

Arthur C Clarke Institute for Modern Technologies

Annual Report – 2015

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Arthur C Clarke Institute for Modern Technologies
Katubedda,
Moratuwa.

16th March 2017.

Hon. Minister of Science, Technology & Research
Ministry of Science, Technology & Research,
3rd Floor, Sethsiripaya Stage 1,
Battaramulla.

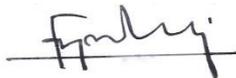
Hon. Minister,

Annual Report of the Arthur C Clarke Institute for Modern Technologies For the Period from 1st January to 31st December 2015.

In terms of section 40 of part vii of the Science & Technology Development Act. No. 11 of 1994, I have honour to submit herewith the Annual Report of the Arthur C Clarke Institute for Modern Technologies for the year 2015 along with,

- (a) A copy of the Audited Statement of Financial Performance
- (b) A copy of the Audited Statement of Financial Position and
- (c) Auditor General's Report and the Observations of the Institute on the same for being submitted for the approval of the Cabinet of Ministers.

Yours faithfully,



Eng. Sanath Panawennage
Director General & CEO
Arthur C Clarke Institute for Modern Technologies

Annual Report - 2015

1.0 General

1.1 Governing Legislation

The Arthur C Clarke Institute for Modern Technologies (ACCIMT) is a statutory corporation operating within the purview of the Ministry of Technology and Research. The ACCIMT was established on April 1, 1998 by the Science and Technology Development Act. No. 11 of 1994 of the Parliament of Sri Lanka, as successor to the Arthur C Clarke Centre for Modern Technologies (ACCMT) established by the Act No. 30 of 1984.

The functions of the Arthur C Clarke Institute for Modern Technologies as specified in the Act are as follows:

- (a) to accelerate the introduction of modern technologies to Sri Lanka by
 - (i) initiating, promoting and conducting research and development in the application of modern technologies
 - (ii) providing research and development support to the Government and private sector undertakings in the application of modern technologies and
 - (iii) training of personnel in modern technologies to meet the needs of the Government and private sector undertakings and
- (b) to promote future studies

The areas of modern technologies include Communication and related Sciences, Information Technology, Electronics, Micro-electronics, Space Technologies, Robotics, Photonics and new materials.

1.2 Vision

To be a leading innovation centre for Modern Technologies in the region

1.3 Mission

To develop, foster and facilitate the domestic base of modern technological capabilities through innovation, R & D, training, industrial services and international collaboratio

1.4 Governing Ministry

The ACCIMT, (formerly known as the ACCMT) was established under of the Ministry of Higher Education in 1984 and was brought under the purview of the Ministry of Industries, Science and Technology in 1990.

In Augsut 1994 the ACCIMT was asigend to the Ministry of Science and Technology. With the establishment of the new Ministry for Economic Reform, Science and

Technology, in December 2000, the ACCIMT was transferred under its purview. In 2004, the institute came under the newly constituted Ministry of Science and Technology.

In 2010 the Ministry of Science & Technology has renamed as the Ministry of Technology & Research. The ACCIMT continues to function under the newly formed Ministry of Science, Technology & Research.

1.5 Members of the Board of Governors from Jan. 2015 -February 2015

1.	Prof. H Y Ranjit Perera	Chairman – Board of Governors
2.	Eng. Sanath Panawennage	Director General & CEO - Member, Board of Governors,
3.	Prof. (Mrs) I J Dayawansa	Member, Board of Governors
4.	Prof. A K W Jayawardena	Member, Board of Governors
5.	Prof. Chandana Jayaratne	Member, Board of Governors
6.	Mr. P Algama	Member, Board of Governors
7.	Mr. Muditha Prasanna Jayasinghe	Member, Board of Governors
8.	Prof. A Senarathna	Member, Board of Governors
9.	Mr. M A Salgado	Member, Board of Governors

Members of the Board of Governors from March 2015 onwards

1,	Prof. Kemal Deen	Chairman – Board of Governors
2.	Eng. Sanath Panawennage	Director General & CEO - Member, Board of Governors,
3.	Prof. A K W Jayawardena	Member, Board of Governors
4.	Prof. Chandana Jayaratne	Member, Board of Governors
5.	Prof. (Mrs) Dileeka Dias	Member, Board of Governors
6.	Ms. Lakshmi Jeganathan	Member, Board of Governors
7.	Prof. S J B A Jayasekera	Member, Board of Governors
8.	Mr. Naresh Adikaram	Member, Board of Governors (up to October)
9	Prof. P S M Gunarathna	Member, Board of Governors
10.	Mrs. S A C Kulathilake	Member, Board of Governors
11.	Mr. Ashley de Vos	Member, Board of Governors
12.	Mr. K.M.C. Fernando	Member, Board of Governors (w.e.f. November)

2.0 Executive Summary

During the year under review, the institute managed to make substantial progress in its overall performance in the areas of research and development, technological services, training and consultancy services as well as in contributing to overall national technological capacity development in its domains of specialization, whilst continuing to be affected by contain two major constraints namely the difficulties in recruitment and retention of core staff in view of inadequate remuneration, and the predominantly procedural-compliance-oriented rather than results-oriented regulatory pressures.

Notable advanced design and development solutions offered during year 2015 include design and delivery of True RMS Voltage Recorders to Public Utilities Commission of Sri Lanka, collaborative development of fully Automated Hospital Bed with the BIOMED International (Pvt.) Ltd, development and installation of CCTV Security Surveillance Systems and Water Treatment Plant Pumping Control SCADA System upgrade at Galle, Hapugala, to National Water Supply and Drainage Board. Further deep diagnostics and advanced hardware recovery of Class M9 Locomotive IGBT driver modules of Sri Lanka Railways and few other sophisticated electronic systems were carried out for number of clients. Apart from that test and measurement and instrument calibration services were expanded substantially compared to previous years.

In the area of internal technical infrastructure capacity building the institute made significant achievement by establishing a new facility to measure photometric characteristics of CFL and LED light sources, which include AC and DC domestic and automobile lamps. Compliance against following two Sri Lankan National standards, SLS 1225:2002 and SLS 1231 Part 1 2002 for energy efficiency of self ballasted lamps and performance of lamps can be tested using this facility.

As the National Agency for capacity development in Space Technologies and Applications the ACCIMT spearheaded the Sri Lanka's admission to the United Nations apex body on space - United Nations Committee on the Peaceful Uses of Outer Space (UNCOPUOS). Sri Lanka was admitted to the full member status of UNCOPUOS within 8 months of becoming an observer in February 2015. The matter was initiated and driven by the Arthur C Clarke Institute for Modern Technologies (ACCIMT) with the Ministry of Foreign Affairs duly contributing on the formalities. The country's admission to this apex body would mean its active involvement of the policy, regulatory, legal as well as technology development matters pertaining space at the highest

level, thereby both safeguarding the national interests in space activities in the international arena whilst spurring the development of national capabilities in space technologies and applications.

The project launched inteaming up with United Nations Economic and Social Commission for Asia & Pacific (UNESCAP) to develop national capacities, to use space technologies for effective drought monitoring and early warning through the long-standing Regional Space Applications Co-operative Programme for Sustainable Development (RESAP) is in progress. The programme aims to build resilience of the countries in the region against agricultural drought and such other natural phenomena resulting in economic losses to such countries. The ACCIMT has been successfully driving the pilot project, as the lead agency with seven other relevant national agencies namely, Natural Resource Management Centre of Department of Agriculture, Department of Agrarian Development, Irrigation Department, Mahaweli Authority of Sri Lanka, Department of Meteorology, Department of Census and Statistic and Disaster Management Centre participating in the project. Further the institute in collaboration with UNESCAP organized 4 days expert training program on implementation of the UNESCAP & ACCIMT pilot project on space technology applications on Drought Monitoring and Early Warning from February 24th to 27th of 2015 in Sri Lanka.

The preliminary steps were taken for the development of a National Hub for Receiving and Distribution of Earth Observation Satellite Data. The objective of this project is to make Remote Sensing data available to other organizations at affordable costs and thereby promote use of space technology for the development of the country.

The key in – house research, design and development projects which were initiated or continued during the year included development of Tea Quality Grading and Colour Separating System, Fleet Tracking and Information Logging System, Library Process Automation using RF-ID and Thermal Cut off Switch for hot cupboards.

Research projects undertaken in the area of Space technology applications and RS/GIS include, Forest cover Monitoring and Mapping, a collaborative work with the Forest Department and Identification of Spectral Signatures of Rice Verities in Sri Lanka in collaboration with Rice Research and Development Institute, Bathalegoda, Further a research paper titled "An Optimized Orbit Design and Determination for a Small Island for a Remote Sensing Nano satellite Mission"

was presented at the Joint Conference, 30th ISTS (International Symposium on Space Technology and Science), 34th IEPC & 6th NSAT on 8th July in Kobe, Japan.

In addition, the Space Application Division of the Institute was also involved in research work in Astronomy and one of the projects, study short period Delta Scuti type variable stars was undertaken in collaboration with University of Peradeniya. The internal research projects in Astronomy undertaken by the division included Spectroscopic & Photometric Study of Supernova SN 2014J, a research paper on this study was written and to be submitted for Institute of Physics for annual sessions and Study solar flares using CALLISTO.

A number of information system development projects were also carried out by the Information Technology Division, the client being mainly the national universities and other public sector agencies.

During the year, the institute maintained and enhanced the delivery of its services to the industrial clientele to cope up with the substantial demand for industrial services the institute offer namely electronic test and measurement equipment calibration, performance testing of various types of electronic equipment, accessories, module, Lead acid batteries and surge protective devices, testing and measurement services provided for the communication and broadcasting sectors etc., which include issue of 310 performance test reports and 139 of calibration reports apart from the considerable number of consultancies and advanced hardware recovery assignments carried out.

Further on the training domain the institute conducted four types of short term continuous professional development (CPD) programmes on highly specialized technological areas such as Modern Electronic Test and Measuring Instruments with Digital Emphasis, Modern Electronic Components, Embedded Control Systems and Programmable Logic Controller mainly for the benefit of engineers, technologists and other professionals from public and private sector organizations and these courses continued to enjoy substantial demand from the industry. The total number of professionals who attended such courses during the year was approximately 160. In the meantime the institute also provided training opportunities through its intermediate training courses.

The government grants received during the year for capital and recurrent expenditure were approximately Rs.63 million and Rs.111.5 million respectively. Total revenue generated by the

institute was approximately Rs.17.5 million which amounts to approximately 16% of the total recurrent expenditure.

