



**ORGANIZATION OF
AFRICAN UNITY**
Secretariat
P. O. Box 143

المنظمة الإفريقية
الوحدة
إفريقية

**ORGANISATION DE L'UNITE
AFRICAIN**
Secretariat
B. P. 3243

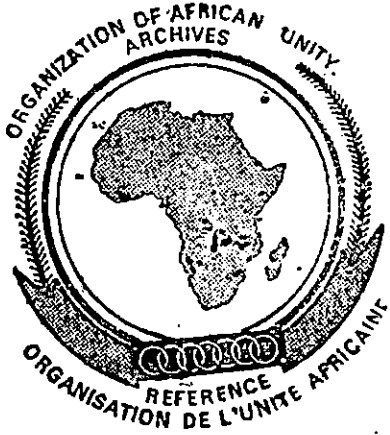
Addis Ababa

COUNCIL OF MINISTERS
THIRTY-SIXTH ORDINARY SESSION
23rd February - 1st March 1981
Addis Ababa, Ethiopia

Original: English

CM/1100(XXXVI)

REPORT OF THE SECRETARY-GENERAL ON THE
ACTIVITIES OF OAU/STRC IN COMPUTER SCIENCES AND INFORMATION
EDUCATION



CM-1100

MICROFICHE

maintained references long subjects in field to equivalent (11)

activities in research and development of scientific and technical (12)

CM/1100 (XXXVI)

Activities of OAU/STRC in Information Education and Computer Sciences:

The founding fathers of the Organization of African Unity saw the need for Member States to co-operate in the areas of Scientific and Technological Research and Development. This was translated into action by the establishment of OAU/STRC. Some of the main functions of this Commission are:

- (i) Co-operation among Member States in areas of Scientific and Technical Research;
- (ii) To encourage exchange of scientific and technological knowledge;
- (iii) To encourage and sponsor training into new areas of science for the future, beside researches into African traditional methods with a view to developing them.

On a recommendation from the Scientific Council of Africa, (CSA), the OAU/STRC began contacts with three African Universities and Institutions to begin some work and training in the field of Computer Sciences and Informatics Education. This began in Lagos University, Cairo University and National High Polytechnics, University of Algeria.

International Post Graduate Diploma in Computer Sciences at the University of Lagos:

This course started since 1971 and it is jointly sponsored by OAU/STRC, UNESCO and the University of Lagos. It has since produced an average of eight students per annum. These students come from African countries like; Ghana, Ethiopia, Kenya, Uganda, Sudan, Nigeria and Tanzania.

These courses are designed to provide graduates of Computer Sciences or Computer Science related discipline with advanced general post-graduate training in various topics of Computer Science with a view to preparing them:

1. to acquire professional status,
2. for post-graduate research in Computer Sciences.

The support of OAU/STRC for this programme includes:-

(i) Award of scholarships to some participants from OAU Member States;

(ii) Exchange of programme between the Department of Computer Sciences at the University of Lagos and Cairo University and other higher Institutions of any OAU Member States;

(iii) Exchange of staff or visiting professors or technicians;

(iv) Sponsoring workshops, seminars and symposium on various Science topics in informatics training or techniques, and post-graduate training.

This programme offers tremendous opportunities for Member States of OAU to develop necessary manpower in informatics, especially those who do not have local training facilities.

Entry requirements is a good under-graduate degree in one of the following subjects: Mathematics, Physics, Engineering, Electronics, Statistics, Business Administration, Economics or Computer Science. Because of this rather broad range of subjects, Member Nations may not find it difficult to find suitable candidates.

(11) Exchange of staff or visiting professors or technicians

(12) Exchange of staff or visiting professors or technicians

Other Courses in Different Sub-Regions:

The efforts of OAU/STRC is on, to arrange similar courses in Egypt, Algeria and Tanzania. The contribution of OAU/STRC to these Courses is just on a scale of moral support. 15,000 US Dollars is paid to Lagos University annually and similar amount will also be paid to the other Institutions.

Need for Cooperation Among OAU States:

1. Development of computer technology is a capital intensive affair. The amount of money IBM alone devotes to research in computer technology is many times over the budgets of several developing countries. Again, since most of the developing countries have cheap labour, why should they engage in the capital intensive industry like computer technology?
2. For computer technology to take off in any country there must be in existence viable electronic industry and other allied industries,
3. There is the need to develop the necessary technical manpower,
4. There must exist market to absorb computers produced.

