PRESERVATION TECHNIQUES AND MATERIALS USED IN THE PRIVATE ELECTRONIC MEDIA LIBRARIES OF GUWAHATI: A STUDY

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Abstract: Electronic media libraries are the special library, which manages information in electronically retrieval format that are structured so that they can facilitate the requirements and serve the clientele. Electronic media libraries are also known as digital libraries as all the information collected, disseminated or stored, are in the digital format. Preservation is the technique of keeping the materials in good condition, so that they can be used for a long period by the future generation.

***Index terms*: Digital Materials, Cassettes, Preservation, Media, Electronic Media Libraries.**

1.0 INTRODUCTION

As the term "media" comes into mind, we start to think about actor, actress, glamour, film industry etc. Oxford Dictionary describes media as "the main ways that large numbers of people receive information and entertainment that is television, radio, newspapers and the Internet". Media can be categorised into two distinct types- one is print media and another one is electronic media.

1.1 Electronic Media

Electronic media generally refers to the news channels; it is same as print media, but the difference lies in the mode of transmission. These are the forms of media that uses electromechanical energy or we can say electrical energy (simple language) to access the content for the end users.

1.2 Electronic Media Libraries

Unlike other libraries, electronic media libraries store, process and retrieve audio-visual information using different types of audio-visual materials. Such libraries provide least emphasis on printed documents. Sole purpose of the electronic media libraries is to preserve its audio-visual information for the future use.

1.3 Types of Electronic Media Libraries

The electronic media libraries can be categorised into following types:
a) Television Library
b) Radio Library and
c) Film Library

Television Libraries:

Electronic media libraries which are attached to different TV channels are known as television libraries. Television can be categorised into: entertainment (e.g. zee, Sony, colors, bindass etc.), news (e.g. Aajtak, Timesnow, CNNIBN etc.), educational (e.g. gyandarshan, kisan, NAT GEO WILD etc.), animation (e.g. CARTOON NETWORK, POGO, HUNGAMA etc.) and sports (e.g. DDSPORTS, STAR SPORTS, ESPN etc.).

Radio Library

All India Radio was started in 1930. It is one of the largest broadcasting organisations in the world in terms of the number of languages of broadcast, the spectrum of socio-economic and cultural diversity. AIR today consist of 415 stations, which are located across the whole country, it covers 99.19% of the total population in the country. Radio library's collection mainly comprises of Audio-visual materials, gramophone records, spools etc. Among the media libraries, radio libraries are the oldest one with the history since 1936. Therefore, they have very large and oldest collections of records.

Film Library:

Film libraries are those libraries which are attached to the film studios. For e.g. Ramoji Film City (world's largest film studio) in Hyderabad and Jyoti Chitraban, Guwahati. These types of libraries consist information on motion pictures, songs, drama, spoken word, short films and advertisement reels.

2.0 OBJECTIVES OF THE STUDY

a). To know the status of the private electronic media libraries in Guwahati.
b). To compare the types of materials used for the storage of information.
c). To know the techniques used for the preservation.

3.0 METHODOLOGY

The study followed both questionnaire and personal interview method. Library staffs of different electronic media have been contacted and visited personally for collecting data.

4.0 SCOPE OF THE STUDY

Guwahati is the gateway of North East India. It is the centre of business, education, health and cultural activities of North-East India. The study covers the private electronic media libraries of Guwahati. With the advancement of Information and Communication Technology, new storage media are coming out. Therefore, any development occurred after this study should not be considered as contrary to the information provided under this study.

5.0 LITERATURE REVIEW

Das[1] in his book has provided a comprehensive and methodological analysis of organization, management and preservation of electronic media libraries. **Krishnan**[2] in his article has highlighted an overview of the media resource collection in media libraries with special reference to CEC, New Delhi. **Chakroborty, Das and Brahma**[3] has studied the staffing patterns and role of library professionals in the libraries attached to the electronic media.

6.0 FINDINGS AND DISCUSSION

6.1 Status of Electronic Media Libraries in Guwahati

There are five private electronic media channels operating in Guwahati. Previously before 2007, there was only one electronic media company i.e. Positive Television Pvt. Ltd. But unfortunately, the company is not in function anymore. There were also another two companies running news channels named FRONTIER TELEVISION and PRIME NEWS, which now have been stopped. The Electronic Media Channels which have been covered under the study are:

Pride East Entertainment Private Limited

The company Pride East Entertainments Pvt. Ltd. is very popular with its channel News Live, which is a 24-hour satellite channel of Assam, North-East India. NEWSLIVE has other sister channels viz. RANG, RAMDHENU, NORTHEAST LIVE and an assamese newspaper named NIYAMIYA BARTA. It was released on 21st January, 2008. Pride East Entertainments Pvt. Ltd. is a personal company, registered on 13/11/2006. Its registered office is situated at NEWS LIVE BUILDING, G.S. Road, Christianbasti, Dispur, Guwahati, Assam, India - 781005.

