NATIONAL INFORMATION
AND INFORMATICS POLICIES
IN AFRICA

REPORT AND PROCEEDINGS
OF A REGIONAL SEMINAR
HELD IN ADDIS ABABA, ETHIOPIA
28 NOVEMBER – 1 DECEMBER 1988
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NATIONAL INFORMATION AND INFORMATICS POLITICS IN AFRICA
Report and Proceedings of a Regional Seminar

Addis Ababa, Ethiopia
28 November - 1 December 1988

International Development Research Centre (IDRC) &
Pan African Documentation and Information System (PADIS)

Shahid Akhtar
Editor

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Addis Ababa, Ethiopia
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E. Zwangobani
NCR Zimbabwe
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A. INTRODUCTION

This paper assumes that informatics is largely driven by computer technology. Consequently, developments in computer technology will be the focus of this discussion.

Computer applications can be characterised by two phases of development. "Phase I" applications automate clerical functions i.e., payroll, general ledgers, accounts, etc. These types of applications carry out what would otherwise constitute manual tasks. Computers carry out these tasks more efficiently and at lower cost. "Phase II" applications include on-line, real time interaction with the computer that bring about increased organisational effectiveness. These type of applications also integrate the computer into the decision-making process. These are referred to as decision support systems.

B. CURRENT STATUS OF INFORMATICS

a) Government

The Government, with large computer installations, is the largest user of informatics in Zimbabwe. Almost each parastatal has its own computer centre or is linked to one, while the majority of computer installations in Government have microcomputers which have made a widespread penetration in the last five or ten years. The applications range from "Phase I" to "Phase II", with the former confined to applications such as payroll and accounts.

The Government computer centres face a personnel problem, as it is difficult to attract the right calibre of qualified and experienced staff into Government. Having recruited them, it is even harder to retain such staff.

b) Private Sector

Currently, there are about thirty vendors of computer equipment in Zimbabwe.

The private sector is heavily computerised, with most applications falling into the Phase II category. The private sector is, however, less susceptible to the personnel problems experienced by the public sector. It is probably true to say that most private sector installations are based on microcomputers. Estimates put the number of micros that have come into the country in the last five years at between 3500 and 4000 - a number that is almost certainly on the low side - as a sizeable number of micros are hand-carried into Zimbabwe.

Phase II applications such as computer-monitored manufacturing and CAD are available in Zimbabwe, though on a small scale.
C. TELECOMMUNICATIONS

Telecommunications are provided by a parastatal called the Posts and Telecommunications Corporation (PTC). The PTC provides reliable data networks within cities. Data links between cities are of good quality wherever they are accessible to microwave channels; but those are expensive. Dial-up links are cheaper but tend to be less reliable.

The PTC provides good quality telefax and telex services, although many companies prefer using fax as an economical alternative to voice and telex. With a view to providing better quality of data communications, the PTC recently inaugurated Zimbabwe’s X-25 network — called "interim ZIMNET" — with a switching node in London. The "full ZIMNET" should be introduced in about two years.

The availability of data circuits country-wide has made it possible for banks to install country-wide computer networks. For example, CABS (Central African Building Society) has about 300 on-line terminals country-wide at all times, and about 700 devices including printers. Even branches in the rural areas are on-line.

D. SOFTWARE HOUSES

There are a number of companies that provide software services in Zimbabwe. Some of these may be small, one-person outfits. The larger companies provide both software and consultancy services. Some of the software houses have developed software which they are marketing internally and externally.

E. CONSULTANTS

A number of companies provide consultancy services ranging from programming to computer auditing. This area is led by the large multinational auditing companies such as Price Waterhouse, Arthur Young, Peal Norwick and Mitchell, etc. However, a number of younger consultancy companies are also available.

F. EDUCATION AND TRAINING

Although Zimbabwe is generally self-sufficient in its number of computer maintenance engineers, there is a shortage of manpower for managerial and business analyst positions.

A number of institutions provide training. The University of Zimbabwe offers composite degrees in Computer Science, plus one other subject, e.g. Economics, Business Administration, etc. While this
approach may be a reasonable one for a developing country, the problem
is that the University courses tend to be too theoretical, making
lengthy and expensive training courses in applications necessary when
the graduates later start working.

