actual test is done with 8 participants including 4 university students, 2 secondary students and 2 primary students. One of the university students also work as a tutor for an educational centre, so she can take the test as the role of a teacher.

5.2 Findings

Interface

Strengths

1. Interface design is clear and easy to use

There is 80% of participants agree that the interface design is clear and easy to use. Elements are well structured and packed in interfaces. Users can easily recognize which part to look for content or function icons.

2. Appropriate graphic and pictures are provided

Almost all participants agree that Naxos has used appropriate graphics and pictures to facilitate users in browsing. However, some participants also suggest adding more graphic to attract junior users.

3. "Navigation routes" provided to help in recognizing the current location

There are 90% of participants agree that they can always know their location in the website, with nearly half of them strongly agree this statement. With the "navigation routes" provided (*see appendix 5.2*), users can review every step they have taken to come to the current page. Also, they can easily go back to any previous pages by clicking the corresponding page icon in the "Navigation route". It's convenience and time saving.

Weaknesses

1. Not easy to locate the information

Although 60% of the participants agree that the information is easy to locate in Naxos, there is about half of the participants remains neutral. After the post-test interviews with all participants, actually more than half of them find some difficulties in finding some information. Also, based on the result of Question 1 in Part I of the testing, 86% of participants gave the wrong answer. These indicate that some information, such as "artists", is not easy to locate.

The main reason is that, bibliographical and content information are listed at the right hand side of the item record page. It only occupied a small area with small font size. Some information are hidden and only be shown after clicking on the icon "Show List". (*see appendix 5.2*)

2. Did not use different colours to help in browsing

Half of the participants think the interface did not use different colours to help users in browsing or using players. Buttons and links do not change in colour after clicked, it fails to show users what steps they have taken and which page they are in by colour changes.

The player interface did not highlight text or change the text colour to show users the progress of the audio and the parts that the artists are speaking. (*see appendix 5.3*)

3. Icons are not eye-catching and clear enough

About 30% of the participants think the icons are not eye-catching, and 40% of them remain neutral in view of this. Based on the post-test interview, most of the participants think the icons and buttons are too small. Also, the colours of icons and buttons are not sharp enough to attract users.

4. Font size too small

Based on the post-test interview, over 70% of participants suggest to enlarge the font size of text. The current font size is too small which actually makes users hard to read the content of the pages. (*see appendix 5.5*)

5. Content is not fully utilizing the spaces of the interface

The current interface design is packing the contents at the center of the interface. On the homepage, there are much space left on both left and right margin. On some other pages, such as "Authors", contents are packed at the central and the upper part of the interface. (*see appendix 5.4*)The closely packed content, together with the small font size, most participants find it difficult to read and find the information they need. (*see appendix 5.5*)

6. Multilanguage-interface but not for whole page

Naxos supports multi-language, but not for all parts and pages. The "Help" page and most of the contents remain in English even other language is chosen. (*see appendix 5.6*)One of the participants gave his comment that "it is not consistent and not meaningful to have multi-language for only part of the digital library but not for the content".

Searching

Strengths

1. Easy to search

There is 90% of the participants agree it is easy to search in Naxos. The steps taken to search are few. As only simple search is provided, users only need to insert any keywords related to the wanted information to search. It's simple and clear.

2. Suggestion in "no-result page" of keyword search helps refine searching

There are 80% of the participants think the suggestion in the "no-result page" of keyword searching helps them to find their needed information. For example, when wrong spelling words are typed in, the correctly spelled word would be suggested for users to perform searching once again. (*see appendix 5.7.1 & 5.7.2*)

Weaknesses

1. Searching strategy provided is not enough, advanced search is needed

When one of the participants wants to find a piece of information with specific author, title and year, she found it no way to enter the information in specific field. She can only enter all keywords in the simple search text box, which finally misunderstand the meaning of the keywords combination. Advanced search strategy is suggested to be added to facilitate users to search by inputting specific information in specific area.

2. Search result is not clear

Based on the post-test interview, most of the participants are annoyed by browsing through the search result listed to find the needed record. On the result page, results are shown in a list in which the author, title and volume number combined in one sentence for each record. Except punctuations, there are no colours or any other indicators to help users to recognize title and author. (see appendix 5.9)

Secondly, the relevance of result records is not indicated and keywords matched are not highlighted. It does not support users to change the listing criteria of the records, such as by year or by relevance. Users have to browse through all records to find the most relevant one.

3. Some results are not relevant

In part II of the testing, participants are encouraged to perform searching based on their interest or needs. More than half of them get irrelevant results in searching.

4. No suggestion in text searching on "no-result page"

When participants enter null query or wrong spelling words in text searching, there is no suggestion given on the result page. It is not helpful for users to refine or perform searching. (see appendix 5.8)

'Help' function

Weaknesses

1. Do not help in searching

Less than half of the participants agree that the "Help function" help in searching while half of them remain neutral. A few participants comment that both the user instruction and FAQ do not provided much detail on searching on Naxos.

2. Do not help in fully utilize all function provided

There are about half of the participants agree the "help" function help them to fully utilize the functions provided by Naxos while more than half of them remains neutral. Through the post-test interview, a few negative comments are received. Both the user instruction and FAQ only teach users a few functions, many of the functions are not taught. For example, the meaning of some indicating icon, such as "text included on screen", the function of some buttons, such as "Bookmarks", "Labels", are not told. (see appendix 5.10)

Also, it does not provided tutorial on how to use the player. Some functions, such as "Bookmarks" may not be recognized and well used. Overall, the "Help" function does not help much on using Naxos.

3. The "Help" function icon is not clear and eye-catching

Through the post-test interview, almost all participants commented that the "Help" function icon is hard to locate. One of the participants could not locate the icon until he was told where it was. The icon is obviously too small and the colour is not sharp enough to attract users.

There is actually a help page for keyword searching, but none of the participants discovered that because it is small and not eye-catching. (*see appendix 5.10*)

Content

Strengths

1. Each record give enough and useful information

There is 70% and 80% of participants agree that each record give enough and useful information.

2. The records can always be played smoothly

There is 90% of participants agree that the records can always be played smoothly. But one of them find the loading time is slow.

3. The booklets can be opened

There is 90% of participants can open the booklets provided on record page. However, some participants cannot open certain booklets as it makes the internet browser down.

Weaknesses

1. Important words are not highlighted to help searching

Some participants commented the record page do not highlight any keywords, such as the subjects of the items. Refer to the result page, it actually highlighted the category and authors of the records for user to click on to search for related records. However, it is not eye-catching and not significant.

Also, participants further explained that, the needed keywords may be the keywords related to the content or the subject, but not the large area category.

2. Not enough bibliographic information

In part II of the testing, one of the participants find the records are not giving enough bibliographic information, such as the year of publication or the release date. Users cannot use it as an access point to find the information they need.

3. Unrecognized code appeared

Some unrecognized code appeared in the page of "About this recording", which disturb their reading. (*see appendix 5.11*)

6. Recommendation

After evaluating Naxos Spoken Word Library by a few means, some recommendations are suggested to improve the performance of the digital library.

Interface design

I. Provide eye-catching navigators

The navigators should not be inconspicuous in showing the path and functionality of the digital library. The home and help icons are not easy to discover in the interface. It is suggested that a text description can be added to aware users of the functions, as well as a bigger size of icons can be used. So the users can notice and use the navigators in an easy way.