Brahmaputra Tele Production Private Limited

DY365 broadcasts news and various shows in Assamese, Bengali, Hindi & English. It was launched on 30th October, 2008. DY365 is a unit of Brahmaputra Tele Productions Pvt. Ltd. JONAKK is the sister channel of DY365. The office is situated at NH-37, Near ISBT, Guwahati, Assam 781035.

Rockland Media and Communication Pvt Ltd.

Assam Talks is an Assamese 24/7 news television channel, owned by Rockland Media and Communication Pvt. Ltd. It has started operating from 2nd May, 2015. It has a broadcasting area over India as well as Bhutan. Its register office is at Bamunimaidam, Guwahati, Assam.

Pratidin Times

Pratidin Times was launched as 'News Time Assam' on 25th December, 2010 at Ulubari, Guwahati. It was owned by Kolkata based Brand Value Communications Ltd. under Rose Valley Group of Companies. In 2015, the channel was acquired by Pratidin Group and re-branded as Pratidin Times.

AM Television Pvt. Ltd.

PRAG, also called as Prag News, is the oldest channel of the Northeast vicinity of India owned by A M Television Pvt. Ltd. It was launched on 4th March, 2001. It broadcasts news and other programs in Assamese. The channel is primarily based in Guwahati.

RENGONI is another venture of A M Television Pvt. Ltd., which was launched on 3rd June, 2013 and offers an entire spectrum of emotions to its viewers.

Table 1: Status of the Library

COMPANY	STATUS OF THE LIBRARY	LIBRARY PROFESSIONALS	LIBRARY OPENING HOURS	DUTY HOURS	TRAINED LIBRARY PROFESSIONALS
Pride East Entertainment Pvt. Ltd.	Present	Present	12 hours	8 hours	Present
Brahmaputra Tele Production Private Ltd	Present	Present	12 hours	10 hours	Present
AM Television Pvt. Ltd.	Absent	Absent	Absent	Absent	Absent
Pratidin Times	Present	Present	12hours	9 hours	Present
Rockland Media and Communication Pvt Ltd.	Present	Present	12hours	9 hours	Present

Table 1 shows that four (80%) private electronic media has library to maintain their required information. Only AM Television Pvt. Ltd. Prag News has no library. Except AM Television Pvt. Ltd. Prag News, all the private electronic media libraries are maintained by trained library professionals that is from library and information science background. Opening hour is same for all the private electronic medias, which is 12 hours a day. Working hour for the library staffs vary from 8 to 9 hours per day.

6.2 Materials used at Electronic Media Libraries of Guwahati

Electronic media libraries give emphasis on AV (Audio-Visual) materials. The audio- visual materials come with different variations, which mainly comprises of DV cassettes, Betacam, CDs, DVDs, etc. They may vary in shape, size, goals, structural pattern, complexity and many other characteristics. Some of the types of AV materials are:

DVCAM:

DV is a format for storing digital video. It was first launched in 1995. DV was standardized within the IEC (International Electro technical Commission) 61834 family of standards. These standards define common features such as physical videocassettes, recording modulation method, magnetization etc. It has many variants like DVCPRO, DVCAM, DVCPRO HD, DVC PRO progressive, etc. The DVCAM tape layout is the maximum compact professional digital recording media. In 1996, Sony introduced its own professional version of DV known as DVCAM, additionally it comes in diverse lengths like 12, 22, 32, 34, 40, 64, 94, 124 & 184 minutes.

Fig 1: DVCAM

Betamax:

Betamax is a purchaser-stage analogue videocassette magnetic tape recording format advanced by Sony, launched in Japan on 10th May, 1975. The format is obsolete, having lost the videotape layout struggle to VHS. Betamax recorders ceased manufacturing in 2002, but the layout's cassette tapes remained to had till March 2016, whilst Sony will discontinue them**.**

Fig 2: Betamax

¾" U-Matic:

U-Matic is an analogue recording videocassette layout, first shown via Sony in prototype in October 1969 and introduced to the market in September 1971. It became among the first video codecs to incorporate the videotape inner a cassette, in place of the numerous reel-to-reel or open-reel codecs of the time. U-Matic changed into named after the shape of the tape path when it was threaded across the helical test video head drum, which resembled the letter U recording time became limited to at least one hour.

