



UNITED NATIONS ECONOMIC COMMISSION FOR AFRICA  
MULTI-DISCIPLINARY REGIONAL ADVISORY GROUP

ECA/MRAG/96/83/MR



Multidisciplinary  
Regional Advisory Group

REPORT ON A MISSION FOR THE PREPARATION  
OF THE CD ROM FOR AFRICAN  
DEVELOPMENT (CDAD)

Sao Paula, Brazil

1-6 April 1996

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Regional Adviser, Information  
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Associate Computer Expert

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## Executive Summary

1. Preparation and manufacturing of a CD ROM made up of information from Africa and on Africa is one of the priority areas of ECA's focus on Harnessing Information Technology for Development. For the development of the first CD ROM for African Development (CDAD) fifteen African countries and institutions have offered to contribute information from their bibliographic, experts and institutions data bases as well as statistical and full text data, thus making the CDAD unique in its kind. Most of the participating institutions have participated in the preparatory meeting of the CD at their own costs, hence showing the interests of members States in such a cooperative effort. In addition to those efforts and that of ECA, the Carnegie Corporation of New York and the Netherlands Government have supported the project since its inception. Hence, the CDAD is the result of a common effort of African countries and institutions willing to put together their information resources for sharing. Data collection has been completed while data reformatting and interface authoring are continuing at ECA and at BIREME (the CDAD production site in Brazil). Translation of the French interface language version will be carried out when the English language interface authoring exercise will be completed. Premastering, mastering and production of the "gold disc" for testing by ECA and selected African institutions are envisaged in early June while the 500 copies of the CD will be manufactured in July in the USA and sent to PADIS in Addis Ababa for distribution and sale. It is expected that the production of the CDAD will make African information available and usable at minimum cost to African countries and institutions. All member States and African institutions will be invited to contribute information to the second edition of CDAD which will be manufactured before the end of 1996.

### Background

2. BIREME (Biblioteca Regional da Medicina) of the Latin American and Caribbean Centre for Information Sciences on Health, operates under the umbrella of the Pan American Health Organization (PAHO) and the World Health Organization (WHO). BIREME is known worldwide by its activities on CD ROM mastering and as the development centre for the CISIS and Windows versions of UNESCO's CDS-ISIS software package. ECA learned about BIREME's activities during the International CDS/ISIS Congress held in June 1995 in Bogota, Colombia which was attended by the Regional Adviser in Information Systems Development.

3. Development of a CD ROM for African countries was discussed during several years in the framework of the PADIS Standing Committee on the Harmonization and Standardization of Documentation and Information Systems in Africa. In 1994 the Standing Committee created a Subcommittee on CD ROM development to assess possibilities of creating a CD ROM for African countries taking into account availability of data, storage capacity, willingness of institutions to contribute data, nature of data and time span, reformatting possibility and common format, and sources of funding. The Subcommittee on Data format and structures met in November 1995 in Cairo, followed by the Meeting of the Subcommittee on CD ROM development in Addis Ababa in March 1996. Input from both Subcommittees were used by PADIS for data collection and reformatting into a central data base which would supply the required information to the CD ROM. Several CD ROM manufacturers

were approached and there were negotiations between PADIS and those institutions for eight months. The two main CD ROM renowned producers are Silver platter in the USA and BIREME in Brazil. Conditions offered by BIREME were found to be more acceptable to ECA than those offered by Silver platter which wanted to keep for itself almost the total sales revenue which would be derived from the sales of the CDAD.