3.0 Divisions of the Institute

- Electronics & Micro Electronics Division
- Communications Division / Robotics Division
- Industrial Services Division
- Space Technology Application Division / Space Technology Division / Astronomy Division
- Information Technology Division
- Administration and Human Resources Division
- Finance Division

4.0 Research Programmes and Technological Services

4.1 Industry-Sponsored R&D Projects and other Technical Services to the Industry

The institute has made substantial contributions to the industry through

- R & D projects undertaken as per specific requests by the industry
- Test & Measurement services
- Equipment calibration / Performance testing and recovery services
- Information systems development projects
- Consultancy assignments, and
- Contractual maintenance of systems and facilities.

4.1.1 Industry-Initiated Research & Development Activities

4.1.1.1 True RMS Voltage Recorders to Public Utilities Commission.

True RMS Voltage Recorders to Public Utilities Commission were designed and developed by the Electronic Division.

This design is a state of the art display and logging system designed to monitor and record the R.M.S. Voltage of 230V AC single phase supplies for voltage fluctuations in the range 160V-270V R.M.S, where the unit is supplied with a user friendly software interface and a data cable to download the data of a given recording period. This design has the capability of storing data upto 10,000 records.

The product is designed to stand IP- 65 standard ingress protection. 05 units were completed and handed over to Public Utilities Commission.

4.1.1.2 Automated Hospital Bed to Bio - Med.

The project is to automate the manual beds used in the hospitals with an affordable cost. With this development, it is possible to reduce the strain placed on the hospital staff to take care of a patient.

This automated bed has 4 functions (back rest tilting 0-30°, knee rest tilting 0-35°, HI-LOW:51cm-70cm) with electrically operated remote controller.

The product was planned as an import substitution and arrangement are being made to sign an agreement with Bio-Med International Pvt Ltd., for manufacturing the product in Sri Lanka

4.1.1.3 Two Industrial wall clocks to Sri Lankan Airlines.

This project was to design, develop and install two 560mm x 190mm LED wall clocks to Sri Lankan Airlines

4.1.1.4 Development of CCTV security surveillance systems to National Water Supply and Drainage Board (NWSDB)

This project was to design, develop and install security surveillance systems at four NWSDB sites namely Ambatale, Biyagama, Thelawala and Ratmalana. The installation work at the Ratmalana site was completed including a project extension (additional PTZ cameras) and the rest three site more than 60% of the work completed. The project is undertaken by the Communication Division.

4.1.1.5 Galle Hapugala water treatment plant pumping control SCADA system upgrade

Based on a request received from the Galle regional NWSDB office, this project was commenced to add more backup systems to the existing SCADA (Supervisory Control and Data Acquisition) system. The work was successfully completed and the treatment plant pumping control functions currently operational. The project is undertaken by the Communication Division.

4.1.1.6 Deep diagnostics and Advanced Aardware Recovery of class M9 Locomotive IGBT driver modules of Sri Lanka Railways

On the request of Sri Lanka Railways 32 IGBT driver units were successfully fault diagnosed, recovered and field tested and submitted to be installed into two locomotives of type Alstom. This advanced hardware recovery exercise included extraction of design details through reverse engineering exercises and later development of inhouse fault diagnosis test system for several fault type, before recovering the actual modules.

4.1.2 Test and Measurements, Hardware Recovery and Consultancy Services

4.1.2.1 Test & Measurement Services of Power Electronics Measurement Laboratory- Electronics & Microelectronics Division

During the year, the division issued 310 performance test reports mainly for testing of surge protective devices (SPDs), Residual Current Circuit Breakers (RCCBs), Miniatures Circuit Breakers (MCBs), Socket Outlets, Switches, LTEs, PSTN Phones, Routers and Batteries. Further division carried out safety testing & power quality measurement of electrical/ electronic products apart from the power quality measurements undertaken at customer locations.

The key customers include Orel Corporation, Micro Power Engineering, Hyperjet Technologies, Kevilton Electrical Products, Sri Lanka Standards Institution, Douglas and Sons, Epic Lanka (Pvt) Ltd, Sri Lanka Telecom PLC, NETGEM SINGAPORE PTE LTD, Sri Lanka Ports Authority, Hyperjet Technologies (Pvt) Ltd, Shashira International, Siyol International, Huawei Technologies, Sala Enterprises, E B Creasy, Tyre House Trading, Brown & Company PLC, Yucon Lanka, Samson Rubber Industries, Associated Motorways, K.D.Imports, Samudhi Trading Company, Power Wheels, Richard Peiris Tyre Company, Reliance Lanka, SML Frontier and Associated Battery Manufacturers.

4.1.2.2 Troubleshooting/Repair Services and Consultancy Assignments Carried Out by Electronics & Microelectronics Division

During the year under review 09 major consultancy and hardware recovery assignments were undertaken by the Electronics and Microelectronics division. Apart from that 03 miscellaneous jobs were performed.

Key hardware recovery assignments include, oscilloscope to University of Colombo, transformer tap indicator to Ceylon Electricity Board, torque controllers to Thermo Plastics (Pvt) Ltd, flue gas analyzer to National Cleaner Production Centre, oscilloscope to Rahula College, electronic analytical and precision balance to Sri Lanka Standards Institution, optical transmitter to University of Ruhuna, foss tecator digester and polarimeter to Sri Lanka Standards Institution, power meter to National Cleaner Production Centre, DC power supply to University of Ruhuna and 3 Phase Power Quality Analyzer to National Water Supply and drainage board.

4.1.2.3. Test and measurements and hardware recovery services and consultancy – communication Division

Under test and measurement services Radio Frequency related and cable characteristic measurement jobs were carried out to the clients namely, VIS broadcasting, Kelani Cables, Cedar International (pvt) Ltd, Medi Equipment Pvt. Ltd., Ceylinco Insurance Ltd.

Hardware recovery activities is concerned, repairing of line tracers, leak and metal detectors for National Water Supply and Drainage Board were undertaken during the year under review.

A consultancy project on CCTV installations to Peoples Bank branches was completed including specification preparation, evaluation and certification

4.1.2.4 Instrument Callibration Service /Performance test services offered by the Calibration Laboratory – Industrial Services Division

During the year, the division issued 139 Calibration Certificates / performance test reports mainly for Analogue and Digital Multimeters , Digital Clamp Meters , Power Analyzers , Digital Oscilloscopes, Digital PSC Loop Testers, Digital Insulation Testers, Digital RCCB Testers, With standing Voltage tester,Appliance Testers and other miscellaneous Lab Instruments. The key customers include Kohoku Lanka (Pvt) Ltd LTL Transformers (Pvt) Ltd, Ceylon Electricity Board -Kukuleganga Power Station & Hydro Electrical Branch , Aquinas University College ,Colombo Dockyard PLC,David peiris Motor Company Ltd,Elcardo Industries (Pvt) Ltd,Synergy Engineering (Pvt) Ltd, Electro Metal Pressings (Pvt) Ltd,SGS Lanka (Pvt) Ltd ,David Pieris Motor Co. Ltd,Lanka Harness Co (Pvt) Ltd .

4.1.3 Warranty Maintenance Services

4.1.3.1 Mobile Operated Vending Machine

The above system designed and installed in 2014 was maintained for successful operation during the year under review.

4.2 In-house R & D Projects

4.2.1 Thermal Cutoff switch for hot cupboards

As part of infrastructure development, a thermal cutoff switch for hot cupboards used in performance testing of products was developed by the electronics division.

4.2.2 Data Loggers

As part of infrastructure development, data loggers were developed for monitoring activities of data by the electronics division

4.2.3 Tea Color Grading System

The product aiming for a low cost with features capable of colour separating the tea process final stage, required by the low grown tea factory was initiated by ACCIMT sometime back. The lack of expertise for the elcetric development was selected to be

outsourced and selected a party, while the mechanical systems developed. The agreement was prepared to be signed by the early next year with assurance of submitting a complete mechanical system.

4.2.4 Fleet tracking and information logging system

A project proposal was submitted to Sri Jayawardenapura General Hospital to display and log the vehicle operational locations as records for management purposes required by the transport sub department together with software and hardware information logging features. The system is to be designed with GPS technology based hardware and google maps. The project was accepted and the basic prototype system features tested.

4.2.5 Library Process Automation using RF-ID

The RF-ID technology based tagging for books and personnel is to be applied for automating the library functions, with the necessary reading devices and the development of the software for Management Information Systems (MIS)

All firmware items ready for the software testing purposes. Once the product is completed as a pilot library at ACCIMT, applications exist for all libraries in the government sector, institutes, universities etc.

4.3 Reconstruction of the telescope room

The telescope room of ACCIMT which houses the largest optical telescope in Sri Lanka, GOTO 45 cm telescope, has been in dilapidated condition and the reconstruction work has been undertaken by the Buildings Department. Construction work was in progress.

5.0 Internal Capacity Building

5.1 Improvements to Power Electronics Measurement Laboratory - Electronics & Microelectronics Division

Development of Battery testing facilities

The electronics division procured an universal battery tester which is capable of carrying out endurance testing of batteries.

5.1.1 Establishment of Light Measurement Facility – Industrial Services Division

Establishment of Light Measurement Facility comprising of Light Measurement Laboratory, Lamp Aging Rack system and the container office was completed during the year. The facility capable of testing electrical and photometric characteristics of

CFL and LED lamps would be beneficial to manufacturers and imprints and finally to general public.

6.0 Training Programmes Conducted by the Institute

6.1 Continuing Professional Development (CPD) Training Programmes for professionals

6.1.1 Modern Electronic Test & Measuring Instruments with Digital Emphasis

One CPD course was conducted for 21 participants earning an income of Rs. 315,000/=. The participants were given the knowledge and practical experience on usage, applications, advantages and limitations of modern electronic test and measuring instruments such as oscilloscopes, spectrum analyzers, etc.

6.1.2 Modern Electronic Components

One CPD course was conducted for 13 participants earning an income of Rs. 195,000/=. The participants were given the knowledge and practical experience on modern electronic component families both analog and digital together with data conversion components.

6.1.3 Embedded Control Systems

One CPD programme conducted for 22 participants from the industry community.

6.2 Basic and Intermediate Level Technical Training Programmes

6.2.1 Practical Electronic Course

This regular course designed for the general community including students and school leavers. The course was successfully undertaken for the 22nd time with 46 participants attended, which provides participants with practical knowledge on electronics for design and repair work exposure.

6.2.2 Programmable Logic Controller

Three Programmable Logic Controller (PLC) Courses were conducted for the benefits of 93 participants consisting of engineers, technicians, managers attached to various institutions and youth providing knowledge on programming PLC and practical experience. Total revenue generated from the courses were Rs. 1,302,000/=.