II. Add new elements to replace the duplicated navigators

The category navigators “English title” and “German titles” on the left of the interface are duplicated navigators with those on the top bar. Therefore, the navigators on the left can be deleted and replace by useful information, such as “tips to search” and “top ten audio books in the week”. Then the interface can be fully used without duplicating contents.

III. Provide color changes to recognize the searching path

Color of navigators should be changed to indicate the searching path of the users. When users click on a certain navigator, the color of the navigator should change the color so the users can easily notice which part of the digital library are their browsing. This is convenient to users that they do not need to remember their searching path.

Audio player design

I. Support highlighted text

The words in the text script can be highlighted when the audio is playing corresponding sound of the words. This fits the educational purpose of the digital library that facilitates reading and listening skills among users. For local children and students, especially those primary and junior secondary school students, they may not be familiar with the pronunciation, vocabularies and speed of audio books. With the help of the highlighted text, users can easily catch up with the text and audio even when they miss some words or out of concentration for a while. The highlighted text would assist them to cope with language learning purpose and increased the popularity of library.

II. Provide automatic scroll function of text

It is suggested that on-screen text in audio player can be automatically scroll down when a page is read. This convenient the users that they don't need to scroll down for next page manually so they can concentrate on the reading and listening of audios. This also prevents user from losing their focus while there are a number of pages of on-screen text.

III. Consistent the sound volume

The sound volume is not consistent for most of the audios, some are too loud and some are too soft to hear. By providing consistent sound volume, users do not need to turn the volume whenever they start a new audio book. This provides a better performance on “ease of use” to users.

IV. Consistent the format of audio player

A standard audio player is provided when opening a track from the page of audio book playlist. However, when the users open the bookmarked audio tracks, the audio player is different from the standard one. The window size of audio player is limited and not able to display the full interface and content, thus, some functions such as bookmark, play, stop and pause are not displayed and unavailable to users. A standard audio player is recommended to apply to all track playing regardless the track is selected from the track list or bookmarked section. So the functionality of the audio player will not be affected or limited.

Search function

I. Add indicator in text search function

Naxos provides two search functions for its collections. They are keyword search and text search function. For the text search, the search is comprehensive that covers the on-screen text. However, it is not common that users will use this function unless they remember a specific term used in the on-screen text so they use the term to search for the track or audio title. Meanwhile, the result of text search does not indicate where the search term is located. It just directs the users to the audio book playlist but not indicate to users which track does the search term belong to. This requires users to browse and search for the desired track on their own. This is time consuming to do so. It is suggested that an indicator should be placed in track level while applying text search. This makes the result more precise and the text search function would be more user-friendly.

Collection management

I. Provide tags of audios

Tags function can be added to Naxos to suit the needs of users. Tags should be freely added and modified by users so users can find the collection in the way other than category. For example, the level of language used in the audio and what age is the collection purposed for can help users to find the desired information in appropriate language or content level.

II. Modify bookmark function

Bookmark function can be applied to play time instead of track level. The current bookmarking function only directs users to the track level of the audio book. However, users may need a more specific play time period of the particular track, especially when the duration of track is lengthy. Thus, the bookmark should be applied to play time level so the users can have freedom to quickly retrieve the information they need rather than spending time to listen the whole track.

III. Provide guidelines of functionalities

The guideline of use of bookmark is not conspicuous enough to users. Unless users open the audio player and notice the bookmark button, they will not know where the bookmark button locates and how to use the function. There should be a guideline on the page “Bookmark” to instruct users the method of using bookmark, or the users may need to explore the functions by themselves.

IV. Provide a site map

There is no site map in the Naxos. Users may get confused when they lost the path in searching for information. A site map helps to provide a clear image to direct users in using the digital library.

7. Conclusion

During the report, a number of evaluation methods are applied to assess the performance of Naxos Spoken Word Library. These methods are useful to give recommendations for the library to improve its performance on various aspects. The evaluation criteria include the users' perspective as well as the experts' assessment elements, which makes the evaluation comprehensive. Naxos performs rather well in providing audio collections to users. It fits the information needs of its target and potential users. However, there are still some improvements can be done on interface and audio player design. The search function and collection management can be optimized also. By taking the above recommendations in consideration, Naxos can definitely increase its competitive advantages in the field of digital library.

References

- American Productivity & Quality Center. (1993). *The benchmarking management guide*. Cambridge, Mass: Productivity Press.
- Andersen, B. & Pettersen, P.-G. (1996). *The benchmarking handbook: Step-by-step instructions*. London: Chapman & Hall.
- Chowdhury, G. G., & Chowdhury, S. (2003). *Introduction to digital libraries*. London: Facet Pub.
- Chu, S. (2007). Case Study: The development and management of the online information literacy tutorial at the HKUST Library. In L.L. Hardesty (Ed.), *The role of the library in the first college year*, (pp. 241-247). Columbia, SC: National Resource Center for The First-Year Experience & Students in Transition, University of South Carolina.
- Dumas, J. S. & Redish, J. (1993). *A practical guide to usability testing*. Norwood, N.J.: Ablex Pub. Corp.
- Gaffney, G. (1998). *Web evaluation materials (evaluation usability resources. information & design)*. Retrieved 25 April, 2010 from <http://www.infodesign.com.au/usabilityresources/evaluation/webevaluation.asp>
- Nielsen, J. (2005). *Heuristic evaluation*. Retrieved April 11, 2010 from <http://www.useit.com/papers/heuristic/>
- Norlin, E. & Winters, C. (2002). *Usability testing for library websites: A hands-on guide*. Chicago: American Library Association.
- Spool, J. M. (1999). *Web site usability: A designer's guide*. The Morgan Kaufmann series in interactive technologies. San Francisco: Morgan Kaufmann.

Appendices

Appendix 1 Questionnaire for user needs assessment

Naxos Digital Library Questionnaire

Q1. Are you familiar with Naxos?

- Never heard of it before
- I have heard of it but never used it before
- I have used Naxos before [GO DIRECTLY TO Q3]

Q2. Take 2-5 minutes to browse Naxos. What are your first impressions of this digital library?

Q3. What do you think are the main reasons for visiting Naxos?

Q4. How do you expect Naxos to help you?

Q5. Please rate the design and implementation.

| | Strongly agree | Agree | Neutral | Disagree | Strongly disagree |
|---|-----------------------|--------------|----------------|-----------------|--------------------------|
| The structure of the website is clear to me and I find it easy to move between different subpages | | | | | |
| The indexing is effective | | | | | |
| The design of the website is visually appealing | | | | | |
| The amount of information presented on screen is appropriate | | | | | |

Q6. Search for an author, who is writing in English, that you know about. Who do you search for and what are the results of your search?

Q7. Now search for “Romeo and Juliet” – Use the rating scheme below to describe the results of the search.

| | Very good | Good | Average | Poor | Very poor |
|--|------------------|-------------|----------------|-------------|------------------|
| Number of records resulting from the search | | | | | |
| Relevance of suggested items | | | | | |
| Duration of search i.e. time until results are displayed | | | | | |
| Order in which items are displayed | | | | | |

Q8. Please click on the item entitled SHAKESPEARE, W.: Romeo and Juliet (Unabridged) [Call no. NA312512]

| | Yes | No |
|--|------------|-----------|
| Can you enlarge the cover image? | | |
| Can you access the additional information about the recording? | | |
| Can you open the booklet? | | |

Q9. Try to play an excerpt from this recording. Is the player working smoothly?