### **Terms of reference**

4. To be able to effectively share their information resources, with minimum cost and appropriate technology, African countries and institutions are putting together their databases onto a CD ROM. The continent is large and postal services are not reliable for exchange of diskettes and tapes or even printed outputs. It can take months for a letter to be delivered from one country to another in the same subregion. Hence the exchange of large amount of data, such as bibliographical and statistical databases, will be done most efficiently in Africa using CD ROMs. This would mean making available for African countries new technology and cheap and reliable ways of distribution of full databases compared to the cost of on-line direct access. Furthermore, members of the PADIS Subcommittee on CD ROM Development pointed out that it would be important to make available all African research and development information on CD-ROMs. They also felt that ECA's CD-ROM project was a good and viable endeavour in the sense that, it has the advantage of mass data storage and retrieval speed vis-a-vis that of a hard disk. The CD ROM development project was unanimously recognized by members of the Subcommittee as a cost effective solution for Africa, and that any institution in Africa should contribute data in it. Thus it is expected that the CDAD will provide the participating centres with a medium to disseminate data which have been compiled for years hence removing barriers to information access which was mainly caused by lack of appropriate dissemination tools for the African region.

5. After the preparatory work towards the publication of the CD-ROM was undertaken by PADIS (data reformatting, conversion and migration, development of guidelines) the actual CD development process will be carried out at BIREME, Brazil from April to July 1996. In the meantime a mission was undertaken to BIREME by Makane Faye, Regional Adviser in Information Systems Development and Lambert Hogenhout, Associate Computer Expert to start interface authoring, data reformatting and migration of data bases from participating centres to the CDAD.

### **Activities carried out during the mission**

6. The main activities of the mission was to prepare technical input, mainly data reformatting and interface authoring and definition of search and display parameters which would enable the CD ROM to be left at BIREME at the premastering stage for further mastering, preparation of the gold disk and pressing. Due to the short duration of the mission, the above activities were carried out in Brazil for the bibliographic data base only. Even though, the mission had to work day and night in order to leave with BIREME a clean copy of the data which would form the major part of the CD ROM. Indeed as data to be included in the CD was of diverse nature (textual, bibliographic, referral) and origins (ECA, OAU, African countries, subregional and regional institutions), there was a big reformatting exercise which was to be undertaken in Brazil by the mission and BIREME staff. The

reformatting exercise started in Addis Ababa in February but could not take into account all the parameters set up by BIREME for CD ROM development. In addition, the CD ROMs developed by BIREME were always bibliographical and thus did not take into account before our mission bibliographic, textual and statistical information into one single CD.

### **Interface authoring**

7. Interface authoring is the mechanism which would enable each of the data bases to be used for information storage and retrieval in the CD ROM. It is time consuming and needs a lot of care and expertise in data reformatting. Interface authoring is expected to be done for each of the following 3 data bases: bibliographic, experts and institutions. If expertise and time are available, interface authoring can be done by the institution which owns the CD ROM, otherwise it is subcontracted to the CD ROM manufacturer which always charge a substantial amount of money for this purpose. In view of the above information, the mission decided to carry out the interface authoring as part of the mission's follow up. Completed interface authoring data will be sent to BIREME, by e-mail before end of May 1996.

8. Interface authoring consists of:

- preparing general information about the CD as a whole and the separate databases it contains
- defining general title characteristics (contents, periodicity, languages)
- set up data preparation production procedures
- preparation of documentation for storage and retrieval
- definition of query forms
- preparation of help messages for each type of possible search and combinations and for each searchable and browsable field
- definition of display formats for information browsing

### **Data to be included in the CDAD**

9. As recommended by the PADIS Subcommittee 7 on CD ROM development which met in Addis Ababa, Ethiopia in March 1996, the following type of data will be included in the first CDAD.

#### **FULL TEXT DATA**

10. It consists of information on ECA, the various organizations which have contributed data into the CD ROM and information on the activities, plans, programmes and achievements of the OAU and the various subregional economic groupings. Each institution has been invited to supply its own information. In the case of ECA, several documents are considered:

- What is ECA
- Serving Africa Better: Strategic Directions for the Economic Commission for Africa
- Survey of African economic conditions

- UN Wide-System Initiative for Africa
- What is PADIS
- Guidelines and standards for electronic networking in Africa
- Manual for document analysis (micro CDS-ISIS version)
- Building Africa's Information Highway: an Action Plan

The above documents will be in english and french versions whenever both languages were available, otherwise the english language will be used.