Fig 3: ¾" U-Matic

Betacam:

Betacam is a circle of relatives of half-inch expert videocassette products developed by means of Sony in 1982. In colloquial use, "Betacam" singly is frequently used to refer to a Betacam camcorder, a Betacam tape, a Betacam video recorder or the layout itself. The cassettes are available in two sizes: S (for short) and L (for lengthy). The Betacam camcorder can handiest load S magnetic tapes,

even as tv studio sized Video Tape Recorders (VTR) designed for video editing can play each S and L tapes. The smaller S cassettes use the equal form factor as Betamax. The layout supplanted the three-quarter-inch U-Matic format, which Sony had added in 1971.

Fig 4: Betacam

VHS:

The Video home gadget or Video Home System (VHS) is a fashionable for patron-stage use of analogue recording on videotape cassettes. It was advanced by Victor Enterprise of Japan (JVC) within the 1970's. In the 1980's and 90's, VHS was the dominant home video layout. But, after the introduction of the DVD format in 1997, VHS's market proportion commenced to decline.

Fig 5: VHS

VHS-C:

VHS-C is the compact VHS videocassette format delivered in 1982 and used often for purchaser-grade compact analogue recording camcorders. The layout is based on the identical video tape as is utilized in VHS, and can be played lower back in a standard VHS VCR with an adapter. VHS-C cassette turned into larger than Video8 cassette, but changed into well suited with VHS tape recorders, using a special adapter cassette. The adapter carries a general sizable engagement hub for the VCR's take-up sprocket, which related to a gear train to pressure the VHS-C cassette take up equipment.

Fig 6: VHS-C

MiniDV:

MiniDV is the outcome of the joint efforts of leading producers of video camera recorder in 1998. Mini DV and Digital8 use different, non-interchangeable cassette media, with Digital8 cassettes being the larger in size as compared to MiniDV. The two formats

may also use different media formulations: Digital8 can use metal-particle or metal-evaporated media, while MiniDV is based solely on metal-evaporated media.

Fig 7: MiniDV

MicroMV:

MicroMV was a proprietary videotape format introduced by Sony in October 2001. The size of the videocassette is smaller than a Digital8 or DV cassette. The fact is that, MicroMV is the smallest videotape format, which is around 70% smaller than MiniDV. It was the first helical scan tape system using MR read head introduced to the market and each cassette can hold up to 60 minutes of video. MicroMV has not been a successful format. Sony was the only electronics manufacturer to sell MicroMV cameras. As of January 2006, Sony no longer offered any new MicroMV camcorder models. In November 2015, as Sony announced, that is why shipment of MicroMV cassettes had been discontinued in March 2016.

Fig 8: Micro MV

Digital8, Video8, Hi8:

The 8mm feature organization eludes casually with three related videocassette formats to those NTSC (National Television System Committee), furthermore PAL/SECAM TV frameworks. These includes those unique Video8 (analogue recording) configuration whose successor is Hi8 (analogue feature are more simple sound, yet with procurement for advanced audio), and additionally more lately advanced recording arrangement known as Digital8 is introduced. In 1985, Sony (Japan) acquainted the Handycam, a standout amongst those principal Video8 cameras with business prosperity. Much more modest over those competition's VHS and Betamax feature cameras, Video8 got precise prominent in the shopper camcorder Stamp.

Fig 9: Digital8, Video8, Hi8

LP/Vinyl Record:

It is also known as “Gramophone records” or “records” and provides an analogue storage medium in the form of plane polyvinyl disc with an inscribed, modulated spiral groove. The primary medium used for music reproduction until late 20th century was phonograph disc record, before that phonograph cylinder records were used. In the late 1980s, digital media came into existence, in the form of the compact disc, which had gained a larger market share, and the vinyl record slowly left the market in 1991.

Fig 10: LP/Vinyl Record

Reel-to-Reel:

It will be those structures for attractive tape sound recording on which the recording medium will be with respect to a reel, as opposed being safely held inside a tape body of evidence. Reel-to-reel tape might have been likewise utilized clinched alongside early tape drives to information capacity looking into mainframe computers, feature recording device (VTR) machines, and prominent relationship sound recorders, which have been used, starting with those early 1940s, dependent upon until display.

