

*XVII IMEKO World Congress  
Metrology in the 3<sup>rd</sup> Millennium  
June 22–27, 2003, Dubrovnik, Croatia*

## **ESTABLISHMENT OF THE INSTRUMENTATION REPAIR AND SUPPORT SERVICES IN MALAWI - A HISTORIC BACKGROUND AND NATIONAL EXPERIENCES**

*Davlin M. D. Chokazinga*  
Malawi bureau of standards, Blantyre, Malawi

**Abstract** - Malawi is one of the developing countries in Africa, as such her economy is donor driven. Being a developing nation, there are a number of scientific institutions such as Universities, National Standards Body, Polytechnics, Medical Institutions, Government Agricultural Research Centres, Water Development, Research Institutes, Environmental Protection and Research Institutes, Industrial Research and Development Centres, Telecommunications Development and many more. These institutions house from simple to most complicated electronic equipment /instruments. Since 1964, when Malawi became independent, there has been a great acquisition of such instruments.

Over the years, instruments inventory surveys showed that Malawi had received a large variety of measuring instruments. However, notable was the fact that there was no local capabilities developed to repair and service such equipment. 1980's most of the institutes had most of their useful instruments broken down. In order to solve the problem first repair and maintenance contracts were concluded with the manufacturers, then Malawi technicians were trained to provide the necessary services. Neither of the methods could operate successfully and the national instrument inventory showed that about 50% of the available instruments in various institutions were non-functional, such that most of vital functions could not be undertaken locally. Hence there is need for the establishment of local capability which can provide the needed services on the site.

Keywords: measurements, repair services

### 1. INTRODUCTION/BACKGROUND

Malawi is one of the smallest countries in Africa bounded by Mozambique, on the West, South and South east, Zambia on the east and Tanzania on the North. Malawi was one of the British protectorate and only became independent in 1964. since then, several programmes were put in place to develop the country in Science and technology, industry and agriculture in an effort to empower Malawians economically.

To meet this noble objective, it was recognised that scientific research is a prime element in the creation of wealth for it brings about an increase in productivity of both labour and capital while ushering in a diversity of available goods and services of high quality.

In the 1980's, this factor was recognised by several Southern African countries. This prompted partners in development to donate a lot of scientific and electronic equipment to these countries. Malawi was among the countries in this regard.

In the early deliveries of the scientific equipment, Malawi was being requested to sign servicing and maintenance contracts with the equipment suppliers who were scattered across the world. At that time this was viewed as a viable option to maintain the instruments.

### 2. OPERATION OF SUPPLIERS' SERVICE CONTRACTS

The institutions in Malawi teamed up and signed service contracts with various instruments suppliers in an effort to share the costs of service engineers.

The contracts became more and more expensive as time progressed because:

- (1) Flight fares were being increased (dollar pegged)
- (2) Hotel rates (dollar pegged) were being increased
- (3) Car hires were also becoming too expensive
- (4) The cost of the contracts themselves were also dollar pegged, hence were also becoming expensive
- (5) Occasionally, incompetent engineers were being sent who then did more damage than good on the equipment.

This never worked successfully as the costs were becoming unbearable with time and again some institutes were unwilling to pay due to two factors:

- (1) Money was not available for this;
- (2) Sometimes due to limited time, the service engineer could not successfully service/repair all the instruments.

In the early 1990's, the idea of sharing costs for service was dropped and the institutions had to face costs individually. By 1991, the national instrument inventory showed that about 50% of the available instruments in various institutions were non-functional, such that most of vital functions could not be undertaken locally. In this way many organisations such as the Universities, Research institutions and many more were scaled down. Research activities slowed down and in some cases completely abandoned. Some institutions opted to send the instruments overseas for repairs. This became a very expensive and frustrating exercise, as in some cases the instrument would be sent back without being repaired, meanwhile the cost of freight and other administration have been paid.

This situation was recognised by the national Research Council of Malawi (NRCM) and the Council made efforts to train instrumentation technicians who would be responsible for servicing and maintenance. This, however, did not work.

Most institutions in Malawi therefore, opted to buying new equipment as servicing and repairing of old instruments was almost impossible in Malawi.

### 3. THE ISOLATED CASE OF MALAWI BUREAU OF STANDARDS

The Malawi Bureau of Standards was becoming hard hit by the above phenomenon. This is because, the Bureau's income approximately 50% comes from testing and certification. With the breakdown of instruments, some services were suspended and this meant that income was also curtailed in 1999.

### 4. ESTABLISHMENT OF INSTRUMENTATION SUPPORT SERVICES UNIT

In 1999, the Malawi Bureau of Standards, requested a mission to come to Malawi, to evaluate the need for the establishment of the National Instrument Repair and Support Services in Malawi to be based at the Malawi Bureau of Standards. The mission sponsored by the Physikalisch- Technische Bundesanstalt (PTB in Braunschweig, Berlin, in Germany) established the fact that there was a great need for the establishment of local capabilities in instrument service and repair. This was also

the same in Zambia, Tanzania and in Kenya the strengthening of the Instrument Department was suggested. The mission therefore recommended the establishment of the Nation Instrument Repair and Support Service in Malawi as a pilot project, which when successful, will be able to serve as a basis for the development of such services in Zambia and Tanzania and other SADC countries, which may need these services.

In the year 2002, UNIDO, Vienna, Austria, approved and sponsored a Project for the Development of Instrumentation Support Services in Malawi under the project no. US/MLW/01/155. The main objective of this project is to develop local capabilities for Instrument Support Services on measuring instruments in collaboration with the service stations of major suppliers of such instruments in South Africa.

This development has been a welcome move by the Southern African Development Community (SADC) Programme on Standardization, Quality Assurance, Accreditation and Metrology (SQAM). The development of this project is also viewed as a very important element for supporting internationally recognised conformity assessment infrastructure in the SADC region in addition to facilitating smooth operations of various research programmes especially in health, Agriculture and environment.

### 5. CURRENT STATUS

The Project is currently working very well and that about ten (10) pieces of equipment have been repaired and fifty (50) more have been trouble-shot awaiting spare parts to be repaired. The Malawi Bureau of Standards, the University of Malawi and the Geological Survey Department have been the main beneficiaries so far.

### 6. CONCLUSION

If the Unit will be well managed, Malawi will be able to revive most of the equipment broken down. This will in turn make scientific activities vibrant.

### REFERENCE

Maida J.H.A (DR), (1991) National Inventory of Scientific equipment, Government of Malawi.

---

**Author:** Davlin M.D.Chokazinga, Director of Technical Services, Malawi Bureau of Standards P.O. Box 946, Blantyre, Malawi, Telephone: +265 1 670 488, Fax: +265 1 670 756, E-mail: <davlin@mbs.malawi.net>