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Digital Resource Management Strategies: Study on Selected All India Radio Media Libraries of Karnataka

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ABSTRACT

The present century has been earmarked by various revolutionary and innovative developments such as information revolution, recent electronic technology revolution, globalisation and privatisation. The application of ICT in libraries has resulted in redefining the housekeeping operations like digitalisation, preservation, indexing, distribution, authenticating, etc. On the other hand the librarian has to face the challenges in managing the digital resources. The special libraries are the libraries concerned almost exclusively with literature of a particular subject or special collection and to a special user. The Special libraries exist to serve the needs of the personnel of a parent organisation. All India Radio Media Libraries. The attempt has been made to know the management of digital resources and the strategies followed in selected All India Radio Libraries in Karnataka. The questionnaire and the interview method were used for the study.

Keywords: Digital preservation, digital resource management, All India Radio, media (tape) libraries, library collection

1. INTRODUCTION

All India Radio(AIR) is the mother of all radio stations. AIR aims to provide information, education, and entertainment. The true initiation of radio broadcasting in India has started on a trial basis in 1921 when Times of India in alliance with Post and Telegraph Department broadcasted an audio programme. AIR currently has a network of 223 broadcasting centers with 143 average frequency (MW), 54 high frequency (SW) and 161 FM transmitters. It encompasses an area of 91.42 % serving 99.13 %, of the population of India. AIR covers 24 languages and 146 dialects in home services. In the beginning, AIR libraries did not face any problems due to less collection of information resources. Later it become difficult to manage the collection in the libraries without library professional and library systems.

With the application of ICT on media production and delivery technology AIR-related information resources are now in born digital form and are available through network communication. All the information assets are collected and indexed. Academic libraries maintain traditional resources and are now shifting towards digitisation to establish digital library, but media libraries like newspapers, telecast and AIR already have information resources in born digital form. Digital resources is becoming popular due to their ease of use, mobility (accessible through hand-held mobile devices), sharing the same information resource among number of users, unlimited accessibility, and one time investment. The implementation of new technology, planning and policies, monitoring, decision making, expert staffing, data security, information distribution, etc., issues need a systematic unique professional task to manage digital libraries and are often called as digital resources management strategies.

2. LITERATURE REVIEW

Wactlar & Christel[1] in their study explored the need of metadata increases with the growth of digital audio visual archives. They suggested automatic analysis of video in support of content-based retrieval which will be the necessary step in managing the archive. Fenner[2] pointed out that it is becoming common for librarians to consider availability of open access web resources as components of a collection, whether the resources are catalogued and appears in the Web OPAC, or are accessible through links on a library web page. Attention in being paid towards digitising materials and publishing digital collections on the World Wide Web as a strategy to increase user access.

Chadha[3] explained various digital preservation strategies and techniques refreshing, replication, technology preservation, backwards compatibility and version migration, medium to long-term preservation strategies, migration, emulation, investment strategies, encapsulation, etc.

Carl[4], *et al.,* exposed the challenges for preserving audio and video records. The characteristic attributes of preserving video and audio documents are relatively few formats (for video records, the phonograms archive

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only ingests files from 10 different input formats): the pure theory of decision economics, the unknown future for preserving digital files, the exact and experience-based requirements of archives and libraries and the direct application to video and audio records. Krishnan[5] provided an overview of organisation and management of media resources collection in media libraries and also explained various media resources collection such as audio, video and multimedia resources, types of storage for media resources like tapes, spools tapes, CDs DVDs, video servers, films, cassettes. He also pointed the environment for preservation and archiving of media resources, creation of database for media resources, digitising of media resources, cataloging, classification and management of media resources, metadata constraints, and software for media resources.