11. The following regional economic groupings were invited to send full text information to be included in the CD ROM: ECOWAS, ECCAS, COMESA, SADC, UMA, UEMOA and UDEAC. The full list of countries and institutions which have input bibliographic and referral information in the CD is in the paragraph 17 below.

### **STATISTICAL DATA**

12. The statistical data to be included in the CD ROM consists of information on the social and economic conditions of African countries which was compiled by the ECA Statistical Division into a booklet entitled Africa in Figures.

13. The following institutions have volunteered to include their statistical data into the CD ROM:

- The Lake Chad Basin Commission (LCBC). The LCBC has recently developed a statistical data base on economic conditions of countries members of the organization.
- ECOWAS. The west African institution has offered to include its statistical data base on trade into the CD ROM.

However, data from LCBC and ECOWAS have not yet reached PADIS at the time of the preparation of this report; hence, if supplied the data will be reserved for the next edition of CDAD envisaged for beginning of 1997.

### **REFERRAL DATA**

14. It consists of data bases on experts from African countries and research and development institutions from member States. As these are structured data, the BIREME' LILACS retrieval engine will be used for searching and information display for both data bases.

#### **Data on African experts**

15. They have been supplied by *PADIS and IGADD* and they give useful data on expertise available in African countries. The data have been collected by questionnaires on a continuous basis over the years by the two organizations. The CD gives factual information on over 3,000 selected African experts.

**Data on African institutions**

16. They have been supplied by *PADIS, IGADD and CODESRIA* and give useful information on activities, programmes, resources and full addresses of selected African institutions in their fields of research and development. The CD gives a list of over 500 institutions operating in Africa.

**BIBLIOGRAPHIC DATA**

17. It supplies the bulk of the information in the CD and is a summary of library holdings on African information or information on Africa from 15 centres which are participating in the CD ROM development exercise. It consists of 30,000 records from the following institutions:

- AFRICAN REGIONAL ORGANIZATION FOR STANDARDIZATION (ARSO)
- LESOTHO: NATIONAL UNIVERSITY OF LESOTHO
- AFRICAN REGIONAL CENTRE FOR TECHNOLOGY (ARCT)
- INTERNATIONAL CENTRE OF INSECT PHYSIOLOGY AND ECOLOGY (ICIPE)
- LAKE CHAD BASIN COMMISSION (LCBC)
- NIGER: CENTRE D'INFORMATION ET DE DOCUMENTATION ECONOMIQUE ET SOCIAL (CIDES)
- TOGO: CENTRE DE DOCUMENTATION TECHNIQUE DU MINISTERE DU PLAN (CDT)
- INSTITUT PANAFRICAIN POUR LE DEVELOPPEMENT (IPD/AOS)
- LESOTHO: INSTITUTE OF SOUTHERN AFRICAN STUDIES (ISAS)
- INTERGOVERNMENTAL AUTHORITY FOR DROUGHT CONTROL AND DEVELOPMENT (IGADD)
- COUNCIL FOR THE DEVELOPMENT OF SOCIAL (CODESRIA)
- SENEGAL: SOCIETE NATIONALE DE PROMOTION INDUSTRIELLE (SONEPI)
- PANAFRICAN DEVELOPMENT INFORMATION SYSTEM (PADIS)

- ALGERIE: CENTRE NATIONAL D'INFORMATION ET DE DOCUMENTATION ECONOMIQUE (CNIDE)
- MAROC: CENTRE NATIONAL DE DOCUMENTATION (CND)

18. The bibliographic data bases are stored in the CD ROM as CDS/ISIS data bases and will use BIREME's LILACS search, retrieval and display engine which currently runs under DOS and would be able to run on Windows platform in 1997 with its newly developed graphics interface. LILACS interface has been used for the 24 editions of the Latin American CD ROM on Health Information Sciences and also for several other CD ROMs developed in Latin America. Versions of the same interface is also available for UNIX and HTML (to create a World Wide Web interface) that can be installed as modules onto the same data base.