In spite of these problems we must make progress. For, there is a similarity between the industrial revolution and the "computer revolution". Countries that we now call the developed countries today are those countries that paid proper attention to the development of computer technology. Besides, we know information is power. Therefore, because developed countries using resources of modern computers can now have greater abilities to store information on developing countries. Such information can now be used against the interests of developing countries and manipulated to undermine their sovereignties. Thus computers are now political weapons being controlled entirely by our former colonial matters!!!

It is because of this distinct possibility that the Scientific Council of Africa recommended to work out the possible areas of cooperation for the development of informatic industry in Africa.

Possible Areas of Co-operation

1. Hardware
2. Software
3. Net Work
4. Personnel Development Training and Education.

Current Feasible Areas of Co-operation

Because of reasons earlier stated namely high cost, lack of allied electronic industries and non-existence of capable manpower, individual countries cannot embark on Hardware Technology Development now. The best that can happen now is to have computer components made outside and assemble them locally. The danger in that arrangement is that the local assembly plant will be at the mercy of the parent Company outside Africa.

Net Work has been proposed as an area of cooperation, however, there are problems of:-

- (i) Communication: (Telephone network must first be established, and there is the need to standardize dialling codes;
- (ii) In-compatibility of Existing Equipment;
- (iii) Trans Border Data Transmission - may lead to violation of sovereignty of Member State.

All that is required for software development is brainpower. This is an area of feasible cooperation and no effort should be spared

in achieving cooperation in development of software.

- (i) Training and Education;
- (ii) Applications.

Regional Meeting of Computer Centre Directors in Africa
(Arusha, Tanzania, 14 - 18 April, 1980).

OAU/STRC with the co-operation of UNESCO convened this regional meeting of Computer Centre Directors. The principal terms of reference of this regional meeting are the following:

- (a) Provide for exchange of experiences in the application of informatics;
- (b) Discuss establishment of software exchange programmes and common maintenance efforts of software and hardware;
- (c) Review problem of computer equipment procurement;
- (d) Consider personnel exchange programme at regional level;
- (e) Examine initiation of regional network of cooperating informatics centres.

The Meeting was held in Arusha from 14th to 18th April, 1980 and was attended by eight participants representing; Tanzania, Uganda, Zambia, Malawi, Senegal, Nigeria and Kenya. The OAU/STRC sponsored five Scientists. (List of participants in Annex I also attached). The recommendations of the meeting in Annex I also attached.

Summary of the Recommendations:

1. The OAU Member States to encourage the establishment of an informatics network in Africa by making positive contributions

including financial and political support,

2. That International Organizations: UNESCO, UNDP and OAU/STRC promote the establishment of this network,
3. OAU Member States should make efforts to establish informatics education and training facilities in Universities and other Institutions and encourage improvement and expansion if these facilities exist,
4. UNESCO to intensify its efforts to produce a modular curriculum to be adopted in different OAU Member States and not inferior informatics education in developing countries; UNESCO and other International Organizations to strengthen the training support (Seminars, Workshops, Courses, Conferences in Africa and exchange of staff),
5. OAU/STRC, UNESCO, IIBI and NGO's to encourage the formation of national and regional informatics societies or associations,
6. UNESCO, OAU and other International Organizations take the steps to further the establishment of regional centres for Computer Sciences and Informatics to undertake hardware, software maintenance and training;
7. A conference on the application of Informatics in Africa to be organized by UNESCO in 1981.

THE RECOMMENDATIONS

Recommendation 1

The Regional Meeting of Computer Centre Directors in Africa at Arusha (Tanzania) from 14th to 18th April, 1980,

Expresses its profound gratitude to Honourable Tabitha Siwale, Minister for Education, United Republic of Tanzania for participating in the inauguration of the meeting and for the support she thereby gave to the meeting,

Expresses its gratitude to the Government of the United Republic of Tanzania for all the facilities made available to the meeting, such facilities that made it possible for the meeting to carry out its work under satisfactory conditions,

Thanks the authorities of Eastern and Southern African Management Institute and the Tanzanian people for the warm hospitality shown to it and for the expressions of goodwill it received.