6.3 Science & Technology Popularization and Information Dissemination Programmes

6.3.1 Astronomy & Space science Popularization Programmes

6.3.2 Night Sky Observation Camps

With the idea of popularizing astronomy education in the country, night sky observation programs are organized in rural areas where clear dark night skies are available. During the observation program the participants are able to view planets, nebulae, galaxies and deep sky objects through the portable modern astronomical telescopes taken to the observation site. An introductory level lectures in astronomy are also delivered during the program. Night Sky Observation camp and astronomy workshop were conducted at the Rajarata University. About 200 undergraduates were benefited from this event.

6.3.3 Astronomy Lectures for School Children, University Students and Sri Lanka Forces

1087 persons visited ACCIMT and participated in the astronomy lectures and telescope demonstrations.

6.3.4 Water Boost Rocket Competition -2015

With a view to promoting space science activities among school children ACCIMT organizes a water rocket making workshop and a water rocket competition annually. The winners of the local water rocket competition will get the opportunity to participate in the international water rocket competition organized by Asia-Pacific Regional Space Agency Forum (APRSAF). Sri Lankan team won the 2nd place at the 22nd session of APRSAF Water Rocket Event which was held in Bali, Indonesia on 28-29 November, 2015.

6.3.5 Poster competition organized by APRSAF

The Poster Making Contest aims to engage elementary students aged eight (8) to eleven (11) years old in creative presentation and learning of space science. Organized local Poster competition under the theme of “Careers in Space” and selected the best 3 posters for the international competition held during the 22nd session of the Asia-Pacific Regional Space Agency Forum (APRSAF-22), Bali, Indonesia, December 1-4-2015.

6.3.6 Astronomical Information and Space Science Dissemination for Schools

Information on astronomy and space science were disseminated among 22 students. Two school children visited ACCIMT and obtained information for their A/L individual projects.

7.0 Research & Publications

7.1 In-house Research Projects in Astronomy

7.1.1 Spectroscopic & Photometric Study of Supernova SN 2014J

SN 2014J type 1a supernova, a cataclysmic explosion of a star, occurred in the M82 galaxy in January 2014. Photometric and spectroscopic data obtained from international observatories were processed and analyzed to determine the expansion velocities and the other parameters of the supernova. A research paper on this study was written and to be submitted for Institute of Physics for paper publication.

7.1.2 Study solar flares using CALLISTO

The Compact Astronomical Low-cost Low-frequency Instrument for Spectroscopy and Transportable Observatory (CALLISTO) is a system which has been setup at ACCIMT to detect and record the radio bursts during solar flares. Analyzing of past data recorded on the CALLISTO system is completed. Research paper is being written.

7.2 Collaborative undergraduate level Research projects in astronomy

7.2.1 Study short period Delta Scuti type variable stars (Collaborative research with University of Peradeniya)

Delta Scuti stars are pulsating variable stars of spectral types A to early F with luminosity classes V to III. Delta Scuti type variable star SZ Lyn was studied. Analyzed photometric data obtained from 1.2m Cassegrain telescope at Mount Abu Observatory, Gurushikar, India. Average density of the star and harmonics of the pulsations were determined. Thesis was submitted to the university.

7.3 In-house Research in Space Technology

A research paper titled "An Optimized Orbit Design and Determination for a Small Island for a Remote Sensing Nano satellite Mission" was presented at the Joint Conference , 30th ISTS(International Symposium on Space Technology and Science) , 34th IEPC & 6th NSAT on 8th July in Kobe, Japan.

7.4 Research in Space Technology Applications

7.4.1 Forest cover Monitoring and Mapping

The objective of this project is to extract deforested areas of the forests in the country using satellite images. Downloaded Landsat 8 satellite data for 2002, 2013, 2014 and 2015 and processed the data. Results were validated with ground truth data of the Wilpattu National Park. Research paper is being written on the findings. The project will be carried out as a collaborative work with the Forest department.

7.4.2 Identify Spectral Signatures of Rice Verities in Sri Lanka – in collaboration with RRDI at Bathalegoda

Across any range of wavelengths, the percent reflectance values for landscape features such as water, sand, roads, forests, etc. can be plotted and compared. Such plots are called “spectral response curves” or “spectral signatures.” Differences among spectral signatures are used to help classify remotely sensed images into classes of landscape features since the spectral signatures of like features have similar shapes. The objective of this research is to obtain the spectral signatures of the rice verities in Sri Lanka and make use the spectral signature to classify the satellite images. Spectral data for 15 different paddy verities were acquired using Spectroradiometer at Rice Research and Development Institute (RRDI). Spectral data is being processed and analyzed.

7.5 ACCIMT Library

ACCIMT Library and Information Division functions as a special library and consists a fair collection of books, periodicals and other educational materials in the fields of Communications, Information Technology, Electronics, Photonics, Robotics and Space Technology.

The aims and objectives of the library are to facilitate and provide information to professionals and personnel engaged in Research and Development projects, graduates, postgraduates, students, etc.

7.5.1 Library Collection

The Library has a fair collection of very expensive specialized reports and publications with frequent updates obtained from reliable and independent organization both in and out of the country. The Library consist of handbooks, data libraries, user surveys, product guidelines, application notes, design-oriented text books, state-of-art reviews, encyclopedias, dictionaries, directories, VHS, VCDs, DVDs, CD-ROM data bases, standards etc. Also, The specific magazines allocated to Communication, Information Technology, Space Technologies, Electronics are available in the periodical section.

Total collection:-

Books	- 8879
CD-ROMs	- 745
Video Tapes	- 368
Audio Tapes	- 94
VCDs	- 130
DVDs	- 87

New Acquisitions

Books	- 70
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7.5.2 Services

- (a) Lending & Reference Facilities:- ACCIMT staff and trainees
- (b) Reference Facilities: - Visiting lectures and instructors, graduate and Postgraduate student engage in projects, Continuing Professional Development (CPD) course participant, and Personal and Institutional membership.
- (c) Reader Services:- Photocopying service, Scanning facility, Internet facility, Electronic Library facility, Inter library loan, Current Awareness Services, Information and document supply service, and Online catalogue.
- (d) Service to Community:- Membership offers for the professionals in the public and private industrial sectors, Information & document supply service for professionals scholars (a. Industrialists. b. University academic & researchers. c. General public with a special interest.), providing display items for exhibitions and Astronomy promoting Programs.

7.5.3 Open Public Access Catalogue (OPAC) via Internet (<http://www.accimt.ac.lk>).

Information about the collection can be accessed through the ACCIMT Library on-line catalogue from the internet (www.accimt.ac.lk). (computers are also provided for our users to search and access the library collection via our LAN. The user can search for materials by Author, Title or Key words.)

8.0 Special Events and Exhibitions

8.1 Special Events

8.1.2 Arthur C Clarke Memorial Lecture – 2015

A memorial lecture was organized on 19th of March 2015 at the Bandaranayake Center for International Studies to mark the seventh anniversary of the demise of Sri Lankabhimannya Sir Arthur C Clarke, the founder patron of the institute. The lecture was delivered by Prof. Guo Huadong, Director General, Institute of Remote Sensing and Digital Earth (RADI) of the Chinese Academy of Sciences (CAS).

The lecture, titled “China’s Earth Observation Systems and Applications”, was attended by a large audience of policy makers, senior public officials, engineers, scientists, academic and other professionals.

8.1.3 ACCIMT School Day and Industrial day

In-line with the Science Week activities initiated by the Ministry of Technology and Research, the ACCIMT organized an exhibition demonstrating Research & Development projects and Industrial Services carried out by the institute on 12th of November 2015.

Apart from the exhibition the event comprised programmes such as lectures and documentary sessions on astronomy and space technology applications. Around hundred and fifty school children from four schools attended the event.

The industry day provided opportunity for industrialists, technical service providers and other organizations to get to know research, development and technical capabilities as well as testing and calibration facilities of the ACCIMT.

8.1.4 Agricultural drought monitoring and early warning system (UN-ESCAP Pilot Project)

The ESCAP is implementing the Regional Cooperative Mechanism for Drought Monitoring and Early Warning project in the overall context of building the resilience to the agrarian economies of Asia and the Pacific region. Sri Lanka has been selected as a pilot country to implement this project. Arthur C Clerk Institute, the nodal agency of Sri Lanka Government, has been working with ESACP secretariat for implementing the pilot project. While implementing the project, it is intended that the institute should be enabled to have the close collaboration with the service nodes established in China and India as the part of the Regional Drought Mechanism.

The project has the following components:

- (i) Enabling Sri Lanka to access the real time satellite data/products during the drought season starting from May/ June to Sept/Oct.
- (ii) Developing drought specific applications including the customized drought products and indices addressing the unmet needs of the key line ministries/agencies,
- (iii) Organizing specialized capacity development training for the key officials from the line ministries/agencies.

ACCIMT Organized 4 days expert training program on implementation of the UNESCAP & ACCIMT pilot project on space technology applications on Drought Monitoring and Early Warning – 2015 Feb 24th to 27th, Galkissa.

Satellite data were downloaded and calculated the drought indices such as NDVI, NDVI Anomaly and NDWI. Validation of the results using the UN-DMC disaster data repository called “Disinventor” is in progress.

8.2 Exhibitions

The ACCIMT participated for Techno 2015 held from 09th to 11th of October 2015 at the BMICH.

8.2.1 National Hub for Receiving and Distribution of Earth Observation Data

The objective of this project is to make the Remote Sensing data available to other organizations at affordable costs and thereby promote use of space technology for the development of the country. There are 3 phases of the project.

1st Phase: Procure and setting up computer servers to make available the existing satellite data.

2nd Phase: Setting up a virtual ground station (in 2016)

3rd Phase: Setting up a ground station (Future)

Procurement and initial setting up of blade Computer servers and software is completed. Setting up of Geo Portal testing environment is in progress.

8.3.1 National Astronomical Observatory (NAO)

Project proposal for setting up a National astronomical observatory has been submitted to the ministry for getting source of funding. A potential location to setup the NAO in the summit of mountain range near Dambulla has been identified. Two other alternative locations are being sought.

8.3.2 Project proposal for “Exploratorium at Sri Lanka Planetarium” has been developed in collaboration with the Sri Lanka Planetarium and submitted to the Ministry.

9.0 Human Resources Development

9.1 Staff Position

Cadre positions approved by the Department Management Services for the ACCIMT were 177. Out of that 81 positions were filled and 96 positions remained vacant. Majority of vacancies were in technical fields where prospective employee required basic qualifications such as an engineering degree or equivalent professional qualifications.