#### **Presentation of information**

19. The following arrangements were recommended for presentation of information in the CD and on the jacket of the CD, both in English and French languages. For the jacket of the CD, please refer to Annex.

#### **On the jacket**

Information on the PADIS network  
List and addresses of participating institutions  
How to acquire the CDAD  
Troubleshooting address for the CDAD

#### **In the CD ROM**

##### **First screen:**

Welcome message  
Minimum configuration required for use of CDAD

##### **Second screen:**

##### *Table of content:*

Statistical data on African countries  
Full text  
Bibliographic data base  
Data base on African experts  
Data base of African institutions  
List of addresses of participating institutions

**Other screens:**

By choosing one of the above listed items, the user will be taken into another screen dealing with the requested subject. Then he would be able to start immediately doing a search on the data bases or browsing through a document on the full text part of the CD.

**Searching through the data bases**

20. All possible combinations and search strategies accepted by CDS/ISIS software for information storage and retrieval are taken into consideration to enable users find quickly references needed on a subject, an author an expert, an institution, a country or a date of publication.

The statistical data will be stored by country and the user can access information through a search by country and/or by subject.

**Browsing full text information**

21. The full texts received from institutions will be stored each as stand alone to be browsed though by the user.

**Production planning**

22. To avoid a time-lag for the bibliographic, statistical and the institutions data bases and to ensure that the full text documents will not become outdated, it is important that the product will be marketed in mid May 1996 by production of a leaflet on the CDAD. It is planned that the data preparation will be finalized in May, mastering and replication would take place in July 1996. Simulation and testing will be undertaken at PADIS in June 1996. The 500 copies of the CD ROM will be shipped by BIREME to Addis Ababa via UN Pouch in New York.

**Distribution and price**

23. Each national participating centre will receive a copy while each subregional/regional participating centre will receive 4 additional copies for selected active members of their sectoral networks. A publicity leaflet will be prepared for distribution in all African countries and in various INTERNET and web sites. The distribution will be undertaken by PADIS. The retail price for America, Asia and Europe will be higher than the price for Africa. There will be also wholesale prices for bulk orders from any institution be it African or foreign. The Subcommittee on CD ROM development recommended that subsidies derived from the CD ROM should be used to acquire CD ROM readers for African centres.

## **Second CD ROM for African Development**

24. It is expected that the next CD ROM will be published between November 1996 and January 1997. The data collection process is continuous and will be strengthened from May 1996 when a circular letter will be sent to all ECA national contact points, PADIS national and institutional participating centres, subregional and regional organizations and subregional economic groupings as well as the OAU and its national contact points and regional offices. More full text and statistical data will be incorporated to make the CD more attractive to planners and decision makers. The next CD ROM is expected to run under both DOS and Windows platforms.

## **Conclusion and recommendations**

25. CD ROM development is a long process and time consuming particularly if it involves several institutions. There will be less hassle with the fifteen institutions which have contributed data in the first CDAD because their data bases are already in the Common Format standard adopted by the Subcommittee on CD ROM Development. However data bases from the newcomers will necessitate a lot of reformatting before they can fit in the Common Format. However to eliminate incompatibility, the Standing Committee has adopted a series of standards for use by African countries and institutions members of the PADIS network.

26. *It is recommended to institutions willing to take part in future CD ROM development exercises to adopt the Common Format for CD ROM Development or use the methodology recommended in the Manual for Document Analysis adopted in November 1995 and which is under print. In this regard the Manual will be distributed to all institutions.*

27. *It is also recommended to ECA, to the Carnegie Corporation of New York and to the Netherlands Government to continue to make resources available for continuation of the CD ROM production process for benefit of member States .*

28. *Finally, member States are urged to contribute data to the 2nd CDAD and the subsequent issues to make the CDAD truly representative of the continental information.*

29. From 1997/1998 ECA should consider setting up a Regional CD ROM Development Centre for Africa with the required human resources and equipment to be able to cater not only for the CDAD but also for other CDS needed by African countries.