Yes
 No

Q10. If NO, what problems do you encounter?

| |
|--|
| |
|--|

Q11. Please rate

| | Very good | Good | Average | Poor | Very poor |
|------------------------------------|------------------|-------------|----------------|-------------|------------------|
| Design of the player | | | | | |
| Usability of the player | | | | | |
| Sound of the recording | | | | | |
| Functionality and processing speed | | | | | |
| Usefulness of on-screen text | | | | | |
| Overall satisfaction | | | | | |

Q12. Please state if there is any other information you would require about this item

Q13. Does Naxos fulfill your information needs?

Yes

No

Q14. Would you use Naxos again?

Yes

No

Q15. What factors would you consider next time you choose a digital library

Q16. Any other comments

Appendix 2 Benchmarking result

Benchmarking Form (Total 72 marks)

Always (2 marks) Sometimes (1 mark) Never (0 mark)

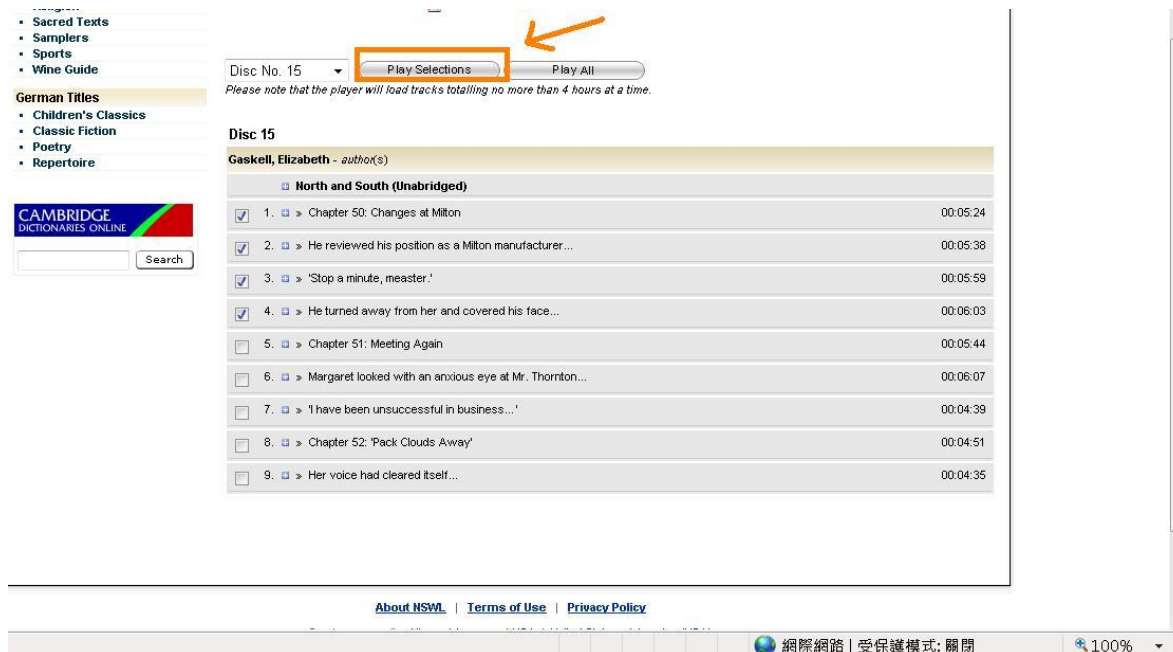
| | Naxos | Overdrive |
|---|-------|-----------|
| Navigation (12 marks) | | |
| There is a clear indication of the current location | 2 | 2 |
| There is a clearly-identifier link to the Home page | 2 | 2 |
| All major parts of the site are accessible from the Home page | 2 | 2 |
| If necessary, a site map is available | 0 | 0 |
| Site structure is simple, with no unnecessary levels | 2 | 2 |
| If necessary, an easy-to-use Search function is available | 2 | 2 |
| Functionality (6 marks) | | |
| All functionality is clearly labeled | 1 | 2 |
| All necessary functionality is available without leaving the site | 2 | 2 |
| No unnecessary plug-ins are used | 2 | 2 |
| Control (12 marks) | | |
| The user can cancel all operations | 2 | 2 |
| There is a clear exit point on every page | 1 | 2 |
| Page size is less than 50Kb/page | 2 | 2 |
| All graphic links are also available as text links | 1 | 2 |
| The site supports the user's workflow | 2 | 2 |
| All appropriate browsers are supported | 2 | 2 |
| Language (4 marks) | | |
| The language used is simple | 2 | 2 |
| Jargon is avoided | 2 | 2 |

| Feedback (12 marks) | | |
|---|---|---|
| It is always clear what is happening on the site | 2 | 2 |
| Users can receive email feedback if necessary | 2 | 2 |
| All feedback is prompt | 2 | 2 |
| Users are informed if a plug-in browser version is required | 2 | 2 |
| Users can give feedback via email or a feedback form | 2 | 2 |
| If necessary, online help is available | 2 | 2 |
| Consistency (8 marks) | | |
| Only one word or term is used to describe any item | 2 | 2 |
| Links match titles of the pages to which they refer | 2 | 2 |
| Standard colours are used for links and visited links | 2 | 2 |
| Terminology is consistent with general web usage | 2 | 2 |
| Error prevention and correction (10 marks) | | |
| Errors do not occur unnecessarily | 1 | 2 |
| Error messages are in plain language | 2 | 2 |
| Error messages describe what action is necessary | 2 | 2 |
| Error messages provide a clear exit point | 0 | 2 |
| Error messages provide contact details for assistance | 0 | 0 |
| Visual clarity (8 marks) | | |
| The layout is clear | 2 | 2 |
| There is sufficient 'white space' | 2 | 2 |
| All images have ALT text assigned | 1 | 2 |
| Unnecessary animation is avoided | 2 | 2 |

Appendix 3 Screen capture on heuristic evaluation

Appendix 3.1 Loading audio book player

Actually the webpage is loading the audio book player. However, no notice is show to the user.



Appendix 3.2 Loading webpage

Original installed status bar informing users that the page is loading.



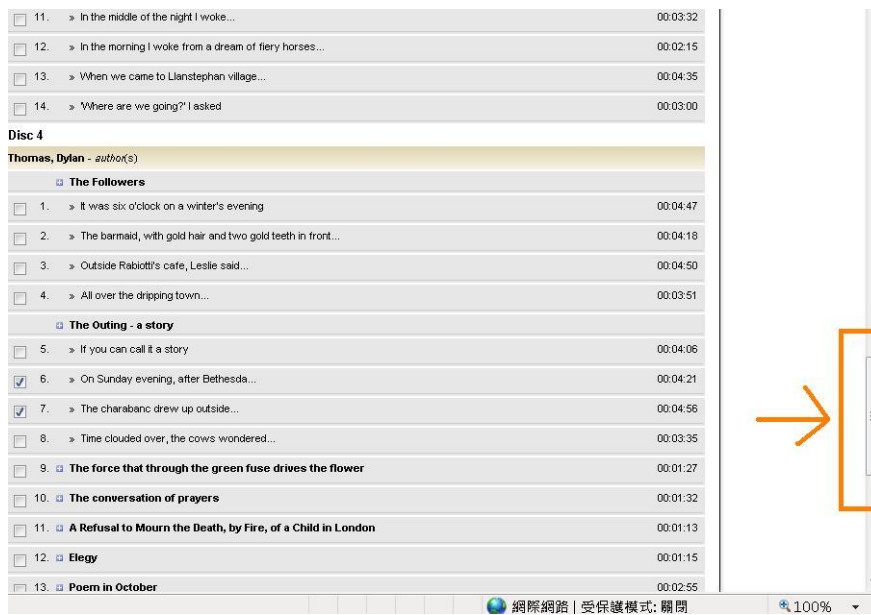
Appendix 3.3 Changing interface language

Wordings of title and navigators change to traditional Chinese words but other content remains in English.



