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Electronic Metadata and Digital Audio: the Experience of Latvian Radio Sound Library

Computerization of Latvian Radio Sound Library Stock

A Sound Library was established at the Latvian Radio in 1947. Since its inception, the Sound Library's objective has been to accept phonograms, to process and to store them. Recording, acquisition or commissioning of phonograms was always the responsibility of the editors of corresponding profiles. The music editors were responsible for music recordings of diverse genres, literary editors took care of radio plays and audio versions of literary works, editors of social and political programs were in charge of transmissions and reports from relevant venues. Music of various categories comprise three quarters or 75 per cent of total Sound Library stock, while the remaining 25 per cent can be split into literature, drama and social- political segments.

Since day one, log books were run in order to register every recording that was added to the stock, and a unique number was assigned to each record. An individual data card was filed for each item, and the cards were stored in a register that was available to the program-making editors. Such a stock-taking system was maintained as long as magnetic tape, vinyl records and audio cassettes were submitted to the Sound Library. The last taped material arrived at the Library in 2000.

In 1992 the first audio CDs arrived at the Sound Library, however, since there were very few CDs at the beginning, they were entered into log books just like magnetic tapes. Up to 1995 the Sound Library's audio stock only consisted of magnetic tapes recorded at various speeds (30 ips, 15 ips and 7,5 ips[1]), vinyl records and audio cassettes.

Since the autumn of 1996 Latvian Radio Sound Library's receipts arrived almost exclusively in CD format. The Sound Library purchased CDs and received them as gifts, and acquired CDs from EBU members as a result of program exchange. Latvian Radio editors started to compile their own CDs in order to facilitate program production and to

[1] Ips- inches per second

save time. Since March 1999 the Sound Library started to receive program output logs that were coded in Real Audio and saved on CDRs in digital format. By the end of 2002 the radio station's server capacity received an impressive boost and it was decided to discontinue recording logs on CDR and to store them on data servers instead.

Beginning of Computerization Process at Latvian Radio

1993 saw early stages of computerization at the Latvian Radio. A concept of complex computerization was developed. All radio structures had to be computerized in order to be able to run as parts of a system.

The plan for computerization of the Sound Library was commissioned in 1996. The objective of the project was to create a system for electronic metadata entry as well as a uniform database for the Sound Library.

Development of the Sound Library software

Development of Sound Library software commenced in 1996.

The development of the user interface was a long and winding road. Leading specialists of the Sound Library, music editors as well as IT specialists took part in the program development process. Identification of the key parameters for each recorded item was a common effort. There were many parameters; therefore I would like to highlight the most important ones. The first group of data concerns the author's work recorded (the title, the genre of music etc.). The second group contains the performance data (the form of recording, the language used in the performance, the timing, the performers etc.). The third group characterizes the storage medium used (the identification number assigned, the type of medium etc.). The fourth group comprises data about every person involved (name, surname, birth data etc.), as well as all kinds of supplementary information that could be added to the work, the recorded item or the registered persons (or groups). For example, a recorded piece can be supplemented by a table of contents, or, biography or discography can be added to a registered person. It is obvious that the number of parameters is quite impressive; therefore data entry is a time-consuming effort. As data entry carried on, several parameters of the Sound Library database program were modified and refined. On the whole, however, the program developed in 1996 was a success; otherwise it would not be used till today.

Computerization of the Sound Library Stock, Pros and Cons

As the computerization process started in 1996 the Sound Library stock held more than 126 000 items on magnetic tape. Those were registered in the log books earlier but now they had to be added to the Sound Library database. The Sound Library database program is not very straightforward and data entry is a very time-consuming process. Many compulsory and optional parameters have to be entered. Some of the compulsory parameters are the index and the number, the name of the work in Latvian or in English, the category (that identifies the record as music or cultural/ historic, etc. item), the carrier (e.g. magnetic tape recorded at 30 or 15 or 7.5 ips, or, as the case may be, a vinyl record), the number of channels (stereo or mono), the language of the performance, the names of the author, performer and producer. Some of the optional parameters are the place and date of recording, the theme or the properties of the recording. If the above parameters are entered it is possible to search for the recording. The search can follow a single parameter or all the possible parameters combined. More parameters will lead to faster finding of the recording in question. For example, you can find recording (s) Ludwig van Beethoven, the German composer of 18th century, pertaining to the performance genre of chamber music for violin and piano, stored on a stereo CD. If such entries exist in the database the recordings will be found fast.

The module for the Sound Library's computerization was developed successfully but the transfer of taped material to digital media dragged its feet. The process was impeded by a shortage of human resources and powerful computers on the one hand, and by the onset of the CD era at the Latvian Radio (and it's Sound Library). One might wonder in what way adoption of CD is related to tape digitization. The simple answer is the lack of human resources because the music editors called for a priority handling of the new CD's, consequently they were to be added to the database first. New CDs arrived every month, even every week to supplement the Sound Library stock. In spite of all the problems the tape digitization process carried on, and it still carries on after fourteen years. However, the computerization of the Sound Library's stock was not the last stage in modernization of the Sound Library.

The Storage Room Project

As the computerization process was commenced at the Sound Library in 1996, the stock of the Sound Library contained 126 000 items on magnetic tape. 74% of the taped legacy was stored in a warehouse on the 4th floor, and the remaining 26% were kept in the

cellar (the building used was originally designed to be a credit bank). The conditions on the premises were not really suitable for tape storage.

In 2003 a plan was developed to redesign the Sound Library's warehouses. The plan proposed to move all storage facilities to the cellar area (the former safe deposit area). The premises were fixed and decorated, and moveable shelves were built. Suitable ventilation and lighting equipment, as well as a fire alarm system were installed.

While the storage area was refurbished, the collection was revised. The obsolete material (including mono copies of stereo records) was moved to the Latvian State Archive of Audiovisual documents. As a result of this revision the number of stock items was reduced by 39100. The new warehouse carried 86 897 units of magnetic tape. The challenge was to provide those units with electronic metadata.

The Development, Implementation and Discontinuing of the Digitization Project

In 2003, the Latvian Radio's IT staff developed the next project that targeted digitization of the sound library, opening on-line access to the content via the local network. The project had two major objectives. On the one hand, it was to take care of long-time storage of the legacy in stock, and, on the other hand, it was to support instant use of the stored content for program production and broadcasting. Workstations were set up for audio input as well as data input, and studios were equipped for copying and editing. Expert sound engineers were hired for tape digitization. The ambitious project went ahead in March 2004. Simultaneously with the start of the digitization process, extensive computerization was resumed, since a processed audio file is available only provided it is linked to a metadata.

The total workload was 86 897 units of analogue tape with total duration of the content close to 15 thousand hours. At the outset, the process was estimated to take 3.5 years. However, in December 2008 the funding was cut and digitization ground to a halt, it had actually taken 4.5 years, and the full amount of tapes was still not covered. During those 4.5 years we had handled the master tapes of music and had processed 95% of the literary and drama programs and social-political content.

Since December 2008, the process of tape digitization is suspended. In the near future, provided we are able to find the necessary funding we look forward to finally accomplishing the tape digitization and computerization.

Thank you for your attention.