Fig 11: Reel-to-Reel

Microcassettes:

These are audio storage cassettes first developed by Olympus in 1969. It uses the same magnetic tape width as the Compact Cassette but is much smaller in size. Microcassettes can offer comparable recording time to the compact cassette. These are commonly used to record things on the go, such as lectures or answering machines.

Fig 12: Microcassettes

Audio Cassettes:

Audio cassettes are very popular sound recording format since 70s till late 90s. They are also known with the name compact cassette or music cassette (MC) or cassette tape, or simply tape or cassette. It was first developed by Philips in the year 1969. Audio cassettes are magnetic tapes used to record and play music. These come in two varieties: pre-recorded and blank.

Fig 13: Audio Cassettes

Slides:

Slides are single framed films, similar to the movie strip, but unconnected physically or until arranged in sets via problem. The slide has nonetheless visible impact however as with every visual substance if arranged in a subject sequence may be utilized in sound programme and in multimedia combos.

Fig 14: Slide

Microfilm**:**

It's miles a microphotograph on cellulose film. It could be negative or positive. Microfilm is the typically used microform with photograph in a linear array. The film widths are 16 mm, 70 mm and 105 mm. Roll microfilm is stored on open reels or put into cassettes. The standard lengths for using roll film is 30.48 m (100 ft.) for 35mm rolls, and 100 ft., 130 ft. and 215 ft. for 16mm rolls. One roll of 35 mm film may carry 600 images of large engineering drawings or 800 images of broadsheet newspaper pages.

Fig 15: Microfilm

Microfiche:

It includes a number of decreased snap shots of files produced on an obvious sheet of movie, the use of a special “Step and Repeat” camera. The microfiche is produced in style of sizes, but the maximum common sizes is 105 mm ×148 mm. The pinnacle of the fiche incorporates an eye fixed legible photograph giving information about microfiche.

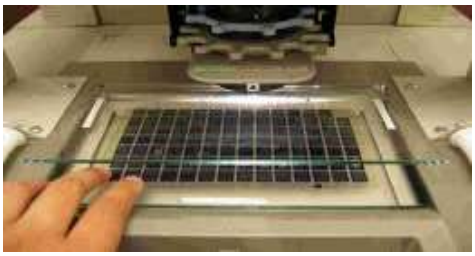

Fig 16: Microfiche

CD:

Compact disc (CD) is a digital optical disc facts storage format. The format was in the beginning advanced to store and play only sound recordings however changed into later tailored for garage of statistics (CD-ROM). Numerous other formats had been similarly derived from these, inclusive of write-once audio and records storage (CD-R), rewritable media (CD-RW), Video Compact Disc (VCD), wonderful Video Compact Disc (SVCD), photo CD, Picture CD, CD-i and enhanced song CD. Audio CDs and audio CD players have been commercially available when you consider that October 1982.

Fig 17: CD

DVD:

Digital optical disc storage format invented and evolved via Philips, Sony, Toshiba, and Panasonic in 1995. DVDs offer higher garage potential than compact discs while having the identical dimensions. Blank recordable DVD discs (DVD-R and DVD+R) may be recorded once using a DVD recorder and then characteristic as a DVD-ROM. Rewritable DVDs (DVD-RW, DVD+RW, and DVD-RAM) can be recorded and erased generally.

Fig 18: DVD

MiniDVD:

MiniDVD (Mini DVD or miniDVD) is a DVD disc which is 8 centimetres (3.15 in) in diameter. Most MiniDVDs hold 1.4 GB of data, but there are variants that hold up to 5.2 GB. The 8 cm optical disc format was originally used for music CD singles and hence the commonly used names are 'CD single' and 'MiniCD'. Similarly, the manufactured 8 cm DVDs were originally used for music videos and as such became known as 'DVD single'.

Fig 19: MiniDVD

Memory Cards:

Memory cards are a popular storage medium for many of the present day customer electronics devices, including digital cameras, cell phones, handheld gadgets and different small digital gadgets. Flash memory is non-volatile, this is the reminiscence card, which will no longer lose its statistics while eliminated from the tool, and the playing cards also can be erased or reformatted and reused. The PCMCIA (Personal Computer Memory Card International Association) has been extended several instances and are appropriate for plenty forms of devices. These memory cards can be classified into following categories:

Type I cards can be up to 3.3 mm thick, and are used by and large for adding extra ROM or RAM to a PC.
Type II cards may be 5.5 mm thick. Those cards are frequently used for modem and fax modem playing cards.
Type III cards can be up to 10.5 mm thick, which is adequately large for portable disk drives.
The types of memory cards used in electronic media viz. MicroSD, MiniSD cards, Secure Digital(SD) cards, Multimedia cards, Memory sticks etc.