Appendix 3.4 Lengthy track list

Users need to scroll down to view the lengthy track list, "Play Selections" button is not located in the middle or at the bottom of the track list.



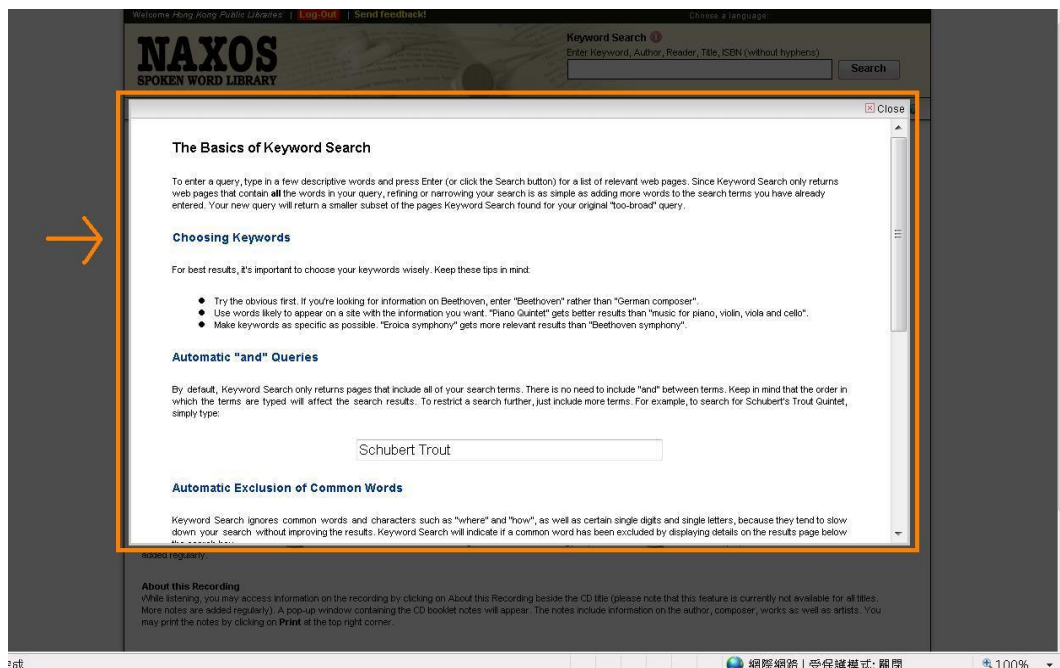
Appendix 3.5 Consistent main menu

Throughout the platform conventions, main menu still not change



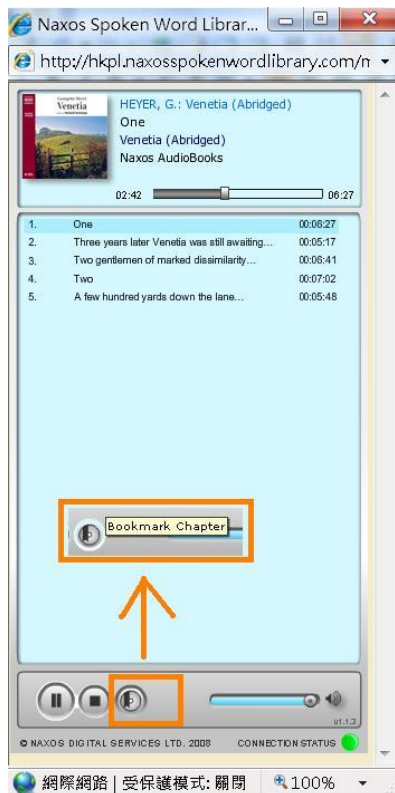
Appendix 3.6 Keyword search information

Keyword search information opens in a new window.



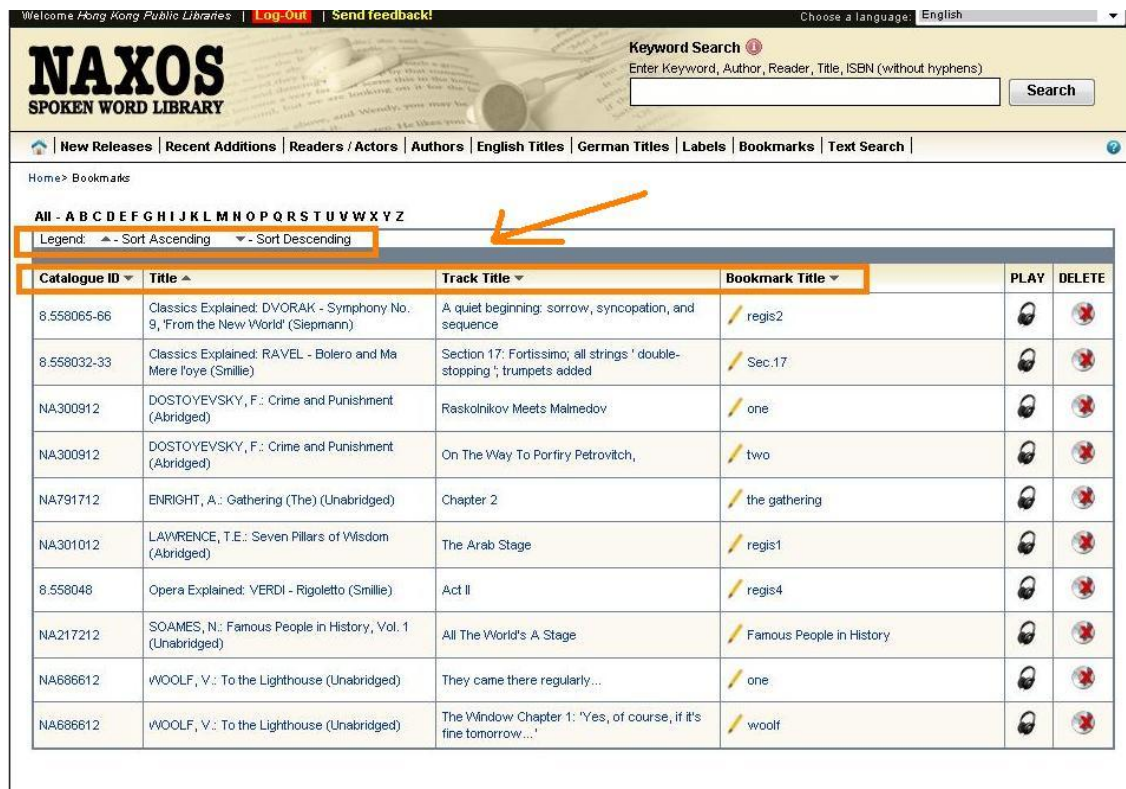
Appendix 3.7 Audio book player

Not eye-catching bookmark icon to bookmark an audio book chapter.



Appendix 3.8 Buttons of sorting

Buttons of sorting are too small and not clear. Users can hardly aware the small icons that can be clicked to sort the results in ascending and descending order.



