The following is a written transcription of a presentation made at IASA 2006 conference in Mexico city by Marie-Hélène Serra and Rodolphe Bailly.

From the concert hall to the library portal

Since this year’s conference theme is “The educative and cultural meaning of the audiovisual archives”, we will be looking at a real example of how to disseminate and exploit a collection of sound archives, used within the framework of a cultural and educational project for people with a passing or strong interest in music.

The audio archives in question are recordings of concerts which take place in the concert halls of the Cité de la Musique in Paris. These archives are now available on the Internet portal of the Cité’s Media Library.
We will be taking a complete look at how we designed the project, and will be including documentation, educational and technical aspects.

The Cité de la Musique is located in Paris, France.

In activity since 1995, the Cité de la Musique is a fairly recent cultural establishment. It can be considered as a classic example of the major cultural democratization projects which took place in France during the eighties and nineties.

The Cité de la Musique has 3 core functions: music performances with 2 concert halls; music heritage with the Music Museum; and lastly, the Education department and the Media Library, whose mission is to provide the general public as well as professional musicians, teachers and instrument makers with different information and documentation services.

The Media library is very recent since it opened one year ago.

One of the major aspects of the project has been the creation of new services for music lovers by taking advantage of the concert hall live recordings which four years ago were still “sleeping” in the archives room.

The idea was to build an educational environment based on music listening and accessible through the Media library portal.

The question we asked ourselves was the following: how could we make best use of our collection of recordings bearing in mind first, that one of our goals is to help music lovers develop their musical
culture; second, that another goal is to get young people listening to music other than popular mainstream; and third, that the Cité de la Musique’s general goal is to encourage cultivated citizens, art lovers, with an aware and incisive outlook.

Thus, we concluded that the future system should help users develop a well documented and intelligent listening approach, enabling them to first, train their ear for better listening, and second, acquire the knowledge required to understand music.

We also took into consideration first, the changes in listening habits (Internet, iPod, etc.), second, the educational potential of multimedia technologies.

This presentation has been split up as follows:

The first part of the talk describes the collection itself, the different accesses that we propose -
we’ll talk about the idea of a documented listening that we have carried out – how we used the collection for educational purposes and finally how we deal with copyrights issue.

The second part presents the technical insights of the information system, first its architecture, then the IPR management.

Our extensive collection of concert recordings reflects the diversity of the music programs which have succeeded each other since the Cité de la Musique was created in 1995.

Our concert halls receive symphonic orchestras, baroque and ancient music, as well as jazz groups and traditional musicians.

Our current stock consists in 1000 audio recordings and 140 video recordings of concerts. About 150 audio and 10 video recordings are added each year.

The recorded music can be broken into 4 major categories: classic/contemporary, jazz, traditional and world music and variety.

The Cité’s started to digitize, catalog and online the contents of its archives on the library portal in 2003.

Today, the number of concerts available online is about 600, containing 4000 musical works. It is increasing everyday.

Now, let’s look at the various access that the system offers. We will be looking at how a user can search, retrieve and play music.
The system offers three options.

The first option is to run an ordinary search.

Let’s switch to the portal (mediatheque.citemusique.fr).

The user simply types in the search criteria which can be: the concert title, a musical work title, a performer’s or composer’s name, a given period or musical genre, a keyword, etc.). Let’s type in the keyword “Japan”.

The system returns a list of results with brief records.

Let’s select the second item. Here is the complete record for the selected item. It is a video archive from 1996 showing kabuki musicians.
Let’s play the archive.

We use a special player, which displays information on the concert and the works it contains.

Let’s do another search with the composer’s name “Schubert”, and the baryton singer “Quastoff”. Here is the list of Schubert lieder performed in the concert. Let’s listen to one of them.

The user can display the program note handed out to the public on the concert evening. We can listen to the music and at the same time read the lyrics with the translation.

As you see, associating the listening with the reading of the program note is a first step towards documented listening.
In order to let the user retrieve either an entire concert, or a specific work or part of a work, the description of the concerts in the database uses a 3-level tree structure, as you can see on the screen. Actually the concerts database is part of the library catalog.

The concert is described in the top record; it is linked to children records describing the works performed during it; each child record can be further linked to grandchildren records with information on parts of the work, here we have three concerto movements.