Recommendation 2

The Meeting,

Conscious of the importance of informatics in the development of all countries in the region;

Noting the wide gap between this region and industrialized countries in informatics;

Recognizing that this gap can be reduced through cooperation effort at regional level;

Taking into account the points raised in the working document concerning establishment of the regional network;

Recognizing the need to control the activities of computer vendors especially preventing them from transferring obsolete technology into the region;

Recommends

1. The establishment of an Informatics Network in Africa,
2. That Governments in Africa should encourage the establishment of the network by making positive contribution including financial and political support,
3. That international organizations such as UNESCO, UNDP, and OAU/STRC promote the establishment of the network.

Recommendation 3.

Considering the large size of Africa region;

Realizing that much has to be done to improve informatics activities in the region;

Conscious of the importance of coordinating efforts of UNESCO in informatics;

Recommends that:

An informatics specialist be added by UNESCO to its Regional Office for Science and Technology in Africa (ROSTA) currently situated at Nairobi.

Recommendation 4

Reaffirming the importance of education and training as prerequisite for the development of capacity in informatics;

Observing the scarce opportunities for informatics education and training in the region;

Recommends that:

1. Governments should make deliberate efforts for establishment of informatics education and training facilities,
2. Where there are such education and training facilities (e.g. in Universities and other institutions) each government should encourage improvement and expansion of these facilities.

Recommendation 5

Realizing the pervasive nature of informatics as it is affecting all spheres of life,

Recommends that:

1. Development of curricula in informatics should take account of national needs of each country as well as the academic content required for an appropriate education,
2. UNESCO's efforts be intensified towards producing a modular curriculum that can be adopted in different communities but ensure that it does not provide for inferior informatics education in developing countries.

Recommendation 6

Considering the dynamic nature of informatics;

Realizing the importance of constant updating of knowledge in area of informatics;

Recommends that:

1. UNESCO and other international organizations strengthen their training support including seminars, workshops, short-term courses and conferences, in and out of African countries and facilitate the frequent participation of informatics specialists from African countries,
2. International non-governmental organizations (NGO's) in informatics such as IFEP extend their current awareness programme including seminars and workshops to Africa.

Recommendation 7

Realizing the vital role that National informatics societies can play in informatics education, professional ethics, dissemination and diffusion of information about current development in informatics education and technology;

Recommends that:

1. Non-governmental national informatics societies in each country of Africa be organized,
2. The national informatics societies should cooperate at regional level for the purpose of strengthening one another, sharing experiences, organizing regional conferences, seminars and workshops, as well as promoting transfer of lateral technology within the region,

3. UNESCO, OAU/STRC, IBI and NGO's such as IFIP encourage the formation and activities of such national and regional informatics societies.

Recommendation 8

Noting the haphazard nature of informatics development in the region;

Reaffirming the importance of well structured strategies and policies in informatics as highlighted at the SPIN Conference in 1978;

Recognizing the importance of informatics in political, economic, social, technological and industrial life of a country;

Recommends that:

1. Governments, as a matter of necessity and urgency, establish statutory bodies for the formulation of strategies and policies in informatics as well as monitoring of the implementation of such policies,
2. Each country should develop a national policy on education and training in informatics as an element of national strategies and policies for informatics,
3. Strategies and policies in each country should include elements geared towards self-dependence in the production and procurement of both informatics hardware and software,
4. Account should be taken of the impact of informatics on society in the formulation of the national strategies and policies.

Recommendation 9

Realizing the importance of information on informatics;

Anxious to ensure that adequate and up-to-date information is readily and continuously made available to all countries in Africa;

Recommends that:

1. UNESCO strengthens its information apparatus for diffusion and dissemination of information on informatics,
2. A compendium of institutions offering education and training in informatics in Africa be prepared and distributed by UNESCO,
3. A newsletter on informatics in Africa be established as part of the functions of the proposed informatics network,
4. UNESCO's UNISIST and OAU strengthen their collaborative effort in the establishment and expansion of the Data Bank on Technologies in Africa the pilot phase of which is located in the Computer Centre of the University of Ife, Nigeria, and that all countries take advantage of the Data Bank,
5. Information centres on informatics should be created in each country in association with national informatics societies,
6. Each country in the region should prepare a directory of computer installations, which should include quantitative data on current staff and projections applications, and equipment utilization. Such directory should be updated from time to time.
7. A compendium of national informatics societies in Africa be prepared by the secretariat of the proposed regional network

Recommendation 10

Reaffirming the importance of hardware and software maintenance for the effective utilization of informatics equipment;

Taking into account the considerable outlay, particularly in terms of appropriate manpower, needed to create a national maintenance capability;

Recommends that:

UNESCO, OAU and other inter-governmental organizations take all necessary steps to further the establishment of regional centres whose functions will include undertaking in whole or in part, hardware and software maintenance as well as training.