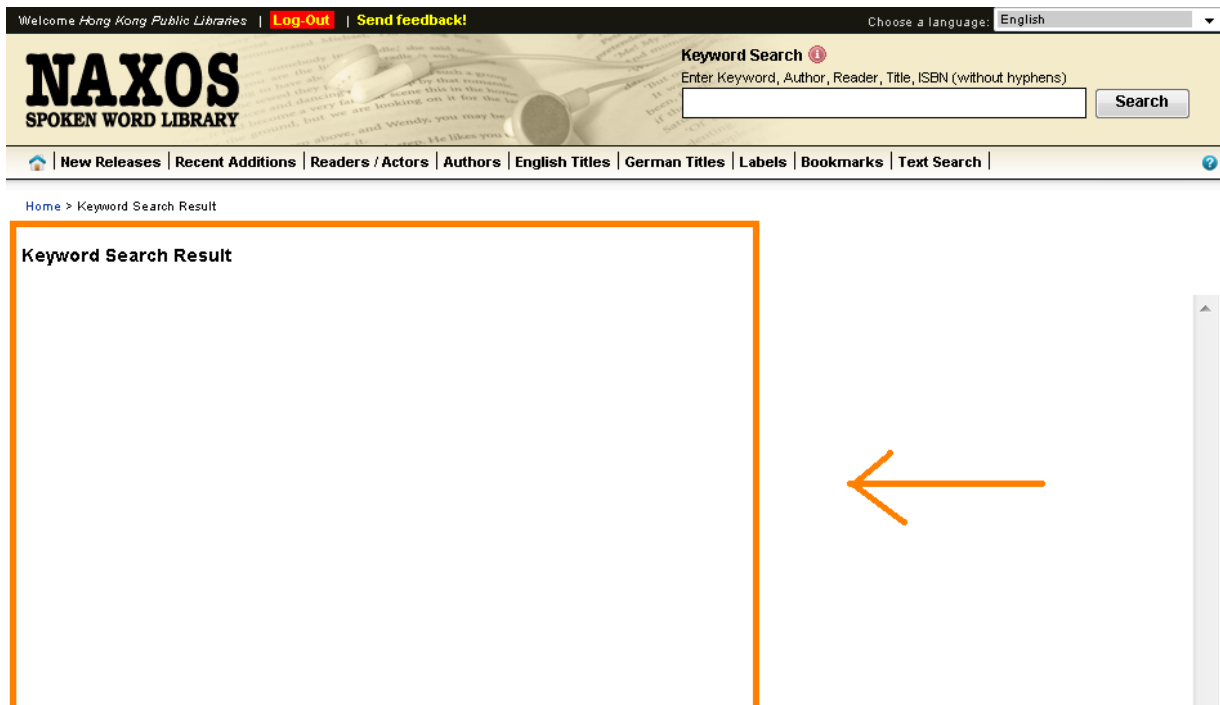
Appendix 3.9 Interface design

Only the center part of the webpage is used to show the core information. The category, “English Titles” and “German Titles”, showed on left side of the interface is duplicated with the navigators on top of the interface.



Appendix 3.10 Keyword search

Enter blank query in keyword search, keyword search result show blank.



Appendix 3.11 Text search

The system cannot recognize the mis-spelled words nor show the correct spelling words in text search.

The screenshot shows the Naxos Spoken Word Library website. At the top, there is a navigation bar with links for 'New Releases', 'Recent Additions', 'Readers / Actors', 'Authors', 'English Titles', 'German Titles', 'Labels', 'Bookmarks', and 'Text Search'. A search bar is located at the top right, with the text 'Keyword Search' and a prompt to 'Enter Keyword, Author, Reader, Title, ISBN (without hyphens)'. Below the search bar, there is a search button labeled 'Search'. The main content area shows a search result for the keyword 'library'. The search bar contains the text 'library' and a 'Search' button. Below the search bar, there is a message that says 'Sorry! No result.' and a sub-header 'Search within all available spoken texts on the Naxos Spoken Word Library.'. Below this, there is a paragraph stating 'The search is not case sensitive, and search for numbers is supported. Following are more rules to observe.' followed by a list of search rules:

- To search for more than one string, link the strings with "and.", separated by spaces. Example:
 - Christmas and festival
- To search for the appearance of one string or another, link the strings with "or.", separated by spaces. Examples:
 - Christmas or festival
 - sixth century or festival
 - Christmas or century or festival
- Single character search is not supported. You cannot perform a search on the letter "m", but can search for "mo".

Below the list, there is a paragraph stating 'Up to 70 characters can be put in the query box, including dots and spaces.' and another paragraph stating 'On the search result, click a catalogue number to view the full text. The text strings you entered for the search will be highlighted in yellow.'

Appendix 3.12 Help function

Help function is just a small question mark. It's too small and difficult to locate. Instructions inside are limited.

The screenshot shows the Naxos Spoken Word Library website with the help function highlighted. The help function is a small question mark icon located in the top right corner of the page. An orange arrow points to this icon. Below the help function, there is a box containing the text 'FAQ' and 'User Instructions'. The main content area shows the 'User Instructions' page, which is divided into sections: 'Getting Started', 'Browse / Search', 'New Releases', and 'Texts on Screen'. The 'Getting Started' section contains five steps for connecting to the website. The 'Browse / Search' section contains instructions on how to use the website's navigation options. The 'New Releases' section contains instructions on how to browse through new releases. The 'Texts on Screen' section contains instructions on how to follow titles on screen. The 'About this Recording' section contains instructions on how to access recording information.

Appendix 4 Severity ratings for usability problems

| Principles | Evaluators - Severity Ratings | | | | | Average of Severity Ratings |
|---|-------------------------------|-----|--------|--------|--------|-----------------------------|
| | Alice | Jan | Rosana | Verena | Wilson | |
| 1. Visibility of system status | 3 | 4 | 4 | 3 | 3 | 3.4 |
| 2. Match between system and the real world | 3 | 3 | 3 | 2 | 2 | 2.6 |
| 3. User control and freedom | 3 | 2 | 3 | 2 | 3 | 2.6 |
| 4. Consistency and standards | 2 | 1 | 1 | 2 | 1 | 1.4 |
| 5. Error prevention | 2 | 3 | 2 | 3 | 2 | 2.4 |
| 6. Recognition rather than recall | 3 | 4 | 4 | 4 | 3 | 3.6 |
| 7. Flexibility and efficiency of use | 3 | 4 | 3 | 3 | 4 | 3.4 |
| 8. Aesthetic and minimalist design | 2 | 3 | 3 | 2 | 2 | 2.4 |
| 9. Help users recognize, diagnose, and recover from errors | 3 | 3 | 3 | 3 | 3 | 3 |
| 10. Help and documentation | 4 | 3 | 4 | 4 | 4 | 3.8 |

Notes:

The following 0 to 4 rating scale are used to rate the severity of usability problems:

0 = I don't agree that this is a usability problem at all

1 = Cosmetic problem only: need not be fixed unless extra time is available on project

2 = Minor usability problem: fixing this should be given low priority

3 = Major usability problem: important to fix, so should be given high priority

4 = Usability catastrophe: imperative to fix this before product can be released

Appendix 5 Appendix for usability testing

Appendix 5.1 Usability testing questionnaire

Part I

1. Simple fact question

Who are the artists of the title: Swan Lake?

Answer: Lenard, Ondrej • Rippon, Angela • Slovak Radio Symphony Orchestra •

2. Judgment question

Your friend want to know more about how wine is made, would "Guide to Wine" useful to him?