Fig 20: Memory Cards

Table 2: Types of Materials used in Private Electronic Media Guwahati

Materials	Pride East Entertainment Pvt. Ltd.	BrahmaputraTele Production Pvt. Ltd.	Pratidin Group	AM Television Pvt. Ltd.	Rockland Media and

					Communication Pvt. Ltd.
DVC	YES	YES	YES	NO	NO
MINIDV	YES	NO	NO	NO	NO
BETACAM	YES	YES	NO	NO	NO
U-Matic	YES	NO	NO	NO	NO
MEMORY CARDS	YES	YES	NO	YES	NO
CD	YES	YES	YES	YES	YES
DVD	YES	YES	YES	YES	YES

From Table 2, it is evident that all the libraries (100%) of electronic media are using CD and DVD for preservation. Only Pride East Entertainment Pvt. Ltd. is using U-Matic and MiniDV. DVC are found in three (60%) private electronic media libraries. BETACAM are found in Pride East Entertainment Pvt. Ltd. and Brahmaputra Tele Production Pvt. Ltd. Three (60%) private electronic media libraries are using Memory Cards.

6.3 Preservation Methods Used in Private Electronic Media Libraries of Guwahati

6.3.1 Need for Preservation and Factors affecting the AV Materials:

Preservation is the management and upkeep of objects in order that they may be accessed and utilized by the future users. Preservation is a proper undertaking to ensure that a digital record of persevering with cost remains accessible and usable. It includes making plans, resource allocation, and application of renovation techniques and technologies and it combines rules, techniques and actions to make certain decisions to be reformatted, regardless of the challenges of media failure and technological exchange. The intention of maintenance is the accurate rendering of authenticated content materials over the years. The factors effecting the quality and durability of Digital Materials are:

The factors which are responsible for damaging the digital materials are:

1. Humidity: Humidity is the most challenging factor in a place like Assam. High humidity will increase the moisture content of the atmosphere which could be very risky for all sort of library materials. It enables in growing of micro-organisms like fungus, which reasons deterioration and damage.
2. Temperature and Sunlight: Sunlight is a factor for deteriorating the life of Digital materials. Direct sunlight is very harmful for all AV materials. Temperature is another factor that affects the condition of the AV materials, a sudden rise or fall in temperature can effect badly, therefore, AC is must.
3. Air Pollution: The pollutants in the air consist of many gases like sulphur dioxide, nitrogen, carbon dioxide, carbon monoxide etc., which may directly or indirectly effect the condition or durability.
4. Dirt and Dust: Dirt and dust are the suspended particles of sand or other materials. These are the main culprits behind the damage or shortening life of the AV materials.
5. Magnetic fields: A fare distance should be maintained from other magnetic fields. Keeping Digital Materials near to the magnetic fields can be very harmful.
6. Biological factors: Biological agents like bacteria and fungi effects AV materials in the form of staining and discoloration. Bacteria viz. Cytophaga, Cellvibro, Mycobacterium and Fungi viz. Alterneria, Aspergilla, etc. are some of the types.

7. Human beings: Among all other factors human beings are the most responsible for damaging the materials. Due to their mishandling and careless attitude, the Digital Materials get damaged.

There may be no single strategy to the demanding situations of digital protection. Preservation keeps giving a complicated mission, that's why there are such a lot of exclusive techniques and a number of one-of-a-kind packages presently being undertaken via varying enterprises around the world to deal with the digital protection task.

As said, there is no procedure or technique for preservation. Many organisations have selected to design their very own digital maintenance method, encompassing a number of the techniques, because industrial products did not meet their needs.

The following are the techniques used for preservation of digital materials:

MIGRATION:

Migration is the switch off digital materials from one hardware or software program kind to another. Migration also can be the transfer to non-virtual media which includes paper or microform, or the transfer to a greater suitable medium, for example floppy disc to CD-ROM or from one format to another. Migration guarantees the integrity of the item, retaining the essential traits of the records and retaining the capability to retrieve or view regardless of modifications to technology.

EMULATION:

Emulation is duplicating the features of one device, the use of a one-of-a-kind device in order that the second one gadget behaves and appears to be the first gadget and the unique digital information is still to be had in its unique form. Emulation is a manner to fight technological obsolescence because it provides a way of preserving the functionality of access to virtual statistics which can be misplaced with the software or hardware, while it becomes old.