2.1 All India Radio Scenario of India

The establishment of radio broadcasting in India has started on an experimental basis in 1921 when Times of India in association with Post and Telegraph Department broadcasts a musical programme. Sir George Lloyd put forward this request to the related companies. In 1927 private radio clubs proliferated. Radio broadcasting was started under the Indian Broadcasting Company in 1930. However, the Company went into liquidation after a span of three years and the Government established the control of broadcasting at their own expenditure. The creation of separate office for the Controller of Broadcasting was established during March 1935. The year 1936 is the milestone in the Indian Broadcasting which changed the name from Indian Broadcasting to All India Radio (AIR). In the same year Delhi station was formed[6] Keeping in view the slogan, 'Bahujan Hitaya; Bahujan Sukhaya', i.e., the benefit and happiness of huge segment of the people, AIR aims to provide information, education for rural development and entertainment. The following are the objectives of AIR:

1. Preserve the country's unity and the self-governing values as shrined in the Constitution.
2. Present a reasonable and distributed flow of data of national, regional, local and International related news and matters including contrastive views. Citation of any opinion or philosophy of its own should be avoided. Integrity of the country should be respected. Various programmes in broadcasting should be integrated.
3. Develop programmes which can arouse, communicate, explain, train, educate, and entertain and improve to satisfy all the audiences throughout the nation.
4. Formulate different programmes for broadcasting, keeping in mind to reach all sections of people of the nation.
5. Prepare progressive and reference programmes on different fields like Education, Agriculture, Health and family Welfare, Science and Technology trends, news tips of political developments, sport, etc.
6. Prepare programmes in regional language for rural, illiterate and poor population including the youths, social, economic and cultural minorities, folklore and the communities and of those occupying the borders, backward or distant areas and job notifications.
7. Encourage consolidation and harmony of the nation[7].

2.2 AIR Scenario of Karnataka

In 1935, private radio station started in Mysore, Karnataka, early 1990s saw the dawn of commercial television in India. In 1936, M.V. Gopalswamy of Mysore named Akashvani where he set up the nation's first private radio station in his home, 'Vittal Vihar'. The name Akashvani indicates celestial announcement. The word, of Sanskrit origin, is often found in Hindu mythology. Literally, 'akash' means 'sky' and vani implies 'voice' or 'message'. Thus, Akashvani seemed suitable for a radio broadcaster and was later adopted by the AIR after independence[8].

At a time when private FM channels are giving a tough competition, the assured listenership of AIR has reached up to a million at any given point of time in Karnataka, and for special broadcasts this number can even be four times higher. According to the latest survey by Akashvani's Audience Research Unit (ARU) in Bengaluru it is revealed that almost one million of figure achieved in 2014-15 is 30 % which is higher than the assured listenership reported in 2013-14. Also ARU figures reveals that, the last six months have magically brought in a 30 % increase in audience data compared to 2013-14 that showed '7 lakh people tuning in at any given point of time.' The Karnataka state AIR has also reported a profit of Rs. 10.4 crore during 2014-15, up from Rs. 6.5 crore in 2013-14[9].

The Transcript Service of various languages was started on 3 April 1954 and entrusted with the main function of preparing transcription of speeches of all dignitaries with special focus on the Prime Ministers and Presidents of the country.

AIR office has the following functional units:

(a) Central Archives

(b) Programme Exchange Unit

(c) Transcription Unit

(d) Refurbishing Unit

(e) Digital Sound Archives

(f) Commercial Release & Marketing

A special project was launched to convert analogues recordings in to digitise form of all archival recordings in 2001. Now, Akashvani has become one of the most important digital libraries in the broadcasting network with recent tape numbering system in tune with the internationally accepted norms.[10]

Tape media library is a special kind of library with respect to its collection and access type of information resources. Library information resources are restricted to internal users only. The library professional and technical staff extracts day to day information for long term preservation. Digitisation of AIR audio recording has also started to a great extent, correspondingly the archival volume will also increase.