Answer: Yes

3. Comparison of fact question

"History of English Literature" and "Famous Composers (Jones, UK)", which one has longer playing time?

Answer: History of English Literature

4. Comparison of judgment question

You are a beginner of Buddhism, which book should you choose?"SANGHARAKSHITA: The Buddha's Noble Eightfold Path - An Introduction (Unabridged)" or "JINANANDA: Middle Way (The) - The Story of Buddhism (Unabridged)"?

Answer: The buddha's Noble eightfold path- an introduction

Part III

Interface Design

1. The interface is clear and easy to use
2. The graphics and pictures are appropriate
3. It's easy to find the information of items
4. The interface uses different colours to help users in browsing
5. Icons are eye-catching and clear
6. I always know where I am throughout the process of browsing, searching and listening
7. Improvement in interface design

Strongly Agree Agree Neutral Disagree Strongly disagree

| | Strongly Agree | Agree | Neutral | Disagree | Strongly disagree |
|---|----------------|-------|---------|----------|-------------------|
| 1. The interface is clear and easy to use | | | | | |
| 2. The graphics and pictures are appropriate | | | | | |
| 3. It's easy to find the information of items | | | | | |
| 4. The interface uses different colours to help users in browsing | | | | | |
| 5. Icons are eye-catching and clear | | | | | |
| 6. I always know where I am throughout the process of browsing, searching and listening | | | | | |

| |
|------------------------------------|
| 7. Improvement in interface design |
|------------------------------------|

“Help” function

- 1. The "Help" page helps in searching
- 2. The "Help" page helps in fully utilize all function provided
- 3. Improvement in "Help" function

| Strongly Agree | Agree | Neutral | Disagree | Strongly disagree |
|----------------|-------|---------|----------|-------------------|
| | | | | |
| | | | | |

| |
|--|
| |
|--|

Searching

- 1. It's easy to search
- 2. The suggestion given on “no result page” help me find the needed information
- 3. Searching Strategy provided are enough
- 4. I was annoyed by the steps taken to search for a title

| Strongly Agree | Agree | Neutral | Disagree | Strongly disagree |
|----------------|-------|---------|----------|-------------------|
| | | | | |
| | | | | |
| | | | | |
| | | | | |

- 5. For the keyword searching, do you see any area for improvement?

| |
|--|
| |
|--|

- 6. For the text searching, do you see any area for improvement?

| |
|--|
| |
|--|

Content

- 1. The records give enough information
- 2. The record give useful information
- 5. The audiobooks can always be played smoothly
- 6. "About this recording", booklets or other additional pages can always be opened smoothly
- 7. Improvement in content

| Strongly Agree | Agree | Neutral | Disagree | Strongly disagree |
|----------------|-------|---------|----------|-------------------|
| | | | | |
| | | | | |
| | | | | |
| | | | | |

| |
|--|
| |
|--|

Appendix 5.2 Navigation bar provided/Show List used

Welcome Hong Kong Public Libraries | [Log Out](#) | [Send feedback!](#) | Choose a language: English

NAXOS
SPOKEN WORD LIBRARY

Keyword Search Enter Keyword, Author, Reader, Title, ISBN (without hyphens)

[Home](#) > [New Releases](#) | [Recent Additions](#) | [Readers / Actors](#) | [Authors](#) | [English Titles](#) | [German Titles](#) | [Labels](#) | [Bookmarks](#) | [Text Search](#)

Home > Naxos > Children's Classics > TCHAIKOVSKY: Swan Lake (Children's Classics)

English Titles

- Anthologies / Collections
- Arts
- Biographies
- Children's Classics
- Classic Fiction
- Great Epics and Tales
- History
- Junior Classic Fiction
- Junior History
- Junior Non-Fiction
- Literature
- Music Biographies
- Music Education
- Non-Fiction
- Philosophy
- Plays - Others
- Plays - Shakespeare
- Poetry
- Religion
- Sacred Texts
- Samplers
- Sports
- Wine Guide

German Titles

- Children's Classics
- Classic Fiction
- Poetry
- Repertoire

TCHAIKOVSKY: Swan Lake (Children's Classics)

[About This Recording](#)

Category: Children's Classics
Composer(s): Tchaikovsky, Pyotr Ilyich
Artist(s): **Show List**
Label: Naxos
Catalogue No.: 8.557174
Total Playing Time: 00:58:50
[Show Static URL](#)
[+ Share this page](#)

Play Selections | Play All

Please note that the player will load tracks totalling no more than 4 hours at a time.

Tchaikovsky, Pyotr Ilyich

Swan Lake, Op. 20

| | | | |
|--------------------------|----|--|----------|
| <input type="checkbox"/> | 1. | > Act I. Prince Siegfried's Birthday | 00:03:19 |
| <input type="checkbox"/> | 2. | > Act I. Waltz of the Flowers | 00:07:30 |
| <input type="checkbox"/> | 3. | > Act I. Flight of the Swans | 00:02:58 |
| <input type="checkbox"/> | 4. | > Act II. Swans on the Lake | 00:02:47 |
| <input type="checkbox"/> | 5. | > Act II. Siegfried invites Odette to his Palace | 00:04:31 |
| <input type="checkbox"/> | 6. | > Act II. Odette's Dance | 00:02:03 |
| <input type="checkbox"/> | 7. | > Act II. Swan's Dance | 00:01:38 |

Appendix 5.3 Player interface did not highlight text to show progress

Naxos Spoken Word Library Media Player - Mozilla Firefox

http://hkpl.naxosspokenwordlibrary.com/mediaplayer/flash/vplayer.asp?br=64&tl=61057810588105981060810611457114571245713457144571545716810628106381064810658106681067810688106981070810718107281073

The Emperor's New Clothes

Many years ago there was an Emperor who was so excessively fond of new clothes that he spent all his money on them. He cared nothing about his soldiers, nor for the theatre, nor for driving in the woods except for the sake of showing off his new clothes. He had a costume for every hour in the day, and instead of saying as one does about any other King or Emperor, "He is in his council chamber," here one always said, "The Emperor is in his dressing-room."

Life was full of fun in the great town where he lived; hosts of strangers came to visit it every day, and among them one day two swindlers. They gave themselves out as weavers, and said that they knew how to weave the most beautiful stuffs imaginable. Not only were the colours and patterns unusually fine, but the clothes that were made of the stuffs had the peculiar quality of becoming invisible to every person who was not fit for the office he held or if he was impossibly dull.

"Those must be splendid clothes," thought the Emperor. "By wearing them I should be able to discover which men in my kingdom are unfitted for their posts. I shall distinguish the wise men from the fools. Yes, I certainly must order some of that stuff to be woven for me."

He paid the two swindlers a lot of money in advance so that they might begin their work at once.

They did put up two looms and pretend to weave, but they had nothing whatever upon their shuttles. At the outset they asked for a quantity of the finest silk and purest gold thread, all of which they put into their own bags while they worked away at the empty looms far into the night.

"I should like to know how those weavers are getting on with the stuff," thought the Emperor; but he felt a little queer when he reflected that anyone who was stupid or unfit for his post would not be able to see it. He certainly thought he need have no fears for himself, but still he thought he would send somebody else first to see how it was getting on. Everybody in the town knew what wonderful power the stuff possessed, and everyone was anxious to see how stupid his neighbour was.