The advantages of emulation are that the unique information isn't always altered in, besides which it helps to preserve the facts and facts' integrity and functionality. It is also an efficient method in respect that once the records are emulated, no further action is needed, till it needs to be emulated once more because of technology advances.

ENCAPSULATION:

Encapsulation is the way of grouping together the digital objects and metadata which had to provide access to the object. It lessens the possibilities that additives had to decode the object, may be misplaced. It's a visible option to the technological obsolescence for document formats due to the fact that all the information to interpret the 'bits' is available. Encapsulation is a detail of emulation and a number of strategies are being advanced the usage of its theory, substantially the usual protection format. It could be executed by using the use of bodily or logical 'packing containers' or 'wrappers' to provide a relationship between the item and the assisting facts.

NORMALISATION:

Normalisation includes the migration of digital data to traditional codec or to some standard format. Normalisation is the most often and widely used preservation technique. Here, the information layout is detected and transformed to an open layout for protection. The information authenticity can be lost; if during the course of the conversion, essential metadata is affected.

Normalising converts the document to an open standard primarily based format that permits it to be documented and handy. At some stage in the normalisation method, some information can be lost and for this reason, the new edition isn't always taken into consideration an original replica.

TECHNOLOGY PRESERVATION:

Technology preservation is the short-term solution of virtual preservation trouble. In this technique, the content can be preserved within the exact technology wherein it becomes regarded. The advocates of this method emphasize that the original surroundings desires to be run to truly maintain the behaviour as well as the look and experience of the virtual object.

The primary problem of the relevance right here is that data and verbal exchange technologies (like ICT) evolve over the time and digital records may come to be inaccessible via technological obsolescence.

CHEMICAL CLEANSING:

Cleaning of Audio records, CDs and DVDs can be done with the help of chemical reagents. Acetate, Lacquer, Shellac and Tiny are well known chemicals for these purpose. The movie strips or movies are wiped clean by way of using CCl4 (Carbon tetra chloride). DDT powder is also used for cleansing.

Table 3: Preservation Techniques used in different Electronic Libraries of Guwahati

Methods	Pride East Entertainment Pvt. Ltd.	Brahmaputra Teleproduction Pvt. Ltd.	Pratidin Group	AM Television Pvt. Ltd.	Rockland Media and Communication Pvt. Ltd.
Dusting	YES	YES	YES	YES	YES

Chemical Cleansing	NO	NO	NO	NO	NO
Encapsulation	YES	YES	YES	NO	YES
Normalisation	YES	YES	YES	NO	YES
Emulation	YES	NO	NO	NO	NO
Migration	YES	YES	YES	NO	YES
Technology Preservation	YES	NO	NO	NO	NO

Table 3 shows the different preservation techniques used by the private electronic media libraries of Guwahati. All the private electronic libraries of Guwahati are using dusting technique for preservation. Chemical cleansing technique is not being used by any of the libraries. Encapsulation, normalisation and migration techniques are used by all the libraries. Emulation and technical preservation techniques are used by Pride East Entertainment Pvt. Ltd. library only.

7.0 CONCLUSION

From the above discussion, it is found that the existence of private electronic media in Guwahati is not stable. Already three private electronic media have stopped functioning till the study. Presently, almost all the private electronic media libraries are maintained by library professional. Only AM television Pvt. Ltd. has no library. The dynamic nature of electronic technology has made several AV materials obsolete. AV materials like Betamax, MicroMV, Digital8, Video8, Hi8, LP/Vinyl record, Reel to reel, microcassettes, audiocassettes, slides, microfilms and microfiche are not being used in any of the private electronic media library of Guwahati. CDs and DVDs are found extensively used. Among preservation techniques dusting, encapsulation, normalisation and migration are being used by almost all the libraries attached with electronic media at Guwahati.

Private electronic media library is a naive field for library and information professionals with numerous scope for the study. More research should be conducted in this field. Seminars, workshops, training etc. should be organised to acquaint library professionals with the working environment of the electronic media library.

8.0 GLOSSARY:

1). AV materials: Audio Visual Materials

2). Codec: Codes (which can be encoded or decoded)

3). Phonograph cylinder records: Earliest mode for recording and reproducing sounds

4). Flash memory: It is a type of storage device mostly used in cameras, USB flash drives and video games

5). Technological Obsolesce: When a product is no longer technically superior to other similar products.

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