

Arthur C Clarke Institute for Modern Technologies

Annual Report - 2013

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Arthur C Clarke Institute for Modern Technologies
Katubedda,
Moratuwa.

2015.02.27

Hon. Minister of Technology & Research
Ministry of Technology and Research
408, Galle Road,
Colombo 03.

Hon. Minister,

Annual Report of the Arthur C Clarke Institute for Modern Technologies For the Period from 1st January to 31st December 2013.

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 2013 along with,

- (a) A copy of the Audited Income & Expenditure Account
- (b) A copy of the Audited Balance Sheet
- (c) Auditor General's Report and the Observations of the Institute.

Yours faithfully,



Director General & CEO
Arthur C Clarke Institute for Modern Technologies

/sc

Annual Report - 2013

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 Sri Lanka's leading centre of excellence in Research & Development and in Facilitation of Domestic Technology - Development in Electronics, Telecommunications, Information Technology, Space Technology & related fields.

1.3 Mission

To foster and facilitate development of the domestic base of technological capabilities in the designated fields of specialization, through engaging in and facilitation of Research and Development, and provision of advanced training and industrial services.

1.4 Governing Ministry

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

It came under the purview of the Ministry of Science and Technology in August 1994. With the establishment of the new Ministry for Economic Reform, Science and Technology, in December 2000 the ACCIMT too was transferred under its purview. In 2004, the institute came under the purview of the newly constituted Ministry of Science and Technology. In 2010 the Ministry of Science & Technology has renamed as Ministry of Technology & Research and the ACCIMT too continues function under the purview of this Ministry.

1.5 Members of the Board of Governors

From Jan 2013 – August 2013

1.	Prof. Lalith D K B Gamage	Chairman –Board of Governors
2.	Eng. Sanath Panawennage	Member - Board of Governors Director & CEO (ex-officio)
3.	Prof. (Mrs.) I J Dayawansa	Member - Board of Governors
4.	Mr. S Merrick Gooneratne	Member - Board of Governors
5.	Ms. J Chandima Weligamage	Member - Board of Governors
6.	Mr.Thusha Weerasooriya	Member - Board of Governors
7.	Prof. H Abayagunawardena	Member - Board of Governors
8.	Dr. Lilantha Samaranayake	Member - Board of Governors
9.	Prof. A K W Jayawardane	Member - Board of Governors
10.	Prof. Dhammika Tantrigoda	Member - Board of Governors
11.	Prof. Athula Senaratne	Member - Board of Governors

From November 2013 – to-date

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

1.6 Board Meetings held for the year 2013

Meeting No.	Date of Meeting
2013/01	18/1/2013
2013/02	8/2/2013
2013/03	15/3/2013
2013/04	26/4/2013
2013/05	17/5/2013
2013/06	25/6/2013
2013/07	19/7/2013
2013/08	16/8/2013
2013/09	14/11/2013
2013/10	12/12/2013

2.0 Executive Summary

During the year under review, the institution made substantial progress in its overall performance in the areas of research and development activities, training and technological services as well as in internal capacity development activities despite of major continuing constraint of recruitment and retain of staff in the core technical disciplines.

Advanced design and development and other technological services offered to the industry, which include design, development, installation and commissioning of remote reservoir and overhead tank level logging and monitoring system for NWSDB Maharagama pumping station, recovery of sophisticated electronic systems in variety of high tech industrial applications, instrument calibration, test and measurement services and training services targeting industrial group as well as general public expanded substantially compared to previous years. These services would enable the institute to generate revenue up to approximately one fourth of total recurrent expenditure. In the area of internal capacity building the institute made a significant achievement by establishing a RCCB testing facility. This test facility would enable to conduct testing of RCCBS / MCBS as per SLS 1099/IEC 610008-1.