"I will send my faithful old minister to the weavers," thought the Emperor. "He will be best able to see how the stuff looks, for he is a clever man and no one fulfils his duties better than he does!" So the poor old minister went into the room where the two

ANDERSEN: Fairy Tales
The Emperor's New Clothes
Naxos AudioBooks
02:22 / 06:28

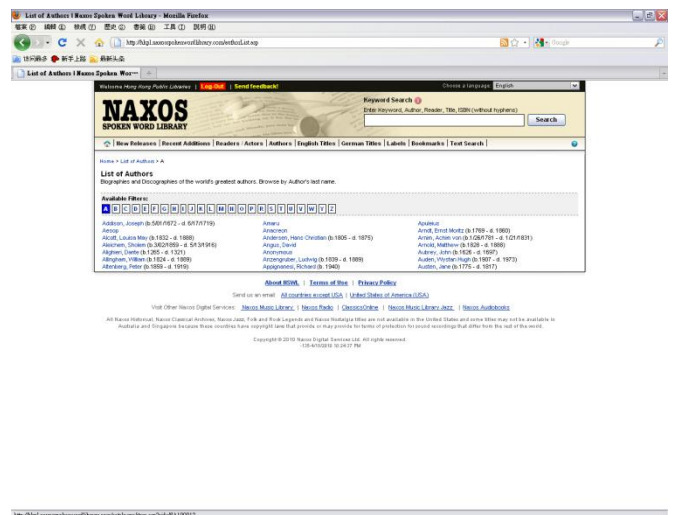
| | | |
|-----|---|----------|
| 1. | The Emperor's New Clothes | 00:06:28 |
| 2. | The Emperor Goes To See His New Clothes | 00:06:06 |
| 3. | The Tinderbox | 00:07:56 |
| 4. | The Soldier Goes To Town | 00:05:11 |
| 5. | The Dog Fetches The Princess | 00:06:01 |
| 6. | The Travelling Companion | 00:07:30 |
| 7. | John Meets His Travelling Companion | 00:07:52 |
| 8. | John Continues His Travels | 00:08:52 |
| 9. | The Princess Meets John | 00:05:19 |
| 10. | The Ogre On His Throne | 00:08:35 |
| 11. | John Answers The Third Question | 00:06:03 |
| 12. | The Ugly Duckling | 00:05:53 |
| 13. | The First Lessons | 00:06:56 |
| 14. | The Ugly Duckling Looks For A Home | 00:06:37 |
| 15. | The Ugly Duckling Sees The Swans | 00:07:51 |
| 16. | The Little Match Girl | 00:07:37 |
| 17. | The Swineherd | 00:05:30 |
| 18. | The Princess Meets The Swineherd | 00:07:14 |
| 19. | Big Claus And Little Claus | 00:03:12 |
| 20. | Little Claus Arrives At The Farm | 00:09:05 |
| 21. | Little Claus Gets More Money | 00:04:21 |
| 22. | The Dead Grandmother | 00:06:44 |
| 23. | Big Claus Takes Little Claus To The River | 00:07:45 |

© NAXOS DIGITAL SERVICES LTD. 2008 CONNECTION STATUS

Appendix 5.4 Content packed at central



Appendix 5.5 Content packed at upper part



Appendix 5.6 Multilanguage does not support whole page translation



Appendix 5.7.1 Suggestion on “no-result” page

Welcome Hong Kong Public Libraries | [Log-Out](#) | [Send feedback!](#) | Choose a language: English

NAXOS

SPOKEN WORD LIBRARY

Keyword Search ¹
Enter Keyword, Author, Reader, Title, ISBN (without hyphens)

[Home](#) | [New Releases](#) | [Recent Additions](#) | [Readers / Actors](#) | [Authors](#) | [English Titles](#) | [German Titles](#) | [Labels](#) | [Bookmarks](#) | [Text Search](#)

Home > Keyword Search Result

Keyword Search Result

Searched for **laghter**. Search took 0.01 seconds.

Did you mean: [laughter](#)

Appendix 5.7.2 Suggestion on “no-result” page

Welcome Hong Kong Public Libraries | [Log-Out](#) | [Send feedback!](#) | Choose a language: English

NAXOS

SPOKEN WORD LIBRARY

Keyword Search ¹
Enter Keyword, Author, Reader, Title, ISBN (without hyphens)

[Home](#) | [New Releases](#) | [Recent Additions](#) | [Readers / Actors](#) | [Authors](#) | [English Titles](#) | [German Titles](#) | [Labels](#) | [Bookmarks](#) | [Text Search](#)

Home > Keyword Search Result

Keyword Search Result

Searched for **information technology**. Search took 0.01 seconds.

Your search - **information technology** - did not match any documents.
No pages were found containing "information technology".

Suggestions:

- Make sure all words are spelled correctly.
- Try different keywords.
- Try more general keywords.

Appendix 5.8 No suggested word for refining search

Welcome Hong Kong Public Libraries | [Log-Out](#) | [Send feedback!](#) | Choose a language: English

NAXOS

SPOKEN WORD LIBRARY

Keyword Search ¹
Enter Keyword, Author, Reader, Title, ISBN (without hyphens)

[Home](#) | [New Releases](#) | [Recent Additions](#) | [Readers / Actors](#) | [Authors](#) | [English Titles](#) | [German Titles](#) | [Labels](#) | [Bookmarks](#) | [Text Search](#)

Home > Text Search Result

"laguter"

Sorry! No result.

Search within all available spoken texts on the Naxos Spoken Word Library.
The search is not case sensitive; and search for numbers is supported. Following are more rules to observe.

- To search for more than one string, link the strings with ".and.", separated by spaces. Example:
 - Christmas .and. festival
- To search for the appearance of one string or another, link the strings with ".or.", separated by spaces. Examples:
 - Christmas .or. festival
 - 5th century .or. festival
 - Christmas .or. century .or. festival
- Single character search is not supported. You cannot perform a search on the letter "m", but can search for "mo".


Up to 70 characters can be put in the query box, including dots and spaces.
On the search result, click a catalogue number to view the full text. The text strings you entered for the search will be highlighted in yellow.

Appendix 5.9 Titles, author and volume number are combined in one line without clear indication

Welcome Hong Kong Public Libraries | [Log-Out](#) | [Send feedback!](#) | Choose a language: English

NAXOS

SPOKEN WORD LIBRARY

Keyword Search 
 Enter Keyword, Author, Reader, Title, ISBN (without hyphens)

[Home](#) | [New Releases](#) | [Recent Additions](#) | [Readers / Actors](#) | [Authors](#) | [English Titles](#) | [German Titles](#) | [Labels](#) | [Bookmarks](#) | [Text Search](#)

Home > Keyword Search Result

Keyword Search Result

Searched for **alexander** Results 1 - 20 of about 33. Search took 0.03 seconds.

