

A CALL FOR AN INTERNATIONAL ARCHIVAL NETWORK (IAN)

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Introduction

I am presenting here the case of Traditional Music Archive (TRAMA) which is a research and documentation centre for all materials related to ethnomusicology. The archives is located at the Institute of African and Asian Studies, University of Khartoum, as part of the Department of Folklore, one of its major divisions. One of TRAMA's initial objectives is to collect and document traditional music, preserve it and make it accessible to students, musicians, scholars and the general public locally and outside Sudan.¹

To fulfil these objectives, the TRAMA staff have conducted programmes such as compiling and publishing catalogues of audio and video recordings, building a computer retrieval system and database, constructing library data cards, etc. These programmes are geared to help the archives users find relevant data. For those who cannot visit the archives, TRAMA has a programme of cassette production and publication so as to make part of the preserved data accessible. But TRAMA has come to recognize that this is neither a sufficiently fool-proof method nor the ideal way to do the job. A tremendous amount of data can be disseminated and made accessible to a large number of users worldwide if we make better use of the available means of connectivity and data processing. Gathering and exchange of data has been transformed by technological advances, such as the replacement of analog with digital instruments and the networking of digital instruments to simplify collection and exchange of data. Personal computers and compact disc readers are commonplace. Many archives

publish collections of digital data sets on compact discs for easy distribution. Digital communication networks make it possible to transfer large data files by email, reducing much of the routine work of the archives' staff who are now largely engaged in developing new data compilations and new tools for data display and analysis.

A Pan-African symposium and festival organized by the Government of the Republic of Congo with support from UNESCO took place from 9 to 15 August 1996. The author, who is also TRAMA Assistant Director for Research and Production, attended the conference and shared with the participants TRAMA's experience and its vision for the future. It was suggested that African institutions concerned with music come together to discuss ideas, share opinions and put their efforts together to bond the varieties of music and art in the African continent. Since none of the already existing institutions can have the entire collection representing the different types of African music, TRAMA put forth its motion to establish The Regional African Music Archives and link them to one main custodian, the International Centre for African Music and Dance (ICAMD) in Ghana. The suggestion was well received by many, especially the UNESCO Representative for Central Africa and by Professor Nketia, Director of ICAMD. The idea has not been worked out but, fortunately, similar ideas like the Culture Africa Network (CAN) project have successfully been implemented and are on their way to becoming a reality.

Communication Network Models and TRAMA's Status

Here we will discuss the types of communication networks, their size and their complexity so that we can evaluate TRAMA's status and the possibilities of its future links with other archives worldwide. Five main types of network models can be distinguished: small networks, local area networks, wide area networks, intranets, and extranets.

1. SMALL NETWORKS

These networks are for the connection of computer sub-assemblies. They are usually contained within a single piece of equipment. This is the kind of network that has recently been adopted by TRAMA. A powerful computer will be connected to two other computers in order

to make use of its wide capacity in digitizing our analog data, editing our audio and video tapes, storing our database and producing audio and video compact discs for wider dissemination.² The other two computers will be for the use of TRAMA local users.



Cassette cover: 'Sufi: Traditional Music of Sudan' published by TRAMA.

2. LOCAL AREA NETWORKS (LAN)

These networks connect computer equipment and other terminals in a localized area—university campus, factory, office. The connection is usually a cable or fibre and the extent of the cable defines the LAN. TRAMA will soon be connected with the University of Khartoum data/computer network, a computing infrastructure that will keep pace with emerging applications, including distance learning, student-centred information access, Internet access, digital libraries and staff and student collaboration.

The University network has different servers to connect faculties at the major university campus to the main library. Mail is forwarded to the faculty mail servers and websites are hosted in the faculty

servers. Each faculty has a sub-net and each department has its own LAN.³

3. WIDE AREA NETWORK (WAN)

These networks connect computers and other terminals over large distances. This often requires multiple communication connections, including microwave, radio links and satellites.⁴ As TRAMA (located in the university campus) will soon be connected with other faculties at that campus, connectivity will also be established with other faculties outside the campus through microwave links/data cloud.⁵ By then all the university faculties will be interconnected and have access to the Internet.

4. INTRANET

Organizations worldwide are discovering ways to enhance internal and external communication using web technology in a new type of information system called 'intranet.'⁶ It is a computer network connecting an affiliated set of clients using standard Internet protocols, TCP/IP (Transmission Control Protocol/Internet Protocol) and HTTP (Hypertext Transfer Protocol) i.e. it is an IP-based network of nodes behind a firewall or behind several firewalls connected by secure, possibly virtual, networks.⁷

Nowadays there is a large interest in and deployment of intranet due to the benefits that it can bring to a corporation. Intranets as private networks of web servers allow the creation of corporate information networks that are easy to use, seamless and global in coverage. They are easier to manage and offer a simple universal, cross-platform client, using smaller applications.⁸ Four main areas of benefit can be identified:⁹

financial gains: corporation returns on intranet investment figures of 100% expenditure are reduced in terms of implementation, training and running cost;

increased information efficiency: allows fast deployment and the use of multiple data formats. It is more efficient than other means of distribution;

low technological implementation: can be applied to already pre-existing hardware and network configurations within the organization;

easy to use: simple applications involved make it user-friendly.

