

Enhancing Access to Audio and Video Collections of Raman Research Institute Library through Digitization

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Abstract. The library at the Raman Research (RRI) began digitization of its audio and video (AV) collections starting in the year 2000 with the intent to enhance the accessibility of these items. AV collections in their original format are problematic since they are vulnerable to physical damage and decay in uncontrolled climate conditions. Further, as AV formats have changed over the years, older formats become unreadable due to the fact that the equipment needed to view such materials is obsolete or no longer available. This paper will show how RRI has taken multiple measures to address these various problems. At first, catalogue records were enhanced with additional metadata, but this did not sufficiently enhance access. Next, the library converted the AV materials to CDs, but this format also posed various problems, as CDs are susceptible to damage and do not allow for multiple simultaneous use. Finally, the RRI library digitized AV materials and placed them on the RRI intranet and the web for wider accessibility.

1. Introduction

The collection of digital documents at the Raman Research Institute (RRI) library dates back to 1950 and represents about ten percent of the library's resources. This article will discuss the collection of audio and video (AV) materials and describe how the library has provided for their access over time. Electronic materials require hardware and software for access, in contrast with photographs and printed records, which are susceptible to decay but can be viewed on their own. Digital photos and multimedia materials are inaccessible without technical expertise and the aid of tools such as video projectors, multimedia players, and software. Despite the shorter shelf life for digital media, they are popular because users are already accustomed to using computers and devices to view digital files. Other digital media, such as floppy disks are excluded from this analysis because they constitute a very small percentage of the RRI library.

2. Audio and video collections

The RRI library digitization project started in the year 2000. Digitization of the first collection — over a thousand 35mm slides — completed in 2001. This collection was stored and made available on CDs. Since the CD was a favorable format for the slides, the library considered digitization of other audio and video collections. The library had a collection of lectures delivered by the late Professor C.V. Raman during the 1950s on gramophone tapes, which had later been converted to audiocassettes. This collection was also digitized and stored on CD, and thus this previously inaccessible collection was made accessible.

Ultimately, the rapid growth of technology makes inaccessible collections accessible (Breitbach 2002). AV collections are growing in parallel with the library's print collection, and while they are not as conspicuous as print media, they have become a vital part of the library collection. (Lim et al. 2003) believes that electronic records can be effectively retrieved if they are preserved in an accessible format, and there is reliable and authentic evidence of their creation.

3. Storage and maintenance

(Lawal 1997) notes that the physical organization of non-print resources must address issues like “shelving, accessibility, storage, handling and exploitation.” Therefore, non-book materials have been classified according to their physical form: audio, videocassettes, and film rolls are arranged according to accession number and kept in closed access. These materials can be borrowed only upon request. Storage of AV materials was problematic because they often decayed over time and under certain conditions, the materials were fragile, and their accessibility was limited due to their storage in closed access areas.

4. Issues in handling AV Collections

Shelving AC materials by format and according to accession number helped with organization, but it did not provide for enhanced access for users. Due to inadequate metadata, the materials also lacked adequate visibility through the library's OPAC. Further, the devices needed to view the AV materials were becoming more rare. The library looked for ways to preserve the material and enhance access and decided that their solution was digitization.

4.1. Digitization

Much information is available today in digital form, and this will only continue to increase. Digital materials fall under two categories — digitized materials and born digital materials (Moghaddam 2010). In the digitization process, there is the probability of losing data during transformation. On the other hand, retaining electronic materials in their original format is problematic due to their fragility and obsolescence.

The library selected AV materials for digitization and outsourced this digitization to a local vendor. Multiple formats including gramophone plates, audiocassettes, and video cassettes were converted to CDs. Initially the CDs were stored in a Stakka

system, but the library later found that this was problematic because retrieval often required technical expertise. The library then adopted their traditional method of storage by arranging the CDs according to their accession numbers. Later, the library added metadata through their automated library software, Libsys.

4.2. Access through WEB OPAC

The collection of electronic resources on CD would not be helpful unless they were made accessible. The library's software is well equipped to handle metadata such as title, author, date, format, and publisher rights. In order to facilitate better searching for AV materials, the library staff added certain additional keywords such as CD-ROM, audio, video, and other terms in the records. Once this metadata was assigned, users started to request CDs through the library OPAC. At this stage, the problem was that multiple users could not access CDs simultaneously because the library did not have a sufficient number of copies. Further, some of the CDs were readable in certain media players and unreadable in others. Retrieving CDs took up library staff time, and often CDs were misplaced. Additionally, CDs have a short lifespan and are prone to scratches and mechanical damage, and are very sensitive to ultraviolet light, and chemicals: in short, CDs require proper handling and storage (Wright 2004). Given all this, the library looked for other options to enhance access to these collections.

4.3. Access through CD mirroring — multimedia library

The library sought an interface to retrieve multimedia materials that did not rely on manual effort. After comparing free and commercial software, the library opted to use TechFocuz, commercial digital library software for CD mirroring. This system differed from the OPAC in that CD contents were available through client software and the library intranet. There was also an administrator interface. The software handled data in a simple and user-friendly way by storing the content of CDs as mirrored images for easy accessibility. TechFocuz supported Windows and Linux, and accommodated the VCD, DVD, and audio CD formats. Multiple users could access material at the same time. By adopting technology like this, other libraries and information centers can satisfy the needs of users faster and more efficiently (Ningappa et al. 2010).

The library noted that key advantages of this system included the support for multiple file formats and anytime-access for users. Library users could find hyperlinks to access the material through the Web OPAC. The disadvantage of the system was the high initial cost coupled with annual maintenance charges. The library needed technical experts to administer the software, and there were risks of viruses and downtime when relying on the software.

4.4. Access through Institutional Repository

The library has developed its own digital repository to display and preserve digitized documents of research publications of the institute and its founder. Currently, the repository contains more than 6,000 records, including newspaper clippings, and audio and video files. The repository runs the DSpace open source software package. The library has started to upload their AV materials to the institutional repository, keeping the TechFocuz system as a backup. The library selected materials, such as lectures and seminars delivered by eminent personalities at Raman Research Institute, for inclusion in the institutional repository, once they acquired proper clearance to do so. Materials that have

no copyright restriction are openly accessible to all web users; the records where the library does not have consent to make the material available are under restricted access in the repository.

5. Conclusion

Merely providing access to AV materials through the Web OPAC was not sufficient to truly enhancing access to these materials for the library's users. After overcoming many hurdles, the library was successful in providing access to their AV materials through the RRI digital repository. Major benefits of this approach include the ability for multiple users to access the content and the ability to make certain material open access. This article provides valuable insight for libraries seeking to enhance access to audio and video collections and ensure for their preservation.

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