| | |
|---|----------|
| PUSCHKIN, A. (PUSHKIN, A.): Erzählungen - Der Postmeister / Das Fraulein als Bauerin / Der Schneesturm / Der Sargschreiner | NHB20362 |
| WILDE, O.: Märchen (ungekürzt) - Der glückliche Prinz / Die Nachtigall und die Rose / Der treue Freund / Die romantische Rakete | NHB20452 |
| SOAMES, N.: Famous People in History, Vol. 2 (Unabridged) | NA219712 |
| GRIFFITH, T.: ANCIENT GREEK PHILOSOPHY - An Introduction (Unabridged) | NA644412 |
| PLATO: Trial and The Death of Socrates (The) - Apology / Phaedo (Unabridged) | NA423912 |
| STORM, T.: Regentrude (Die) (vollständiger Text) | NHB10542 |
| PLATO: Republic (The) (Abridged) | NA419512 |
| PLUTARCH: Greek Lives (Abridged) | NA628912 |
| SOPHOCLES: Oedipus the King (Unabridged) | NA217712 |
| HARDY, T.: Winter Words (Unabridged) | NA237312 |
| SHAKESPEARE, W.: Macbeth (Unabridged) | NA316212 |
| MCCLEERY, D.: Discover Music of the Romantic Era (Unabridged) | NA495212 |
| SEVEN AGES - An Anthology of Poetry with Music | NA218912 |
| PUSHKIN, A.: Pique Dame | NHB10292 |
| Music for Kids CD 7: Music from Planet Earth | 8.558020 |
| Collection: A Lover's Gift - From Him To Her | NA138912 |
| Collection: A Lover's Gift - From Him To Her | NA118712 |
| Music for Kids CD 9: Music from Planet Earth | 8.558022 |
| Opera Explained: VERDI - La traviata (Smilie) | 8.558050 |
| GIBBON, E.: Decline and Fall of the Roman Empire (The), Part I (Abridged) | NA607112 |


Result Page: 1 2 [Next](#)


Appendix 5.10 Help icons are not eye-catching/Not all functions instructed

Welcome Hong Kong Public Libraries | [Log-Out](#) | [Send feedback!](#) | Choose a language: English

NAXOS

SPOKEN WORD LIBRARY

Keyword Search 
 Enter Keyword, Author, Reader, Title, ISBN (without hyphens)

[Home](#) | [New Releases](#) | [Recent Additions](#) | [Readers / Actors](#) | [Authors](#) | [English Titles](#) | [German Titles](#) | [Labels](#) | [Bookmarks](#) | [Text Search](#) 

Home > Help

User Instructions

Getting Started

Step 1: Connect your computer to the Internet.
Step 2: Open your browser. Please refer to FAQ page on browser supported.
Step 3: Go to the address www.NaxosSpokenWordLibrary.com.
Step 4: In the Username/Password box, enter your username and password. Then click on the Go button or press Enter.
Step 5: You have now successfully logged on to Naxos Spoken Word Library. Make sure **Flash** is installed on your computer, and your headphones or speakers are plugged in or turned on. You may download the player by clicking on <http://www.adobe.com/shockwave/welcome/>.

Browse / Search



Once you login, you will be redirected to the site's homepage. The website has the following options you can use to browse through the CD selections:

Authors – Click on to view authors list sorted by last name.
 Readers – Click on to view readers list sorted by last name.
 Title – User has the option to view by English or German Titles. Click on the menu to view by Title or catalogue number.

To play a title, click on the title you want to play. The CD page will appear. All the tracks will be automatically selected. Click on the Play Selections button. The Flash player will appear on a popup window.

If you want to listen to selected tracks, click on the Clear All button then select the track(s) you want to listen to by clicking on the box(es) next to the track name(s). Then click on **Play Selections**.

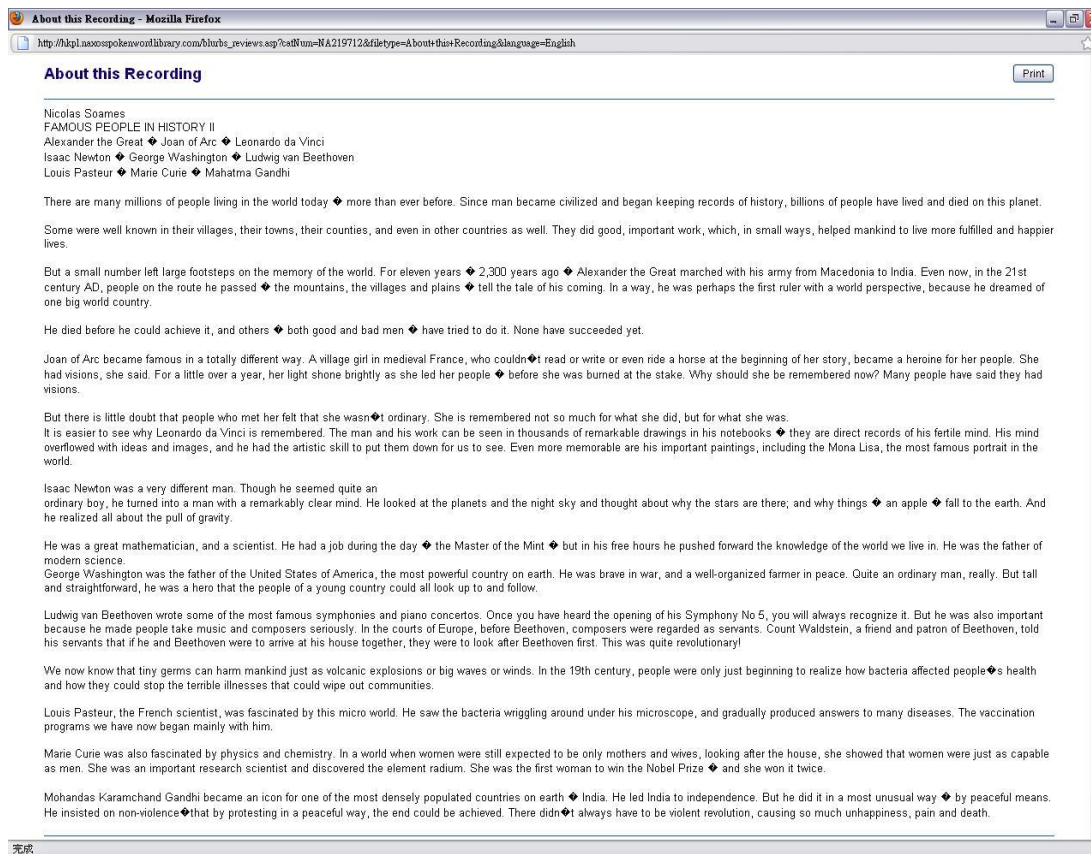
New Releases
 The New Releases section allows you to browse through all Naxos AudioBooks new releases of the current and previous months. These releases can also be found through the other menus and Advanced Search as they have already been added to the library.

Texts on Screen
 The full text of titles marked with a  can be followed on screen as it is being read. For the time-being, only titles with a  have texts displayed on screen. More texts are added regularly.

About this Recording
 While listening, you may access information on the recording by clicking on About this Recording beside the CD title (please note that this feature is currently not available for all titles. More notes are added regularly). A pop-up window containing the CD booklet notes will appear. The notes include information on the author, composer, works as well as artists. You may print the notes by clicking on **Print** at the top right corner.

FAQ
 User Instructions

Appendix 5.11 Unrecognized code appeared



Appendix 6 Workload distribution table

| Person | Work Responsible |
|---|---|
| Chan Lai Zing, Jan (2009640607) | <ul style="list-style-type: none"> • Heuristic evaluation |
| Chan Lok San, Rosana (2009637973) | <ul style="list-style-type: none"> • Usability testing • Best practice benchmarking |
| Cheuk Wai Man, Alice (2009639957) | <ul style="list-style-type: none"> • Introduction & Conclusion • Recommendation |
| Suen Cheuk Wing, Wilson (2009641936) | <ul style="list-style-type: none"> • Best practice benchmarking |
| Verena Henn (2009910753) | <ul style="list-style-type: none"> • Users' need assessment |