Recommendation 11

Noting the higher cost of both software and hardware informatics equipment in the region;

Taking into account that terms of contracts are always in favour of vendors in the region;

Observing that both high cost and unfavourable contractual terms result from absence of clear guidelines on procurement and statutory regulations on signing informatics contracts in the region;

Recommends that:

1. Each country should draw up guidelines on procurement of software and hardware with a view to controlling costs and contractual arrangements,

2. As a further assistance to countries in this region UNESCO organizes seminars and workshops in this region on contract negotiations and management in respect of procurement of both informatics software and hardware.

Recommendation 12

Conscious of the importance of rationalization in the application of informatics for development.

Recommends that:

A conference on application of informatics in Africa be organized by UNESCO in 1981.

Recommendation 13

Noting that a meeting of rapporteurs of different regional meetings of computer centre directors will be convened later in Paris.

Recommends that:

The rapporteur of this Regional Meeting of Computer Centre Directors in Africa represents the views of the meeting in the meeting of rapporteurs in Paris whenever it is convened.

List of Participants for Regional Meeting
Computer Centre Director in Africa

(14th - 19th April, 1980)

1. William D.S. Magambo
Data Processing Manager,
Computer Department,
Tanzania Electric Supply
Company Limited,
P.O. Box 9024,
DAR ES SALAAM,
Tanzania.
2. Professor P. E. Mugambi
Professor & Head Department
of Mathematics,
Department of Mathematics,
Makerere University,
P.O. Box 7062,
KAMPALA,
Uganda.
3. M. N. J. Lambert
Data Processing Manager,
Ministry of Finance,
Data Processing Unit,
P.O. Box 31998,
LUSAKA,
Tanzania.
4. P. E. Chilambe
Chief Data Processing Officer,
Ministry of Finance,
Data Processing Unit,
P.O. Box 30139,
BLANTYRE,
Malawi.
5. Signate Cheikh Oumar
Directeur Exploitation,
D.T.A.I.,
Ministere des Finances,
DAKAR,
Senegal.
6. Dr. O. Abass
Head of Department of
Computer Sciences,
University of Lagos,
LAGOS,
Nigeria.
Representing also OAU/STRC.

7. Samuel Olufunso Kumolu

Computer Facilities Coordinator,
Nigerian Steel Development
Authority,
P.O. Box 3034, SURULERE,
LAGOS,
Nigeria.

8. Jacob Gbago

Data Processing Manager,
West African Examinations
Council,
P.M.B. 1022,
YABA, LAGOS,
Nigeria.

Observers

9. S. R. Sijaona

UNESCO National Commission,
United Republic of Tanzania,
Ministry of Education,
DAR ES SALAAM,
Tanzania.

Secretariat of the Meeting

10. E. A. Owolabi

Programme Specialist,
Information Section,
SC/SER,
UNESCO,
7, place de Fontency, 75700,
PARIS.

Consultants (UNESCO)

11. Prof. R. J. P. Scott

Director,
Institute of Computer Science,
University of Nairobi,
P.O. Box 30197,
NAIROBI,
Kenya.

12. M. J. Shio

Consultant in Management,
Applications of EDP,
ESAMI,
P.O. Box 3030,
ARUSHA,
Tanzania.



AFRICAN UNION UNION AFRICAINE

African Union Common Repository

<http://archives.au.int>

Organs

Council of Ministers & Executive Council Collection

1981-02

Report of the Secretary-General on the Activities of OAU/STRC in Computer Sciences and Information Education

Organization of African Unity

Organization of African Unity

<https://archives.au.int/handle/123456789/9804>

Downloaded from African Union Common Repository