Two (2) new appointments were made during the year 2015. i.e a Research Engineer and a Driver.

Sixteen (16) employees resigned during the year. They were seven (7) Research Engineers (Including one Contract Research Engineer) one Research Scientist, one Software Engineer, four (4) Technical Assistants, one Management Assistant and two (2) Office Aides.

Two (2) employees were retired. They were Deputy Director General (Administration & Finance) and a Driver.

During this year two Contract appointments were made and no promotions or Internal Recruitments were made.

Numbers of staff Grade employees were 46 as at 31st December 2015. Eighteen local training opportunities were provided to the staff of ACCIMT.

Public Sector Entity – Statement of Financial Position as at 31st December 2015

	NOTE	2015 Rs.'000 s	2014 Rs.'000 s
ASSETS			
Current Assets			
Cash and Cash Equivalents	2	73,859	64,007
Short Term Investments	2a	19,154	18,158
Trade and Other Receivables	3a&b	39,798	41,980
Less			
Provision for Bad Debts		(5,019)	(5,354)
Inventories / Stocks	4	9,392	9,309
Prepayments	5	2,496	2,052
		<u>139,680</u>	<u>130,152</u>
Non - Current Assets			
Investments			
Property , Plant and Equipment	6	198,548	168,276
		<u>198,548</u>	<u>168,276</u>
Work - in - Progress-Construction	7	12,730	12,369
		<u>12,730</u>	<u>12,369</u>
Total Assets		<u>350,958</u>	<u>310,798</u>
LIABILITIES			
Current Liabilities			
Payables	8	10,848	12,539
Accrued Expenses	9	4,038	3,236
		<u>14,886</u>	<u>15,775</u>
Non - Current Liabilities			
Deferred Income	10	10,711	10,448
Retirement Benefit Liability	11	27,131	24,500
		<u>37,842</u>	<u>34,948</u>
Total Liabilities		<u>52,728</u>	<u>50,723</u>
Net Assets		<u>298,230</u>	<u>260,075</u>
NET ASSETS / EQUITY			
Capital contributed by Govt	12	325,201	290,622
Reserves		71,892	70,553
Accumulated Surplus/(Deficit)		(98,863)	(101,100)
Total Net Assets / Equity		<u>298,230</u>	<u>260,075</u>

The Accounting policies on pages 7 to 13 and Notes on pages 14 to 38 form an integral part of these financial Statements. The Board of Directors responsible for the preparation and presentation of these Financial Statements. These Financial Statements were approved by the Board of Directors and signed on their behalf.



Chairman



Director General



Senior Deputy Director (Finance)

Public Sector Entity Statement of Financial Performance for the Year Ended 31st December 2015

	2015	2014
	Rs.'000	Rs.'000
Revenue		
Recurrent Grant	111,500	91,250
Other Revenue	17,376	37,987
Amortization	23,200	17,089
Total Revenue	152,076	146,326
Expenses		
Personal Emoluments	79,679	73,048
Travelling Expenses	3,270	2,750
Supplies & Requisites	6,948	8,859
Depreciation	23,200	17,089
Repairs & Maintenance	6,689	4,462
Transportation, Communication Utility & Other Services	16,466	15,179
Project Expenses	4,832	16,807
Other Operating Expenses	1,480	885
Total Expenses	142,564	139,079
Surplus / (Deficit) for the period	9,512	7,247
Income & Expenditure Appropriation Account for the Year Ended 31.12.2015		
Surplus / (Deficit) for the period	9,512	7,247
Transfer of surplus out of generated funds from PC a/c	(6,363)	(11,945)
Net Surplus/(Deficit) for the period	3,149	(4,698)

Detailed Financial Performance for the Year Ended 31st December 2015

2014		2015	
Rs.		Rs.	
	<u>Revenue</u>		
91,250,000.00	Govt. Grant - Recurrent		111,500,000.00
8,158,725.00	Course Fees	4,863,700.00	
17,015,522.05	Project Income / Consultancy Income	9,013,818.75	
441,388.94	Interest Income on Treasury Bills	416,842.37	
348,396.20	Interest Income	339,890.23	
222,000.00	Tender Deposits	549,000.00	
2,868,284.16	Sundry Income	2,192,252.96	
189,497.13	Grant Income		
594,842.00	Sponsorship Income		
8,148,450.00	Income from Disposal of Fixed Assets		
17,089,284.54	Amortization	23,200,087.85	40,575,592.16
<hr/>	Total Revenue	<hr/>	<hr/>
146,326,390.02			152,075,592.16
	<u>Expenses</u>		
	Personnel Emoluments		
47,084,532.40	Salaries & Wages	57,869,532.91	
1,240,778.55	Overtime & Holiday Pay	1,036,951.38	
208,000.00	Allowance to Board Members	300,000.00	
5,572,208.00	Other Allowances	6,791,141.00	
6,585,472.85	E.P.F.	8,008,330.73	
1,317,094.98	E.T.F.	1,601,666.19	
11,039,821.64	Gratuity	4,071,298.46	79,678,920.67
<hr/>		<hr/>	<hr/>
73,047,908.42			
	Travelling Expenses		
1,303,098.55	Travelling - Local	653,908.83	
1,447,050.41	Travelling - Overseas	2,615,963.55	3,269,872.38
<hr/>		<hr/>	<hr/>
2,750,148.96			

2014 Rs.		2015 Rs.	
	Supplies & Requisites		
895,206.64	Stationery & Office Requisites	1,060,233.42	
1,815,471.36	Fuel	3,512,928.21	
79,542.64	Mech & Elect Goods / Lab Components	(13,960.41)	
185,741.15	Uniforms	77,029.20	
8,464.73	Periodicals	29,185.50	
849,949.45	Welfare Items	908,994.40	
4,711,985.38	Exhibitions & Seminars	1,373,846.93	
56,160.00	Profit/Loss on Disposal of Assets - Motor Vehicle		
256,271.67	Loss of Stocks	-	6,948,257.25
<hr/>		<hr/>	
8,858,793.02			
	Repairs & Maintenance		
2,728,838.92	Buildings	2,785,546.47	
630,400.29	Equipment	2,477,303.66	
1,102,847.47	Motor Vehicles	1,426,089.02	
17,089,284.54	Depreciation	23,200,087.85	29,889,027.00
<hr/>		<hr/>	
21,551,371.22			
	Transportation, Communication Utility & Other Services		
2,294,196.50	Telephone	3,815,523.90	
113,952.00	Postage	105,305.00	
199,186.77	Bank Charges	93,800.00	
2,419,549.01	Insurance	2,966,941.02	
1,543,912.00	Advertisement	2,485,428.75	
162,391.55	Hospitality & Entertainment	130,271.20	
1,501,138.80	Security	1,434,772.00	
1,752,747.20	Other Expenses	1,108,471.10	
4,670,849.15	Electricity	4,353,533.50	
212,558.77	Water	306,335.83	
308,515.59	Bad Debts	-	16,465,596.73
<hr/>		<hr/>	
15,178,997.34			
	Project Expenses		
16,806,686.10	Courses/Projects	4,832,358.95	4,832,358.95
<hr/>		<hr/>	
16,806,686.10			

2014 Rs.		2015 Rs	
	Other Operating Expenses		
147,629.01	Membership Fees	172,052.08	
737,797.00	Staff Training	1,307,620.00	1,479,672.08
<u>885,426.01</u>			
139,079,331.07	Total Expenses		142,563,705.06
<u>7,247,058.95</u>	Surplus / (Deficit) for the period		<u><u>9,511,887.10</u></u>

ARTHUR C CLARKE INSTITUTE FOR MODERN TECHNOLOGIES
CASH FLOW STATEMENT
Year ended 31 December 2015

	2015	2014
	Rs. 000	Rs. 000
Cash Flows From Operating Activities		
Surplus/(deficit) from ordinary activities	9,512	7,247
Non-cash movements		
Depreciation	23,200	17,089
Amortisation	(23,200)	(17,089)
Provision for Bad Debts	(335)	5,354
Provision for Defined Benefit Plans	4,071	11,040
Operating Profit/(Loss) before Working Capital Changes	<u>13,248</u>	<u>23,641</u>
(Increase)/ Decrease in Trade and Other Receivables	1,847	7,060
(Increase)/ Decrease in Inventories	(83)	360
(Increase)/ Decrease in Prepayment	(444)	14,314
Increase/ (Decrease) in Payables	(1,691)	1,541
Increase/ (Decrease) in Accrued Expenses	802	245
Cash Generated from Operations	<u>13,679</u>	<u>47,160</u>
Defined Benefit Plan Costs paid	(1,462)	(2,258)
Profit on Sale of Motor Vehicle	-	(2,069)
Loss on Disposal of Assets	-	47
Deferred Revenue	(405)	(5,949)
Net Cash From/(Used in) Operating Activities	<u>(1,867)</u>	<u>36,931</u>
Cash Flows from / (Used in) Investing Activities		
Acquisition of Property, Plant & Equipment	(30,272)	(40,178)
Short Term Investments	(996)	(18,158)
Long Term Investments	-	4,596
Interest and other	(2,609)	-
Interest and Other Received	869	910
Proceed from Disposal of PP&E	-	2,069
Capital Work in Prgress	(361)	(12,370)
Net Cash Flows from/(Used in) Investing Activities	<u>(33,369)</u>	<u>(63,131)</u>
Cash Flows from (Used in) Financing Activities		
Proceeds From Capital Grant	31,409	69,692
Net Cash Flows from/(Used in) Financing Activities	<u>31,409</u>	<u>69,692</u>
Net Increase/(Decrease) in Cash and Cash Equivalents	9,852	43,492
Cash and Cash Equivalents at the beginning of the year	<u>64,007</u>	<u>20,515</u>
Cash and Cash Equivalents at the end of the year	<u>73,859</u>	<u>64,007</u>

10.1. NOTES TO THE FINANCIAL STATEMENTS - SIGNIFICANT ACCOUNTING POLICIES

General Policies

Reporting Entity

Arthur C Clarke Institute for Modern Technologies (hereafter referred to as the “Institute”) was incorporated by the Science and Technology Development Act No.11 of 1994, and is situated at BandaranayakeMawatha, Katubedda, Moratuwa.