2.3 DIGITAL RESOURCE MANAGEMENT STRATEGIES

Generally media organisations are shifting towards digital resources so the users working are also depending on digital resources. Most of the media library organisations are producing born-digital information resources. But e-books, e-journals, e-databases are not much helpful to media library patrons. Space, financial constraints, ease of preservation and management of digital resources. Advancement of ICT is witness for establishment of digital collection and management. Generally AIR library usually contains audio clippings of different programs of music, artists recorded on tapes and DVDs in digitised form. Digital resources becoming popular due to their ease of use, mobility, sharing the same information resource among number of users, unlimited, anywhere and everywhere accessibility, low budgeted and one time investment and management can be done in less time. It facilitates globalised reach and multiple users can simultaneously access of digital resources. Hence for the successful digital library establishment, it is necessary to manage the digital resources in a systematic and well organised manner.[11] The successful digital library establishment requires good library management and administration. So question arise why the management of digital resources? What are the policies? How the HR policies differ from traditional library? How management strategies provide the mass media library to serve in a better way with professional passion? The points necessitate the need of digital resources management strategies are as follows:

(a) Users' service through greater access to accurate digital information sources.

(b) Enhanced information resources and knowledge satisfaction among users.

(c) More economical and safer means of storing and keeping track of digital information resources.

(d) Easier access to digital information resources like old reports, e-journals, e-books, online databases and even audio visual materials, etc.

(e) Reduces errors and eliminating the ennui of long and repetitive manual processing.

(f) Greater liability and lucidity in operations by monitoring.

(g) Improved efficiency and effectiveness in administration and management of digital resources as it has unprecedented access to real-time information.

(h) More consistent safety for susceptible and secret information.

(i) Appropriate knowledge-based action and intervention can now take place in a timelier manner.

(j) Library networking through web-based architecture.

Hence, digital resource collection and management is a systematic and organised approach that allows the management of digital resource to focus on achievable objectives and to attain the best possible results to increase the organisational digital library performance to achieve organisation goal. Management by Objective is outlined by Peter Drucker in his book 'The Practice Management' it is about setting yourself objectives and then break these down in to more specific goals or key results.[12]

The word strategy has entered in the field of management more recently. At first the world was used in the terms of Military science to mean what a manager does to offset or potential actions of competitors. Originally the word strategy has been derived from Greek "Strategies" which means 'general'. The word strategy, therefore, means the art of the general. When the term strategy is used in military sense it refers to actions that can be taken in the light of action taken by opposite party.[13]

So, digital resource management strategies may be considered as library managerial level or top level library management that makes a framework for digital library and policies about how to establish, collect, implement, optimise, organise and manage the digital resources with the help of operational level strategies or middle and low level management to achieve excellency in organisational goal of a digital library. 'DRM activity might therefore be called the 'brains' behind well managed digital library services'. The Holy Grail of ERM is management of the entire lifecycle, with support for the following kinds of tasks:

(a) Discovery of new products

(b) Product evaluation and comparisons

(c) License negotiations

(d) Ordering and renewal

(e) Tracking license terms

(f) Point of use information about license terms and technical support

(g) Creation of web gateways

(h) Individual title access through catalogues, searchable title lists and link resolves

(i) Overlap analysis of database products

(j) Usage analysis

(k) Access management

(l) Proxy services.

3. OBJECTIVES

The objectives of the study are to know the present status of the media libraries and their information and communication technology infrastructure. The paper also highlights the organisation of information resources; preservation and management of digital resources and the policies being followed for preservation and management of digital resources because these media libraries, are the archival centers which fosters the culture and heritage of our nation.

4. METHODOLOGY

The study covers all six AIR libraries (AIR Dharwad, Madikeri, Mangalore, Bengaluru,Vijaypur, Udupi). Survey method and structured questionnaire (as a data collection tool) were used for the selected libraries under study. All the AIR libraries were visited. Udupi (Brahmavaram) and Vijaypur (Bijapur) are relay stations where there are no library and library professionals.

5. ANALYSIS AND INTERPRETATION

5.1 Library Strength

Table 1 shows the strength of all libraries under study and qualification of their library staff.

5.2 Existence of Library Building

Table 2 demonstrates the existence of library building.