**CDAD**

**Annex: Content of the jacket of the CDAD**

This is the first edition of the CD-ROM for African Development.

It contains several databases, full text documents and other information relevant to *socio-economic development in Africa*.

The CDAD is developed by the Pan African Development Information System (PADIS) of the United Nations Economic Commission for Africa (ECA) through cooperation of the members of *The PADIS network*, a network of national, subregional and institutional participating centres in Africa.

**Contents:**

**BIB:** a bibliographic database containing about 34000 references to literature by African authors or dealing with Africa.

**EXPERT:** a database of profiles of African experts in different fields.

**INST:** a database of names, activities and addresses of African institutions.

**DOCS:** full text documents relevant to African development.

**STATS:** Statistical extracts of activities in African countries in 1995.

The following institutions have contributed to this CD-ROM:

Les institutions suivantes ont contribué à ce CD-ROM:

- African Regional Organization for Standardization (ARSO) / Organisation Régionale Africaine de Normalisation (ORAN)
- African Regional Center for Technology (ARCT) / Centre Régional Africain de Technologie (CRAT)
- International Center of Insect Physiology and Ecology / Centre International de Physiologie et d'Ecologie des Insectes (ICIPE)
- Lake Chad Basin Commission (LCBC) / Commission du Bassin du Lac Tchad (CBLT)
- Niger: Centre d'Information et de Documentation Economiques et Sociales (CIDES)
- Togo: Centre de Documentation Technique du Ministère du Plan (CDT)
- Institut Panafricain pour le Développement (IPD/AOS)
- Lesotho: National University of Lesotho
- Lesotho: Institute for Southern African Studies (ISAS)
- Intergovernmental Authority for Development / Autorité Intergouvernementale pour le Développement (IGAD)-Council for the Development of Social Research in Africa / Conseil pour le Développement de la Recherche en Sciences Sociales en Afrique (CODESRIA)
- Sénégal: Société Nationale de Promotion Industrielle (SONEPI)
- Pan African Development Information System (PADIS)
- Algérie: Centre National d'Information et de Documentation Economique (CNIDE)
- Maroc: Centre National de Documentation (CND)

Distribution & Support:

To order this CD-ROM, or to get help on its operation, contact PADIS at:

P.O.Box 3001, Addis Ababa, Ethiopia,  
tel: +251-1-511167, fax: +251-1-514416, email: support@padis.et

Pour commander ce CD-ROM ou pour toute assistance concernant son utilisation contactez le PADIS,

P.O.Box 3001, Addis Ababa, Ethiopie,  
tel: +251-1-511167, fax: +251-1-514416, email: support@padis.et

### CDAD

Ceci constitue la première version du CD-ROM pour le Développement de l'Afrique. Il contient plusieurs bases de données ainsi que des documents en texte intégral et d'autres informations pertinentes sur le développement *socio-économique de l'Afrique*.

Le CDAD est mis en place par le Système panafricain d'Information pour le Développement (PADIS) de la Commission économique des Nations Unies pour l'Afrique (CEA) par le biais de la coopération entre les membres du *réseau PADIS* composés de points focaux nationaux, de centres sous-régionaux et de centres institutionnels participants.

### Contenu:

- BIB:** base de données bibliographiques contenant environ 34000 références d'auteurs africains ou de documents sur l'Afrique.
- EXPERT:** base de données sur l'expertise africaine dans différents domaines.
- INST:** Base de données d'activités et d'adresses d'institutions africaines.
- DOCS:** Documents en texte intégral sur le développement africain.
- STATS:** Extraits de données statistiques sur les pays africains en 1995.