Principal Activities and Nature of Operations

The Principal activities of the Institute are:

- a. To accelerate the introduction of modern technologies to Sri Lanka by
 - i. Initiating, promoting and conducting research and development in the application of modern technologies.
 - ii. Providing research and development support to the government and private sector undertakings in the application of modern technologies, and
 - iii. Training of personnel in modern technologies to meet the needs of the government and private sector undertakings, and
- b. To promote future studies

The areas of modern technologies include communication and related sciences, information and technology, electronics, telecommunications, micro electronics, space technologies, robotics, photonics and new materials.

The number of employees

The number of permanent employees as at the end of the reporting period was 81.

Basis of preparation

a) Statement of compliance

The financial statements comprise the Statement of financial Position, Statement of Financial Performance, Statement of Changes in Net Assets/Equity, Cash Flow Statement and notes to the financial statements. These statements have been prepared in accordance with the Sri Lanka Public Sector Accounting Standards (SLPSAS) issued by the Institute of Chartered Accountants of Sri Lanka.

b) Basis of measurement

The financial statements have been prepared on historical cost basis except where the appropriate disclosures are made with regard to fair value under the relevant notes.

c) Comparative Information

Comparative information including quantitative, narrative and descriptive is disclosed in respect of the previous period for all amounts reported in the financial statements in order to enhance the understanding of the financial statements of the current period and to improve inter-period comparability.

The accounting policies set out below have been applied consistently to all periods presented in these financial statements, unless otherwise indicated.

d) Functional and presentation currency

The financial statements are presented in Sri Lankan Rupees, which is the functional and presentation currency of the institute.

All financial information presented in Sri Lankan Rupees has been rounded to the nearest thousand, unless stated otherwise.

e) Use of estimates and judgments

The preparation and presentation of financial statements in conformity with SLPSAS requires management to make judgments, estimates and assumptions that effect the application of accounting policies and reported amounts of assets, liabilities, income and expenses. Actual results may differ from these estimates and judgments used.

Estimates and underlying assumptions are reviewed on an on-going basis. Revisions to accounting estimates are recognised in the period in which the estimates is revised if the revision effect only that period or in the period of the revision and future periods if the revision effect both current and future periods.

Information about significant areas of estimates, uncertainty and critical judgments in applying accounting policies that have the most significant effects on the amounts recognized in the financial statements is included in the notes to the financial statements.

Assets and the bases of their valuation

Property, plant and equipment

a) Recognition and measurement

Items of property, plant and equipment are stated at cost or at fair value less accumulated depreciation.

All items of property, plant and equipment are initially recorded at cost less accumulated depreciation. Significant components of an asset are identified and depreciated separately. When significant parts of property, plant and equipment are required to be replaced at intervals, the entity derecognises the replaced part, and recognises the new part with its associated useful life and depreciation. All other repair and maintenance costs are recognised in the income statement as incurred.

b) Cost

The cost of property, plant and equipment is the cost of acquisition or construction together with any incidental expenses thereon.

The cost of property, plant and equipment comprises its purchase price and any directly attributable cost of bringing the asset to working condition for its intended use.

Subsequent expenditure incurred for the purpose of acquiring, extending or improving assets of a permanent nature in order to carry on or increase the earning capacity of the assets has been treated as capital expenditure.

Expenditure incurred to replace a component of an item of property, plant and equipment that is accounted for separately, including major inspection overhaul expenditure, is capitalised. Other subsequent expenditure is capitalised only if it is probable that the future economic benefits embodied within the part will flow to the institute and its cost can be measured reliably.

The land value is not stated in the financial statements since land is a property of Ministry of Higher Education and transferred to Ministry of Science and Technology to carry out the activities of the Institute. If Institute operations will not be continued the land should be handed over to the University of Moratuwa as per the MOU signed between University of Moratuwa and the Institute.

c) Depreciation

Depreciation is not charged on freehold land and construction in progress. Depreciation is charged on all other Property, Plant & Equipment on the straight-line basis over the estimated useful lives by equal installments as follows.

<u>Asset Category</u>	<u>% Per Annum</u>
Building	5
Computers & Peripherals	20
Satellite Antenna, Lab Equipment	10

Office Equipment, Furniture & Fittings	10
Motor Vehicles	20
Library Books	15

Depreciation of an asset acquired begins when it is available for use whereas depreciation of an asset ceases at the earlier of the date that the asset is classified as held for sale and the date that the asset is derecognized.

Inventories

Inventories consist of Stationery Stock Items, Electronic Components, Accessories and Tools etc.

Inventories are stated at the lower of cost and net realizable value. Net realizable value is the estimated selling price in the ordinary course of business less the estimated cost of completion and selling expenses.

Receivables

Receivables are stated at the amounts they are estimated to realise.

Investments

Investments in Treasury Bills have been stated at cost. Income from such investments has been accounted on accrual basis.

Cash and Cash Equivalents

Cash and cash equivalents are cash in hand, demand deposits and short-term highly liquid investments, readily convertible to known amounts of cash and subject to insignificant risk of changes in value.

For the purpose of cash flow statement, cash and cash equivalents consist of cash in hand and deposits in banks net of outstanding bank overdrafts. Investments with short maturities i.e. three months or less from the date of acquisition are also treated as cash equivalents.

Liabilities and provisions

Liabilities classified as current liabilities on the Statement of Financial Position are those which fall due for payment on demand or within one year from the reporting date. Non-current liabilities are those balances that fall due for payment after one year from the reporting date.

All known liabilities have been accounted for in preparing these financial statements. Provisions and liabilities are recognized when the Institute has a legal or constructive obligation as a result of a past event and it is probable that an outflow of economic benefits will be required to settle the obligation.

Employee Benefits

a) Defined Benefit Plans

The Defined Benefit Obligation- Gratuity and the related charge for the year are determined using assumptions required under actuarial valuation techniques. The actuarial valuation involves making assumptions about discount rates, future salary increases, staff turnover rates etc. Due to the long term nature of such obligations these estimates are subject to significant uncertainty. Further details are given in Note 11 to these Financial Statements.

b) Employees' Provident Fund

The Institute and employees, contribute 15% and 10% respectively, on the salary of each employee to the approved provident fund.

c) Employees' Trust Fund

The Institute contributes 3% on the salary of each employee to the Employee's Trust Fund.

Trade and other payables

Trade and other payables are stated at cost.

Taxation

The Institute is exempt from Income Tax under Section 7 (b) (ii) of the Inland Revenue Act. No. 10 of 2006. The Institute is registered for Value Added Tax (VAT). The income received from projects and other earnings are liable to VAT payments except income generated from courses.

Capital commitments and contingent liabilities

Contingent liabilities are possible obligations whose existence will be confirmed only by uncertain future events or present obligations where the transfer of economic benefits is not probable or cannot be reliably measured. Capital commitments and contingent liabilities of the Institute are disclosed in the respective notes to the financial statements.

Accounting for Grants

Grants that compensate the Institute for expenses incurred are recognized as revenue in the Statement of Financial Performance in the same period in which the expenses are recognised. Grants that compensate the Institute for the cost of an asset are recognised in the income statement on a systematic basis over the useful life of the related asset.

Revenue Recognition

Revenue is recognised to the extent that it is probable that the economic benefits will flow to Institute and that it can be reliably measured.

- a) Course fees from students are recognised as revenue on accrual basis.
- b) Project income, consultancy income are recognised as revenue on accrual basis
- c) Interest income is recognised on accrual basis.

- d) Grants related income is recognised when control of the contribution or right to receive the contribution is confirmed.
- e) Other income is recognized on accrual basis.

Disbursement of surplus income of projects

The surplus of income on projects undertaken over and above of the normal quantum of activities in the annual action plan has been disbursed in accordance with the Public Finance Circular No.380 applicable for universities and research institutions.

Expenditure

- a) Expenses are recognised in the Statement of Financial Performance on the basis of direct association between the cost incurred and the earning of specific items of income. All expenditure incurred in the running of the Institute and in maintaining the capital assets in a state of efficiency has been charged against revenue in arriving at the surplus for the year.
- b) Expenditure on courses, projects, consultancy works and other activities are recognized in the Statement of Financial Performance on accrual basis.

Cash Flow Statement

The cash flow statements have been prepared in accordance with SLPSAS 2.

Events after the reporting date

The materiality of events occurring after the reporting date has been considered and appropriate adjustments, wherever necessary, have been made in the accounts.

(2) Cash & Cash Equivalents

	Rs.
Bank of Ceylon - C/A 7054733	58,962,407.60
Bank of Ceylon - C/A 307144	11,427,192.69
FINDS Bank A/c - S/A 326764	103,249.19
NASDA Bank A/c - S/A 328391	6,383.61
Directors Fund Bank A/c - C/A 307399	49,221.76
Revolving Fund Bank A/c- C/A 2479737	3,245,383.25
Peoples Bank -CA 313-1-001-9-0012847	38,886.84
Commercial bank-CA 1114029211	26,500.00
	<hr/>
	73,859,224.94
	<hr/> <hr/>

(2a) Short Term Investments

Invest. of surplus funds in Treas.Bills - Projects/Courses Fund	7,145,574.67
Invest. of surplus funds in Treas.Bills - Directors Fund	1,027,047.61
Invest. of surplus funds in Treas.Bills - Revolving Fund	1,998,910.75
Invest. of surplus funds in Treas.Bills - FINDS Grant	5,315,010.65
Fixed Deposit 01(76387182)-Revo.Fund	523,896.62
Fixed Deposit 02(76387290)-Revo.Fund	523,896.62
Fixed Deposit 03(76387299)-Revo.Fund	523,896.62
Fixed Deposit 04(76387310)-Revo.Fund	523,896.62
Fixed Deposit 05(76387322)-Revo.Fund	523,896.62
Fixed Deposit 06(76387328)-Revo.Fund	523,896.62
Fixed Deposit 07(76387343)-Revo.Fund	523,896.62
	<hr/>
	19,153,820.02

(3a) Trade and Other Receivables

	Rs.
Staff Debtor - TG	302.00
Insurance Corporation Debtor	9,700.00
Accounts Receivable - TG	1,186,291.02
Accounts Receivable - P/C	9,347,892.91
Debtor - Mr P T Fernando	4,000.00
Debtor - Mr C R Ranasinghe	426.78
Debtor - Mr.Jayathu Fernando	106,894.72
Debtor - Mr B R P Perera	26,028.46
Other Deposits	155,315.00
R.S.Debtor	14,434.91
Elections Dept	8,159.60
Ministry Debtor - Dish TV Package	33,381.50
Festival Advance	44,250.00
Staff Loans	7,661,957.00
Motor Cycle Loan	272,940.00
Motor Vehicle Loan	1,746,811.00
LC Margin Control A/c	4,321,376.00
Guarantee A/c	200,000.00
PC Control	781,075.12
	<hr/>
	25,921,236.02
	<hr/>

(3b) Trade and Other Receivables

Work-In-Progress

Rs.