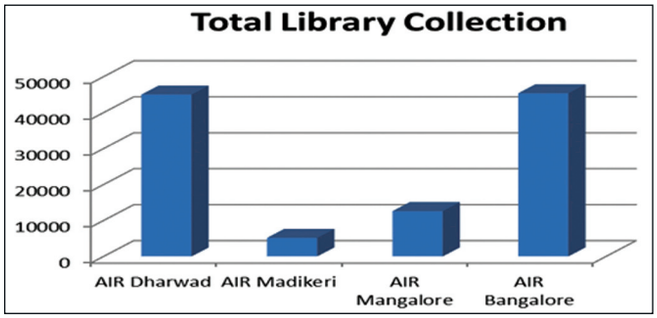

Figure 1. Total library collection.

All AIR libraries under survey have separate section for library and also separate section for digital resource services. All the libraries are in the process of digitisation and some have digitised their library collections.

5.3 Collection of Information Resources

Table 3 and Fig.1 explores the collection of information resources in the libraries under study. The collection of Gramophonic records and magnetic records is available only in AIR Media Library, Dharwad. The government reports, political brochures, photo albums, documentaries, feature programmes, press releases, news bulletins and scripts are available in AIR libraries of Dharwad, Mangalore and Bengaluru. The collection of CD/DVDs are in good number which indicates the acquisition and usage of digital collection. Figure 1 shows the total library collection.

Table 1. Library staff and their strength

Qualifications & other skills*	Name of the AIR library and their no. of staff				Total	Percentage
	AIR Dharwad	AIR Madikeri	AIR Mangalore	AIR Bengaluru		
Having only *LIS (^$BLib or ^MLISc)	2	1	1	4	8	88.90
Having *LIS & ^^other skills	0	0	0	0	0	0
Not having *LIS qualification	1	0	0	0	1	11.10
Total no. of staff	3	1	1	4	9	100

**LIS: Library & Information Science; ^MLISc: Master of Library & Information Science; ^$BLib: Bachelor in Library & Information Science; ^^Other skills: PGDCA, PGDLAN, MPhil, etc.*

Table 2. Library building

Library building and separate section for digital collections	AIR Dharwad	AIR Madikeri	AIR Mangalore	AIR Bengaluru
Provision of section/hall for maintenance of electronic information	Yes	Yes	Yes	Yes
Library building equipped to provide electronic information services to your library users	Yes	Yes	Yes	Yes
Have you digitised/process of digitisation any of the library collections	Yes	Yes	Yes	Yes

Table 3. Collection of digital information sources

Electronic/digital collection	AIR Dharwad	AIR Madikeri	AIR Mangalore	AIR Bengaluru
Reports	0	0	50	0
Photo albums	115	0	10	0
Maps/atlas/globes	30	0	9	0
Clipping database	100	0	1	250
Government publications	100	0	5	10
Government planning/statistics, reports	150	0	6	0
Political brochures	200	0	0	0

Papers archive	5	0	0	0
CD/DVDs	25000	3130	8000	12000
Audio cassettes	300	0	300	25000
Audio tapes	1500	2000	3000	8000
Radio and television scripts	0	0	1000	50
Documentaries feature programmes press releases, news bulletins and scripts	2000	0	200	55
Any other (Pl specify) 1. Gramophone records 2. Magnetic records	6000	0	15	0
Magnetic records	9500	0	0	0
Total	45000	5130	12596	45365

Table 4. Library services

Services	AIR Dharwad	AIR Madikeri	AIR Mangalore	AIR Bengaluru
Reference service	Yes	Yes	Yes	Yes
Referral service	Yes	No	Yes	Yes
Microfilming	No	No	No	Yes
Audio/video clips	Yes	Yes	Yes	Yes
Photographs	Yes	No	Yes	Yes
Reference queries through e-mails	Yes	No	Yes	Yes

5.4 Library Services Provided

Table 4 reveals the library services provided by the media library under study. AII the media libraries are providing are library services such as reference service, referral service. The most important service of AIR libraries is Audio/Video clipping services which are stored in magnetic tapes.

5.5 Availability of ICT Infrastructure

Table 5 shows the availability of ICT infrastructure under study. The majority of the libraries responded 5 (10.41 %) mentioned 'Absolutely Adequate' and libraries responded 14 (29.16 %) is' Adequate', and 4 (8.33 %) of libraries responded "Inadequate" ICT infrastructure and finally 52.10 % of library professional answered as 'No' response for ICT infrastructure.