TRAMA as an Intranet Culture Africa Network (CAN) member

The CAN is a direct outgrowth of the Contemporary African Music and Arts Archive (CAMA) which was started in 1995 at the University of Cape Town, South Africa. It was established to build an interactive arts and culture network for the entire African continent. The project started with seven African countries: South Africa, Mozambique, Kenya, Ethiopia, Ghana, Senegal, Mali and Sudan. The main objective of the project is to facilitate the identification of cultural creativity in an African context and build mutual enrichment by sharing the rich diversity of the African cultures.

Each CAN centre is provided with powerful computers, high quality recording equipment, digital cameras and other equipment necessary to ensure a high quality of cultural products. Each CAN centre started with the cultural data already preserved in it, digitized it and stored it in a CAN database which has been distributed among the centres.¹⁰ In six months, starting October 1999, each CAN centre began to convert analog data into digital data in order to produce two compact discs of its holdings to be exchanged with other CAN centres. The CAN Distributed Database has been designed specially to unify the retrieval system in all CAN centres and make CAN compact discs accessible to the users of these centres.

The next stage of the project is to build an intranet to link these centres and facilitate communication directly through the available potential of the Internet. The Internet services now cover all the African countries participating in the CAN project and more than 80% of the African countries, according to CAN statistics. CAN is now working on the internal protocols.

5. EXTRANET

This is an intranet that allows controlled access by authenticated parties.¹¹ The terms 'intranet' and 'extranet' are roughly web-based analogs of LAN (local area network) and WAN (wide area network), as the following charts make clear:

Chart 1

	LAN	WAN
Bandwith	<i>high</i>	<i>low</i>
Scope	<i>building or campus</i>	<i>city to global</i>
Protocols	<i>diverse</i>	<i>diverse</i>
Security	<i>very high</i>	<i>high</i>

	Intranet	Extranet
Bandwith	<i>high</i>	<i>low</i>
Scope	<i>continent</i>	<i>global</i>
Protocols	<i>internet</i>	<i>internet</i>
Security	<i>moderate to high</i>	<i>low to moderate</i>

Chart 2

The International Archival Network (IAN) as an Extranet

The CAN model as intranet connectivity for the African Continental Archives can be duplicated in other continents around the world. Each continental archival intranet would have its own protocols and terms of reference. The suggested International Archival Network (IAN) would adopt the Internet protocols, establish a panel and endeavour to formulate its objectives. These could be suggested as the following:

1. To ensure permanent archiving and availability of musical, artistic and folkloric data wherever possible in computer-readable form.
2. To ensure the continuation of long-term monitoring of audiovisual data and the permanent preservation of the data so acquired for the benefit of the international community of users, etc. The activities of the panel to further these objectives may include the following:
 - a. compile and publish guides to the International Archival Network (IAN) containing information about data holdings and programmes.
 - b. give guidance and encouragement to IAN on such matters

as data cataloguing, electronic communication links, working visits, new methods of data storage and dissemination and the conversion of analog data into digital data.

c. promote awareness of the IAN system and its data dissemination mechanisms through publications, workshops, exhibitions, etc.

Conclusion

In this paper we presented the state of knowledge in the age of globalization and information revolution. This could be used to make more information about different cultures available to benefit the ever-increasing number of users around the world. This helps in knowing each other and to lessen tensions prevailing among people nowadays. It is hoped that this would contribute to the lessening of these tensions including conflicts and wars which stand as the worst of human practices in the past century.

The establishment of the International Archival Network helps in unifying attitudes towards the means and methods for the conservation of the available data in the present archives. It also helps in joint projects among these archives which work to reduce costs and efforts as well as time.

The official information media concentrates more efforts on natural and manmade disasters. But in our proposed network we are trying to get a parallel media which will disseminate information to tell the world that people of different cultures, despite disasters, are still creating art and have their comprehensive aesthetic visions of existence and the universe.

Notes

1 TRAMA initial proposal, IAAS, University of Khartoum, Sudan, 1985.

2 Guide to World Data Centers,
www.wde.rl.ac.uk/wdcmain/guide/gdintro.html

3 See Chart 1.

4 Classification of /node2. communication networks,

<http://www-dept.cs.ucl.ac.uk/staff/S.Bhatti/D51-notes.html>

5 See University of Khartoum Network Initial Proposal, Khartoum, 1999.

6 Ibid.

7 See Chart 2.

8 Corporate Intranet and Corporate Libraries,

www.jimmy.qmced.ac.uk/usr/im94jone/introduction.html

9 Frequently asked questions about intranet and extranets,

www.idm.internet.com/ifaq.html

10 Why are Intranets primed for massive growth,

www.sunworld.com/swol-01-1997/swol-01-intra.html

11 Ibid.