Courses

CNLA 2015/02 (IT Division)	323,818.96
E C S 25	14,172.38
	<hr/>
	337,991.34

Projects

Tea Colour Separator Project (Comm Div)	4,133,493.13
Light Measurment Alarm System Project	7,795.00
SPG LED Light Project	251.45
Data collection tor rice varieties	3,288.00
Robotics Laboratory Project (Comm Div)	102,892.90
RFID Library Automation - ACCIMT (Comm Div)	90,034.36
Wireless Irrigation Automation Project (Electronic Div)	67,974.23
Hardware Recovery of Jingle Boxes HRJB	53,590.19
Sri Lanka Railway RM 9 2012- 12 (Comm Div)	2,425,171.26
Project 2012/ 2013 - SS - CCTV - NWSDB	6,326,593.94
2014 - 27 - SLR Project	13,931.70
2014 - 07 - CEB (Kukuleganga)	10,800.00
2015 - 01 - SLR Project	211,512.12
Water Board equipment & Repair (Com Div)	6,847.00
Sri Jayawardenapura Gen Hospital Bed Project 2015	14,250.00
White Cane Project	2,180.00
Hardware Rec SLR Two CRTs 2015	54,710.07
Vehicle Tracking System	14,250.00
	<hr/>
	13,539,565.35

Total (3a+3b) 39,798,792.71

(4) Inventories/Stocks

Electronic Components	4,029,255.78
Stationery	975,991.96
Others	53,158.71
Electrical & Mechanical	223,607.90
Welfare	18,885.50
Accessories -TG	199,218.03
Inventory Items - TG	518,035.98
Inventory Items - Projects (P/C)	1,990,378.52
Tools - TG	1,383,466.69
	<hr/>
	9,391,999.07
	<hr/> <hr/>

(5) Prepayments

	Rs.
Pay-in Adv - TG	2,269,154.29
Pay-in Adv - P/C	182,898.70
Stamp Imprest	43,936.00
	<hr/>
	2,495,988.99
	<hr/> <hr/>

(6) PROPERTY, PLANT & EQUIPMENT

	Cost as at 01.01.15	Additions during the year	Adjustments	Total as at 31.12.15	Cum Dep as at 01.01.15	Depn during the year		Cum Dep as at 31.12.15	W D V as at 31.12.15
Buildings	108,726,236.04	15,487,629.88	458,138.78	124,672,004.70	23,733,102.55	5,984,904.45	9,100.02	29,727,107.02	94,944,897.68
Satellite Antenna	2,959,797.83	-		2,959,797.83	2,959,778.83			2,959,778.83	19.00
Computers	54,781,557.72	11,953,242.33	(460,113.78)	66,274,686.27	41,279,970.51	3,958,669.19	(122,668.00)	45,115,971.70	21,158,714.57
Lab Equipment	148,937,596.21	26,541,293.23		175,478,889.44	103,233,742.52	7,904,512.62		111,138,255.14	64,340,634.30
Office Equipment	26,211,015.10	700,457.09		26,911,472.19	16,420,321.96	1,639,471.19		18,059,793.15	8,851,679.04
Furniture & Fittings	14,672,862.13	117,812.70	- 21,707.07	14,768,967.76	8,433,755.10	1,022,825.78	- 4,341.41	9,452,239.47	5,316,728.29
Motor Vehicles	22,068,489.00			22,068,489.00	14,828,489.00	3,170,000.00	900,000.00	18,898,489.00	3,170,000.00
Library Books	23,603,073.15	192,896.50		23,795,969.65	22,795,401.76	235,255.47		23,030,657.23	765,312.42
	-			-					
	401,960,627.18	54,993,331.73	(23,682.07)	456,930,276.84	233,684,562.23	23,915,638.70		258,382,291.54	198,547,985.30

Depreciation has been provided on original cost or valuation on a straight line basis consistent with that of previous year, and is calculated to write off the asset over their estimated useful lives.

Rates at which the depreciation provided are as follows.

Buildings	5%
Satellite Antenna, Lab Equipment	10%
Office Equipment, Furniture & Fittings	10%
Library Books	15%
Computers, Motor Vehicles	20%

(7) Work In Progress - Construction

	Rs.
W I P - Telescope Room	8,329,950.00
W I P - Main Auditorium	4,400,000.00
	<hr/>
	12,729,950.00
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(8) Payables

	Rs.
Accounts Payable -TG	522,156.39
Accounts Payable -PC	1,308.04
E.P.F.Control	1,079,566.13
E.T.F.Control	129,547.96
Welfare Society Control	500.00
Trade Union Control	25.00
Creditor - General Treasury	743,192.70
Refundable Deposit	211,500.00
VAT Payable on receipts - P/C	909,659.42
NBT Payable - TG	1,760.00
NBT Payable - P/C	160,740.18
Stamp Duty Payable - TG	6,550.00
Paye Tax Payable - TG	108,727.90
Disbursement Control	4,021,088.43
Buildings Dept Creditor	984,403.00
Arpico Interiors - Creditor	145,083.20
TG Control	781,075.12
Retention	1,040,393.32
	<hr/>
	10,847,276.79
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(9) Accrued Expenses

	Rs.
Treasury Fund	4,035,894.23
Projects/Courses	2,105.00
	<hr/>
	4,037,999.23
	<hr/> <hr/>

	Rs.
(10) Deferred Revenue	10,711,206.40
	<hr/> <hr/>

(11) Retirement Benefit Liability

As at 1 January	24,500,049.64
Recognition of Transition Liability	-
Charge for the year	4,093,042.46
Payments made during the year	(1,461,625.71)
As at 31 December	27,131,466.39

(11.1) Assumptions

	2015
Discount Rate	6.50%
Salary Increment	8%
Staff Turnover	8.93%
Retirement Age	60 Years

(12) Net Assets / Equity

-	2015		2014
	Rs.		Rs.
Government Capital Grant			
Opening Balance	284,282,034.05		211,419,650.59
Grants received	62,959,000.00		86,781,668.00
Adjustments	(5,179,550.00)		
Amortization	(20,030,087.85)	*	(13,919,284.54)
	322,031,396.20		284,282,034.05
Non Monetary Government Capital Grant **			
Opening Balance	6,340,000.00		9,510,000.00
Grants received			
Amortization	(3,170,000.00)		(3,170,000.00)
	3,170,000.00		6,340,000.00
Reserves			
	2014		2014
	Rs.		Rs.
General Reserve	272,721.64		272,721.64
Celltel Donation	213,333.34		213,333.34
Research & Consultancy Fund	1,341,446.90		1,341,446.90
Foreign Grant	3,464,295.25		3,464,295.25
Re - valuation Surplus	26,682,504.54		26,682,504.54
Other Grants Donation			
Opening Balance	25,076,430.83		25,114,626.24
Fixed Assets received			174,497.13
Depreciation	(592,882.85)	**	(212,692.54)
	24,483,547.98		25,076,430.83
Revolving Fund			
Opening Balance	7,363,739.04		4,968,456.39
Receipts	1,565,947.62		2,395,282.65
Expenses			
	8,929,686.66		7,363,739.04

Directors Fund		
Opening Balance	1,016,213.81	764,220.86
Receipts	58,530.94	266,992.95
Expenses		(15,000.00)
	<u>1,074,744.75</u>	<u>1,016,213.81</u>
FINDS Grant		
Opening Balance	5,122,849.29	3,764,630.20
Interest Income	300,986.12	1,558,522.95
Expenses		(200,303.86)
	<u>5,423,835.41</u>	<u>5,122,849.29</u>
NASDA Grant		
Opening Balance	0.00	5,334.89
Adjustments	6,133.78	
Interest Income	249.83	
Expenses	-	(5,334.89)
	<u>6,383.61</u>	<u>0.00</u>
	<u>71,892,500.08</u>	<u>70,553,534.64</u>
	2015	2014
	Rs.	Rs.
Accumulated Surplus/(Deficit)		
Opening Balance -TG	(120,070,824.29)	(105,567,035.02)
Opening Balance - P/C	18,971,086.39	22,907,076.56
Adjustments - TG	(906,733.61)	(12,269,328.61)
Adjustments - PC	(6,133.78)	(1,472,160.02)
Excess of income over expenditure	3,149,197.16	(4,698,290.80)
	<u>(98,863,408.13)</u>	<u>(101,099,737.89)</u>
TOTAL NET ASSETS / EQUITY	<u>298,230,488.15</u>	<u>260,075,830.80</u>

* Capital grant received has been amortized according to the Sri Lanka Accounting Standard No.24.

**** Depreciation on items received on donations/grants**

Depreciation on item received under donations/grants have been adjusted to the donations/grants accounts as per the instructions given by the Treasury.



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கணக்காய்வாளர் தலைமை அதிபதி திணைக்களம்
AUDITOR GENERAL'S DEPARTMENT



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எனது இல. }
My No. }

TEC/B/ACCIMT/1/15/32

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உமது இல. }
Your No. }

දිනය
திகதி }
Date }

23 November 2016

The Chairman,

Arthur C Clarke Institute for Modern Technologies.

Report of the Auditor General on the Financial Statements of the Arthur C Clarke Institute for Modern Technologies for the year ended 31 December 2015 in terms of Section 14(2) (c) of the Finance Act, No. 38 of 1971.

The audit of financial statements of the Arthur C Clarke Institute for Modern Technologies for the year ended 31 December 2015 comprising the statement of financial position as at 31 December 2015 and the statement of financial performance, statement of changes in equity and cash flow statement for the year then ended and a summary of significant accounting policies and other explanatory information was carried out under my direction in pursuance of provisions in Article 154(1) of the Constitution of the Democratic Socialist Republic of Sri Lanka read in conjunction with Section 13(1) of the Finance Act, No. 38 of 1971 and Section 40(3) of the Science and Technology Development Act, No. 11 of 1994. My comments and observations which I consider should be published with the Annual Report of the Institute in terms of Section 14(2) (c) of the Finance Act appear in this report. A detailed report in terms of Section 13 (7) (a) of the Finance Act, was issued to the Chairman of the Institute on 09 November 2016.

1.2 Management's Responsibility for the Financial Statements

The management is responsible for the preparation and fair presentation of these financial statements in accordance with Sri Lanka Public Sector Accounting Standards and for such internal control as the management determines is necessary to enable the preparation of financial statements that are free from material misstatements whether due to fraud or error.