5.6 Preservation Techniques Used

The media librarians were asked to know the various preservation techniques used in the library. Table 6 shows that 45 % libraries responded 'very often' and, 35 % libraries responded 'occasionally' and only 20 % libraries responded 'never'. Among all, 75 % AIR libraries are using emulation (preserving the original application program) technique since almost information resources of the media libraries are born-digital forms.

Table 5. ICT Infrastructure

ICT Infrastructure	Overall opinion for ICT infrastructure					
	Absolutely adequate (AA)	Adequate (A)	Inadequate (I)	Absolutely inadequate (AI)	No response (NR)	Total
Servers	3	0	0	0	1	4
Clients/workstations/desktops	0	3	1	0	0	4
Lap-top/net book/tablet PCs'	0	1	0	0	3	4
Deskjet printers	0	1	0	0	3	4
Laser printers	0	1	0	0	3	4
Printer cum photocopier	0	1	0	0	3	4
Scanners	0	1	0	0	3	4
UPS	0	3	0	0	1	4
CC cameras/IP cameras in library premise	0	0	1	0	3	4
Multimedia workstation	0	1	0	0	3	4
CD-net/stand (CD tower)	1	1	2	0	0	4
Networking accessories	1	1	0	0	2	4
Total	5	14	4	0	25	48
Percentage (%)	10.41	29.16	8.33	0	52.10	100

(AA= Absolutely adequate, A=Adequate, I=Inadequate, AI=Absolutely inadequate, and NR=No response)

Scaling: AA=4; A=3; I=2; AI=1; NR=0.

Table 6. Preservation techniques

Preservation techniques	Very often	Occasionally	Never	Total
Refreshing	2	2	0	4
Technology preservation	1	2	1	4
Migration (transfer of digital materials from one generation of computer technology to a subsequent generation)	2	2	0	4
Emulation (preserving the original application program)	3	1	0	4
Encapsulation	1	0	3	4
Total	9	7	4	20
Percentage (%)	45	35	20	100

Options and scale values: Very often=2, Occasionally=1, Never=0

56 % of the AIR media libraries for digital resources management strategies. 72 % of AIR media libraries are preserving their digital collection. These needs a proper planning, establishment of new policies, discovery of new tools, advanced techniques for preservation, training, authentication and authorisation, monitoring, regular and routine feedback from library users are help to enhance library services and enhanced productivity with professional touch.

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Table 7. Digital preservation and DRM policies

Policy issues in the library	Overall opinion for policies (digital preservation and DRM implemented)			
	Yes	No	No Response	Total
Does your library have a preservation policy?	4	0	0	4
Is the preservation policy adhered to in your library?	4	0	0	4
Has the policy provided direction to library staff in carrying out their collection management responsibilities relating to preservation?	4	0	0	4
Does the policy provided guidelines on security of library materials?	3	1	0	4
Does the policy provided guidelines on use of library materials?	3	0	1	4
Does the policy address disaster recovery procedure?	1	2	1	4
Has the policy impacted positively on the handling of library materials?	2	2	0	4
Does the policy have guidelines on restoration of degraded library materials?	1	0	3	4
Has the policy enhanced preservation positively?	4	0	0	4
Total	26	5	5	36
Overall percentage (%)	72.20	13.90	13.90	100

5.7 Digital Preservation

Digital preservation policies are very important for effective and efficient management of digital resources. Table 7 shows that 72.20 % professionals responded 'Yes' for various preservation policies and only 13.90 % respondents said 'No' means such preservation policies are not established and 13.90 % have not responded.

Digital resources planning, establishing and policies are essential tasks to implement systematic flow of digital resource management process. Table 7 also explores the various policies and strategies followed in digital resource management. 56 % of the AIR media libraries responded 'Yes' to the strategies and only 2.30 % of the libraries responded 'No' and 41.70 % of the AIR libraries have not responded.

7. CONCLUSIONS AND SUGGESTIONS

Dramatic growth in ICT is producing positive catalyst to revolution and developments in knowledge and management of digital library. The systematic planning adopted in

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