The Polytechnical Institutes offer courses leading to
undergraduate diplomas. Graduates from these courses tend to be more
practically oriented.

Both the University and the Polytechnics suffer from a lack of
trained teachers or trainers and must recruit practitioners to teach
part-time. The Polytechnics have even postponed the introduction of
additional courses due to this problem.

There are many privately owned training institutions in Zimbabwe.
Some of these are reputable and offer good value-for-money courses.
Others tend to exploit the young unemployed by offering them courses
which do not result in anything useful.

Computer education in schools is just beginning. The Government
has yet to decide exactly how this should be done.

G. POLICY AND KEY ACTORS

The federal ministries expected to play major roles in the
process of informatics policy formulation and implementation are:

a) Finance, Economic Planning and Development
b) Labour and Social Welfare
c) Industry and Technology
d) Trade and Commerce
e) Higher Education
f) Primary Education
g) Information, Posts and Telecommunications

H. THE COMPUTER IN ZIMBABWEAN SOCIETY

Although Zimbabwe has no integrated policy on informatics, it does
have regulations, procedures or sectoral policies dealing with specific
informatics issues. These will be presented below.

a) Centralization

The Government has followed a policy of centralisation of data
processing within the public sector. In practice, this policy means
that no ministry or department will be allowed to acquire its own
computer hardware/software without authorisation from the Centralised
Department of Central Computing Services. This policy extends to the creation of informatics posts in ministries and departments. The Federal Service Commission consults the Department of Central Computing Services prior to authorising the creation of any informatics posts in the ministries or departments. Needless to say, there are many officials who find ways and means to circumvent these regulations.

b) Acquisition of Hardware and Software

The ultimate control in the acquisition of hardware and/or software rests with the Ministry of Trade and Commerce through the granting of foreign currency allocations. Any organisation intending to purchase computer technology has to apply to this Ministry for a foreign currency allocation. The allocations are granted in line with the prioritisation of national development priorities. The Ministry of Trade and Commerce has an inter-ministerial committee which vets all applications. This committee examines the technical soundness of each application.

All applications for foreign currency allocations must follow a format laid down by the Ministry of Trade and Commerce. A considerable amount of detail has to be provided to establish a case for the allocation of foreign currency.

c) Telecommunications

The PTC has regulations which forbid the installation of data communications equipment on their circuits without their approval. The only exceptions are local area networks. In Zimbabwe, a local area network ceases to be such if it crosses a public thoroughfare. Devices such as modems and telefaxes have to be type-approved before they can be connected. Furthermore, no one is allowed to purchase modems independently - they can only be rented from the PTC.

d) Expatriates

The employment of expatriates is not encouraged by the Government. A work permit will only be granted to an expatriate if it can be established that there is no Zimbabwean capable of performing the indicated job. Work permits will only be granted if a Zimbabwean is identified/appointed to understudy the expatriate. On this basis, for example, it would be difficult for a non-Zimbabwean to get a work permit for a programming job.
I. INDUSTRIAL INFRASTRUCTURE

Zimbabwe has started assembling microcomputers from semi- and completely-assembled kits. One company has been given the go-ahead to manufacture through-hole plated single layer printed circuit boards. One of the leading electronics companies has designed a modem, the prototype of which is currently being tested by the PTC. Black and white TV sets are assembled in the country; so are telephones and switchboards. The Government, through the Ministry of Industry and Technology, is encouraging the establishment of viable electronic industries in the country.

The country currently faces serious shortages of computer stationery, and moves are underway to establish local production. In the meantime, computer output to microfilm is being used in Government to deal with the paper shortage.

J. CONCLUSION

Zimbabwe reflects an encouraging heightened awareness of the usefulness of information technology as a tool for development. This does not mean, however, that the policy-makers are adequately sensitised to the potential of information as an organisational resource. A lot of work still needs to be done to make policy-makers aware of this. Currently there are no visible links between the informatics and information sciences sectors. Only a few joint workshops have been held with no real encouraging output. A number of ministries are attempting to draft some policy recommendations, but these tend to be regulatory rather than promotional.