1.3 Auditor's Responsibility

My responsibility is to express an opinion on these financial statements based on my audit. I conducted my audit in accordance with Sri Lanka Auditing Standards consistent with International Auditing Standards of Supreme Audit Institutions (ISSAI 1000-1810). Those Standards require that I comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatements.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgement, including the assessment of the risks of material misstatements of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the Institute's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Institute's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of financial statements. Sub-sections (3) and (4) of Section 13 of the Finance Act, No. 38 of 1971 give discretionary powers to the Auditor General to determine the scope and extent of the audit.

I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my audit opinion.

1.4 Basis for Qualified Opinion

My opinion is qualified based on the matters described in paragraph 2:2 of this report.



2. Financial Statements

2.1 Qualified Opinion

In my opinion, except of the matters described in paragraph 2:2 of this report the financial statements give a true and fair view of the financial position of the Arthur C Clarke Institute for Modern Technologies as at 31 December 2015 and its financial performance and cash flows for the year then ended in accordance with Sri Lanka Public Sector Accounting Standards.

2.2 Comments on Financial Statements.

2.2.1 Sri Lanka Public Sector Accounting Standards

The following observations are made.

(a.) Sri Lanka Public Sector Accounting Standard 01

Except for the assets being realized within a period of 12 months from the reporting date, all other assets should be classified as non-current assets. However, employee loan balances totalling Rs. 6,894,904 realized after a period of 12 months, had been shown as current assets.

(b.) Sri Lanka Public Sector Accounting Standard 02

The cash flow statement had not been prepared accurately due to the following deviations.

- (i) Although payments amounting to Rs. 48,022,878 and Rs. 7,058,727 had been paid in the year under review for the acquisition of fixed assets, and work in progress respectively, those payments had been shown as Rs. 30,272,000 and Rs. 361,000 respectively under the investment activities of the cash flow statement.



- (ii) Although the receipts of capital grants amounted to Rs. 62,959,000 in the year under review, a sum of Rs. 31,409,000 had been shown as receipts of capital grants under the financial activities. Furthermore, a sum of Rs. 5,179,550 remitted to the Treasury, had not been shown in the cash flow statement.

2.2.2 Accounting Policies

The following observations are made.

- (a.) Even though it was disclosed that the accrual basis had been followed by the Institute in the preparation of financial statements, cash basis had been followed when the income of the projects subject to the distribution of income had been identified in terms of Public Finance Circular, No. 380 dated 19 January 2000. Accordingly, a total of Rs. 3,830,700 relating to the projects and 18 works completed in the year under review and the years 2013 and 2014, had been accounted as differed income without being identified as income in the relevant years. Of that, a sum totalling Rs. 2,643,530 incurred on 03 projects completed in the year under review, had been shown as work in progress under current assets in the statement of financial position, instead of being accounted as expenses.
- (b.) The balance of the provisions made for doubtful debts amounted to Rs. 5,019,000 as at the end of the year under review, and the accounting policy followed by the Institute in respect of the provisions for doubtful debts, had not been disclosed in the financial statements.

2.3 Accounts Receivable

The balances older than 2 years and totalling Rs. 1,655,680 that remained receivable with respect to projects and courses as at 31 December of the year under review, had not been recovered even by August 2016.



2.4 Non-compliances with Laws, Rules, Regulations, and Management Decisions

The following non-compliances with Laws, Rules, Regulations, and Management Decisions, had been observed.

Reference to Laws, Rules, and Regulations	Non-compliance
-----	-----
(a.) Payment of Gratuity Act, No. 12 of 1983	As special and interim allowances had been included in the earnings considered for paying gratuity, gratuity allowances amounting to Rs. 759,532 had been overpaid to 12 employees in the year under review.
(b.) Public Finance Circular, No. 380 dated 19 January 2000	Of the income generated from projects such as the battery test and RCCB test not covered by the Circular, a sum of Rs. 3,457,113 had been disbursed among the direct and indirect staff of the Institute as incentives.

2.5 Transactions not Supported by Adequate Authority

Without obtaining approval of the Treasury in terms of Public Finance Circular, No. PF/PE 5 dated 11 January 2000, a total sum of Rs. 993,596 had been paid under the approval of the Board of Control as year end allowances subject to a maximum of Rs.12,500 per employee.



3. Financial Review

3.1 Financial Results

According to the financial statements presented, the financial result of the Institute for the year ended 31 December of the year under review had been a surplus of Rs. 9,511,887 as compared with the corresponding surplus of Rs. 7,247,059 of the preceding year, thus indicating an improvement of Rs. 2,264,828 in the financial result of the year under review as compared with the preceding year. Even though the other income had decreased by Rs. 20,611,900 in the year under review as compared with the preceding year, the increase in the recurrent grants by Rs. 20,250,000, and the decrease in the other operating expenses except for depreciation by Rs. 2,626,447, had mainly attributed to the improvement of the financial result.

In analyzing the financial results of the year under review and 04 preceding years, the surplus of the year 2011 that amounted to Rs. 3,577,607 had reached a sharp improvement of Rs. 18,679,669 in the year 2012, whereas it had declined to Rs. 5,957,641 in the year 2013. As compared with the year 2013, the financial result had slightly improved in the years 2014 and 2015 by Rs. 7,247,059 and Rs. 9,511,887 respectively. However, by considering the employee remuneration and depreciation on non-current assets, the contribution of the Institute in the year 2011 amounting to Rs. 56,148,788, had reached Rs. 112,390,896 in the year 2015 representing an increase of 15 per cent as compared with the year 2014.

3.2 Analytical Review

The current ratio of the Institute for the year under review was 9.4 whereas it was 8.3 as at 31 December of the preceding year, and 53 per cent of the current assets should comprise cash and cash equivalents. As this money had remained idle without being utilized, the Institute had not drawn its attention on the income that would have been generated by investing in the short- term investments.



4. Operating Review

4.1 Performance

In terms of Section 22 of the Science and Technology Development Act, No. 11 of 1994, the functions of the Institute include:

- (a.) To accelerate the introduction of modern technologies to Sri Lanka by Initiating, promoting and conducting research and development in the application of modern technologies, providing research and development support to the Government and private sector undertakings, and training of personnel in modern technologies to meet the needs of Government, and private sector undertakings.

- (b.) To promote future studies.

The following matters were observed in the examination of the execution of the said functions in the year under review.

- (i) Due to failure in preparing an initial plan for the time limits of completing the research projects, 03 projects commenced in the year 2012 had not been completed, and expenses amounting to Rs. 4,291,497 had been incurred thereon as at 31 December of the year under review.
- (ii) Out of 54 activities planned to be executed within the year under review at an estimated value of Rs. 100,000,000, seven activities had not been executed.

4.2 Management Activities

Although the lease agreement entered into between the Institute and the Sri Lanka Telecommunications Regulatory Commission in the year 2013 in respect of the project “Establishing a Direction Finding Station for Monitoring of Radio Frequency Signals” had expired on 31 January 2015, a new agreement had not been entered into even by June 2016. Nevertheless, the Institute had continuously provided the relevant



5.2 Procurement Process

The following observations are made.

- (a.) In terms of Section 4.1.1 (a) of the Procurement Guidelines, efficient planning of the entire Procurement process is vital to ensure timely completion of the project. However, according to the Procurement Plan prepared, 41 procurement activities valued at Rs. 26,050,000 in respect of works and goods planned in the year 2015, had not been commenced within the year 2015.

- (b.) The telescope valued at Rs. 3,944,000 expected to purchase in July of the year under review in accordance with the Procurement Plan, had not been purchased even by July, 2016.

6. Systems and Controls

Deficiencies in systems and controls observed during the course of audit were brought to the notice of the Chairman of the Institute from time to time. Special attention is needed in respect of the following areas of control.

Areas of Systems and Controls	Observations
-----	-----
(a) Control of Debtors and Creditors	The delay in the recovery of debtor balances, and settling the creditor balances.
(b) Control of Files	Failure to follow a proper methodology enabling the files to be maintained by each officer separately or as programs.



(c) Accounting

Due to lack of coordination between the Divisions issuing the invoices, and the Finance Division, the ledger accounts relating to the invoices being issued or cancelled had not been maintained in an up-to-date manner.

H.M. Gamini Wijesinghe.

Auditor General

Answers to the Report of the Auditor General, on the Financial Statements of the Arthur C Clarke Institute for Modern Technologies for the year ended in, 31 December 2015, in terms of Section 14(2)(C) of the Finance Act No. 38, of 1971.

2.2.1 Non Compliances with the Sri Lanka Accounting Standards

- (a) Though the assets expected to be realized within 12 months after the reporting date shall be stated in the financial statements under the current assets and the assets expected to be realized after 12 months under the noncurrent assets in terms of Chapter 76, SLPSAS 1 (Sri Lanka Public Sector Accounting Standards) distress loans, motor cycle loans are not been classified in that manner in the financial statements for the year under review. Therefore actions will be taken to include these in the financial statements, classified under the current assets and non-current assets from the next year.
- (b) In preparation of cash flow statements, Net Value has been adjusted as mentioned below and the values stated in the Audit Report should be corrected accordingly. Also actions will be taken to prepare the cash flow statements for gross values from the year 2016 as recommended in the audit report.
- (i) The payments made on acquisition of fixed assets for the year under review is not Rs. 48,022,878/- as stated in the audit report and this value is Rs. 50,935,387/- .
Payments for the work in progress for the year under review is not the amount Rs. 7,058,727/- and it is valued at Rs. 4,400,000/-.
- (ii) Capital grants for the year under review is not Rs. 62,959,000/- as stated in the audit report and this value is Rs. 57,779,450/=. It was calculated by deducting Rs. 5,179,550/-, the amount paid as insurance compensation for motor vehicle accidents from the treasury grant of Rs. 62,959,000/-. This amount has been transferred to the Treasury.

2.2.2 Accounting Policies

- (a) In preparation of Financial Statements, the institute has not deviated from accrual basis as a policy. However these revenue has been accounted under the deferred revenue until the revenue is determined and pending Value Added Tax (VAT) and the Nation Building Tax (NBT) for the revenue are paid as mentioned in the audit report. Ability for realizing the deferred revenue on payment of taxes by keeping minimum debts and obtaining an advance at the commencement of the project and obtaining part payments from institutions by partially invoiced orders will be considered as a preventive measure.
- (b) The amount of Rs. 5,019,000/- has been accounted as allocation for bad debts in the accounts of the year 2015. Accounting policy for allocation and writing off bad debts as per Section 12 in SLPSAS 3 has not been included in the financial statements - 2015 by mistake and action will be taken to rectify this defect in the next year.