As you can see in the diagram, a performed work record is linked to the record of the generic work to which it corresponds. We are now going to clarify this concept of generic work.
Which brings me to the second access possibility: running a search using the musical work as the criterion.

Let’s type in “Beethoven symphony”.

The interface returns a list of 9 musical works (which is fortunate).

Let’s see what we obtain on symphony number 6. We get detailed information on the work itself, the generic work, which is not a document but a conceptual object.

The system also informs the user on all documents (online or not) which are related to this generic work: two audio recordings of concerts, several audio CDs, one score and one book.

We can listen to the performed work.

Once again, we are in the perspective of documented listening because you can play the audio resource while following the score that you have found in the library.

From a technical point-of-view, this type of search is based on a data structure close to the FRBR model. It is a simplified version of FRBR that allows the user to quickly see the different “manifestations” of a work.

The third option is to use the detailed list of recorded concerts and works, comparable to iPod interfaces. The advantage of this type of access is
that different performances of the same work can be compared.

In conclusion to this first part, we have shown how we can take advantage of the collection of recorded concerts in order to draw documented listening which is a first step in our educational project.

I now show you how we have developed the portal so that it becomes a real educational tool for young people and music lovers. As I mentioned during the introduction, the general idea is to generate new usages so that the user develops first general music culture and, second, a good level of listening technique.

Two main approaches were identified:

First we have the Cultural approach. It consists in the user reading the introductory texts written by musicologists specialized in the repertories in the collection (Classical and contemporary; jazz; traditional and world music). These texts are illustrated by music samples taken from the collection.

Let’s see for instance the baroque file where we can find a general overview of baroque style, the italian style, the french style illustrated by a Rameau piece “Le rappel des oiseaux”, taken form the collection.
Another example with traditional music. The presentation of the calypso genre is illustrated by a recent recording of a Steelband from Trinidad.

A special tool was developed to easily create links from these texts to our audio and video resources.

Secondly, we have the Analytical approach, based on music analysis techniques in music schools. These analytical tools are referred to as Listening Guides. They are used to progressively discover the fundamental characteristics of musical languages.
Let’s have a quick glance at a Jazz example

We have developed a synchronization software in order to simplify these techniques by linking comment’s made by a musicologist to the recording, which can be audio or video, the score or notation elements.

To conclude this second part, as you can see the collection of recorded concerts is also a means to provide the public for educational tools that we publish on the portal as long as we have the rights to do so.

Which brings us to the copyright issue that Rodolphe Bailly will technically clarify.

Our philosophy is to provide for as much music and educational content as we can on Internet. But, for copyrights reasons, we have in fact three levels of access : Intranet (in the library) with everything at disposal, Extranet for external public institutions
with almost everything at disposal and finally Internet with part of the contents (concerts excerpts, no listening guides).

Now, let’s look at some technical aspects of our system:

This Diagram shows the main components of the Information System architecture. It reveals the articulation between the description side based on cataloging tasks, and the dissemination side.

We can follow the processing of sound and audiovisual recordings, from the descriptive data input, to the online consultation.

The librarians enter the data on the concerts into the library software, using the 3-level model that we already showed. This is the only point in the system at which information is actually manually inputted.
Then, each night, the new concerts records are exported from the library software, as XML records, using a schema similar to MARC-ML.

This XML record will then be processed by XSLTs, in order to:

- Design the labels for the preservation storage media (e.g. CD, DVD);
- Update the detailed list of concerts.
- Isolate the information to be imported into the XML database

Parts of the record is then imported into the XML database, where additional information is generated. Indeed, the XML database contains all the metadata needed in order to manage the dissemination of our legally protected collection.

When the user searches the catalog, the system sends Z3950 requests to the Library Software. When the user asks for a detailed record, before displaying this record, the system looks into the XML database to see whether or not the user is authorized to access the digital resource.

When the user wants to listen to the concert, the XML database generates the playlist necessary to play the given resource. The playlist is the ordered sequence of audio files that represents the concert.

The system must be able to control the access to the archives which are legally protected. It needs to know if a given archive is accessible to a given user.

Therefore, each archive has it’s own contract (in a particular field of its record), describing its access rules.

For instance, an access rule may be “a anonymous user from the Internet gets an extract of the archive”.
Conclusion

- Online music offer: a catalog of concerts and musical works, enriched by educational tools, aimed at young people and music lovers

Thank you for your attention

http://mediatheque.cite-musique.fr