2.3. Accounts Receivable

The following actions were taken to recover the loans more than 2 years as observed in auditing.

1. Letters that are automatically generated by the computer system will be forwarded to the debtors through the registered post.
2. The debtors will be reminded by telephone calls to pay their loans in due time.

2.4. Non Compliances with Laws, Rules, Regulations and Management Decisions.

- (a) The word "salary" has been defined in Section 6 of the Payment of Gratuity Act No. 12 of 1983 as amended by the Payment of Gratuity (amendment) Act No. 41 of 1992 and Act No. 62 of 1992. The correct definition effective at present for the word "salary" is in the Act amended in 1992 and not the meaning in principal enactment of 1983. Accordingly, the salary include the basic or consolidated wage or salary, cost of living allowances or other similar allowances and piece rates. Therefore, I would like to inform that the gratuity has been paid to the employees in accordance with the provisions of the Act and the employees are not overpaid.
- (b) As per the provisions provided under the Public Finance Circular No. 380 dated 19 January 2000, the Universities and the Research and Development Institutions can undertake income earning projects through training, consultancy services in R&D without interfering the affairs of the institute. These projects involve the activities for the promotion of the R&D projects of the institute, provide necessary assistance to enhance the R&D in the relevant fields, build industry links/ partnerships and consequently facilitate development of the institute.

Accordingly the two projects mentioned in the audit report, the battery testing and the RCCB testing, are not the ordinary testing projects carried out by the institute and these are specific projects (projects for establishing and Maintaining Battery Testing Facility and RCCB Testing) which involve technical procedures to be implemented establishing the precise laboratory facilities under the direct supervision of the expertise research team. Further, these quality certificates are used to certify that the electrical appliances imported the country and enter the market meet the required standards and this is also a specific service delivered by the institute.

2.5 Transactions not certified by Authority Power

Payment of year end bonus for the employees is being practiced for a long time (from about 1992) as a scheme of motivation with the aim of increasing efficiency. However financial provisions granted by the Treasury are not been utilized for this purpose and these are paid out by the income generated through the outside projects and training courses on approval of the Board of Directors. These payments, continued for a long time are also necessary to maintain the industrial peace.

3. Financial Review

3.2. Analytical Financial Review

The value of the liquid assets are increased with the release of estimated amounts by the Treasury during the last quarter and these funds will be disbursed during the first quarter in the next year. Accordingly, stating these amount as an idle working capital in the ratio analysis is a temporary situation.

4. Operating Review

4.1 Performance

- (i) Duration of the projects are mentioned in quarterly basis in the Plan of Action of the institution and targets for the quarters has also included in the Agency Results Framework of the institute. In addition proposals for long term projects are submitted to the Board of Directors and the Department of National Budget in the General Treasury.

Several projects are carried out in collaboration with the external parties and the two parties has enter into agreements and for the rest of the projects enter in to clear contract with the relevant authorities of the both institutes. Though the 04 projects initiated in 2012 has not been completed in the year under review it is not accurate to state as 03 of these projects has been initiated in the year 2012. Though the Robotic Laboratory project is continued from the year 2012 under the same name, various activities are planned and implemented for each year covering the robotic field. The other two projects Tea Color Separator project, and RFID Library Automation Project that have been terminated in 2015 due to technical problems have been resumed project activities in 2015 and 2016 adopting new techniques.

Even it has been stated that the physical progress for these 03 projects are not shown in the progress reports, physical progress has been shown in the year end progress reports

Wireless Irrigation Automation Project has not been included in the Plan of Action 2012 due to the difficulty in engaging an Engineer as a result of shortage of technical staff in the institution and the project has performed only a few activities in the year 2015 with the trainee staff. The progress of the project has not been mentioned in the progress reports due to this reason and it is expected to be completed within the next year recruiting new staff.

- (ii) Rs. 12,100,000/- and Rs. 50,859,000/- were received from the estimated amount on 11.11.2015 and 22.12.2015 respectively. Accordingly the total capital received from the total estimate is Rs. 62,959,000/-. Total number of projects planned for the year under review were 54 and 06 out of these are for improvement of infrastructure of the institute and purchasing equipment and projects/programmes relevant to technical operations are 48. Number of completed projects has been stated as 21, but it should be corrected as 30. accordingly, the number of ongoing projects are 11 and the physical progress has been shown in the quarterly and year end progress reports, though it has been mentioned that the physical progress of the project could not be specifically evaluated.

Projects that are not implemented have been stated as 07, but the actual number is 05. Two activities were included in the plan of action under the two technical fields, deep diagnostic and recovery of complex systems with the aim of implementing on the request of the industrial sector. As such requests were not been made in 2015 these projects have not been implemented.

Project for the renovation of telescope room, one of the 05 projects which is not implemented, could not be implemented due to lack of facilities required for its implementation.

The other 04 projects, 03 training courses and the project for the "maintenance of laboratory accreditation" were not implemented as Engineers/Scientists/Engineering Assistants could not be recruited as expected.

Most of the projects implemented by the institute require the expertise of Engineers and equipment and technical facilities available in the laboratories. Therefore, no need of purchasing laboratory equipment for each project. The estimated cost for the most of equipment has been separately mentioned under the each project in the Plan of Action and this cost could be stated as an operating expenditure for several projects.

4.2. Management Activities

The Agreement entered between the institute and the Telecommunication Regulatory Commission of Sri Lanka (TRCSL) in relevant to the project "Establishing a Direction Finding Station for Monitoring of Radio Frequency Signals" has been terminated on 31 December 2015.

Standard storage facilities has been requested to store the appliances belongs to the TRCSL as per the condition of the above agreement and delay in providing this facility owing to the constraint in internal division due payments were held up until this facility were provided. These storage facilities have been provided and the Director Board has granted approval to authorize this agreement and the agreement has been forwarded to the TRCSL for signing. Action will be taken to recover the due payments after new agreement come in to effect.

4.3 Idle and Underutilized Assets

Though the findings of the auditing in relevant to maintenance of idle and underutilized assets are correct, the institution should maintain the substantial stocks of electronic appliances as a R&D institution responsible to implement the research and development projects. Maintenance of stocks is necessary as it is difficult to purchase these particular parts required at the commencement of projects and also for maintenance and repairing.

4.4 Staff Administration

The approved cadre is 177 and the existing cadre is 81 and therefore 96 vacancies existed in the year under review. These vacancies exist in the senior, tertiary and the secondary levels. There are high demand in the local and international job market for the specialized fields relevant to the institution that are electronic, information and communication technology, space technology and application.

As the salary paid by the institute for the professional Engineers is very low compared to the salary and privileges paid by the Private Sector and also some other public sector institutes, the institute face difficulty in recruitment and retention of Engineers to the institute. 07 Engineers and 04 Technical Officers have resigned during the year under review.

In the year 2015 paper advertisements were published in four times to recruit Deputy Director General (Administration and Finance) one of the four posts of Deputy Director General. However this vacancy could not be filled since the applicants with required qualifications and experience as per the recruitment procedure have not applied and also the limited number of qualified applicants have not attended the interview. It is necessary to fill the vacancies in technical level executive grade posts in the relevant division before filling the 2 Deputy Director General posts in the technical division. Therefore the institute has decided to fill these 2 Deputy Director General posts after filling the vacancies in the posts of Engineer /Scientists/ Engineering Assistants. However, the vacancy in the post of Deputy Director General (Administration and Finance) has been filled now.

The salary scale approved by the Department of Management Services for the technical staff including the engineers is very low compared to the salary prevailed at the present market and this is the main reason for the existence of these vacancies. As an example the initial salary of an engineer recruited to the institute is Rs. 24,725/- and all inclusive salary (with allowances) is Rs. 47,470/-. An engineer in the private sector and some state sector institutes draws a gross salary twice the salary of an engineer in the ACCIMT. Another problem is provisions have not been made to pay any allowance to these engineers although an allowance of Rs 15,000/- and professional allowance is paid to the engineers in the public sector. It is very difficult to recruit engineers to the institute due to certain inequality of privileges (engineers in the public institutions are entitled to vehicle permits on

concessionary terms after completion of 6 years service period while the engineers in ACCIMT are entitled these permits only after 12 years service period). Under this circumstance the institute has taken tremendous effort to recruit and retain the engineers within the institute. We are striving at the institution level to retain the existing engineers in the institute giving them local and foreign training opportunities, get their contribution to the attractive pilot projects. Even within this drawback we have attempted to retain them enhancing their knowledge and skills to achieve the objectives of the institution

5 Accountability and Good Governance.

5.1 Internal Audit

(a) The institute has consequently encountered the problem of insufficient staff and the staff could not be attached to all the divisions. However an officer has been attached to the Internal Audit Division in the post of Management Assistant with effect from 1 January 2016. The total staff is 81 and 2 of them have been engaged in the Internal Audit Division.

(b) The Internal Audit Plan prepared for the year under review as per the Management Audit Circular No. 01 has been approved by the Internal Audit Division of the Ministry of Science, Technology and Research. However it is expected to implement the recommendations relevant to the technical matters revealed at the audit as per the instructions of the Audit and Management Committee.

Practical difficulties will come up due to non relevance of the scope, limited number of officers in the divisions, engaging these officers in the consultancy/technical evaluation committees in seeking internal assistance by the department. Attention of the Audit and Management Committee is drawn to this matter and action will be taken to carry out the relevant audits on their instructions.

5.2 Procurement process

(a) The procurement process for the institution has been prepared based on the capital allocations approved by the General Treasury and the Action Plan of the institute. The amount required for capital expenses has to be adjusted in some instances while performing the activities of the institute. The action plan has to be adjusted (whenever the relevant information and opportunities are not available at the formulation of the action plan) for maximum utilization of capital provisions on the effect of external factors like national and international technical assistance.

(b) Purchase order for the telescope (14 Schmidt Cassagrain telescope with accessories) has been forwarded to the relevant supplier on 02.11.2015 and 16 weeks were given for the supply of goods. Further, Purchase order for three "workstation computers" has been forwarded to the relevant supplier on 21.12.2015 and the supplier could not be able to supply the goods on agreed date due to delay in the production. Actions will be

taken to charge surcharge from the supplier. Actions will be taken to recover the cost from the performance bond worth of Rs. 394,400/- provided by the supplier, if they are failed to supply the goods.

6. Systems and Control

Attention of the institute will be paid to establish good system administration from the next year by minimizing the weaknesses in the fields of systems and administration as observed in the Audit Report.



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Engineer Sanath Panawennage
Director General/Chief Executive Officer