By functioning as the National focal point in Sri Lanka for Space Technology Applications for the Regional Space Application Programme, the ACCIMT was instrumental in the process of Sri Lanka been selected by the United Nations Economic & Social Commission for Asia and the Pacific (UNESCAP) as the first Pilot Country for implementation of the 5 year Action Plan (2012-2017) formulated by the UNESCAP for developing the capacity of the country in the region to use space technology applications for sustainable development. Further Sri Lanka was also selected as one of the pilot countries for implementation of an initiative for monitoring in prediction of agriculture drought using space technology applications. From this initiative the country will have the opportunity of receiving the necessary earth observation satellite data, applications that have already developed, technical expert mission and training of engineers, scientists and technologists in relevant organizations both with the country and overseas in the coming years. The above selection by the UNESCAP was reached at the 17th session of Intergovernmental Consultative Committee (ICC) of the Regional Space Application Programme (RESAP) of the UNESCAP and High level Decision Makers Meeting on implementation of the Asia Pacific Plan of Action for Application of Space Technologies. Both meetings were held during November 26th to 28th of 2013 at the United Nations Conference Center at Bangkok and Sri Lanka was represented by the Director General of the ACCIMT.

The research, design and development projects which were initiated or continued during the year included development of a compressive Library Automation system using RF-ID technology, development of Solar Powered Hording with an efficient illumination system using long-life maintenance-free white LEDs, development of Tele Medicine Diagnostic Kit and also continue from year 2012 the development of Tea Quality Grading and Colour Separating System.

Research projects undertaken during the year in the area of RS and GIS included development of Geospatial Agricultural Information System. This project was to develop a comprehensive web GIS application for Sri Lanka using open source technologies.

In addition, the Space Application Division of the Institute was also involved in five research projects in Astronomy with one of them being undertaken in collaboration with a national university. The internal research projects in Astronomy undertaken by the division included “study of solar flares using CALLISSTO Radio Spectrometer”, “study of P Cygni type stars” and “study different orientations of the disk-like envelopes-surrounded in Be stars through their emission live spectra”.

The industry initiated technology collaboration projects which necessarily involved a significant volume of work of R & D nature included the continued hardware recovery services provided to Sri Lanka Railways for the recovery of advanced microprocessor based control and sub systems of Alston Class M 9 Locomotives and Sefang Class S 9 power coaches. Further design, development and installation of remote reservoir and overload tank level logging and monitoring system for National Water Supply and Drainage Board’s Maharagama pumping station and development of control system and user interface for mobile operated vending machine for Ceylon Business Appliances were another two significant industrial collaboration projects.

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 ACCIMT continued to have substantial demand for the industrial services including equipment calibration, performance testing of measuring instruments and Lead Acid Batteries testing and measurement of power electronics and surge protective devices, testing and measurement services for the communication and broadcasting sectors and other consulting services offered by the institute to the industry. For the year 2013, 252 numbers performance test reports were issued and 52 number of instrument calibration jobs were performed. Apart from that a significant number of consultancies, measurements and advance hardware recovery assignments were undertaken by the institute. One highlight in the industrial services was the establishment of

new testing facility for conformity assessment of Residual Current Circuit Breakers (RCCBs) and related electrical gear.

On the training front, the Continuing Professional Development (CPD) programmes on “Modern Electronic Test and Measuring Instruments with Digital Emphasis”, “Modern Power Electronics”, “Embedded Control Systems”, “Computer Networking and Linux Server Administration”, “Programmable Logic Controller”, “Introduction to Remote Sensing and GIS” and “Introduction to GPS and Satellite Navigation” were conducted for the engineers, technologists and other professionals from public and private sector organizations and these courses continued to enjoy substantial demand from the industry as well. The total number of professionals attended such courses during the year was 365. In the meantime the institute also provided training opportunities through its intermediate training courses and workshop including those specially conducted for Vidatha and Vidatha Restructuring programmes. The number of participants that attended the six different types of intermediate training courses / workshops during the year was 803.

The construction work of the new four storied building which commenced on 2012 was completed and a soft opening ceremony of the new building was held in September 2013. The new building adds a floor area of approximately 8000 sq.ft. to ACCIMT entire building space.

The government grants received during the year for capital and recurrent expenditure were approximately 52.5 million and 72.5 million respectively. Total revenue generated by the institute was approximately Rs. 19.5 million which amounts to approximately 27% 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 & 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 Remote reservoir and overhead tank level logging and monitoring system for Maharagama NWSDB pumping station.

The project was to design / development / installation and commissioning of complete system to acquire the water level data of reservoir and overhead tank in real-time.

The information collected are displayed at the site OIC room and send to a remote server. The data in the server can be accessed from any place via internet and presented graphically in a meaningful manner including the date / time tags with previous data viewing possibility. This information is necessary for supply demand analysis and future planning. This client based project was successfully completed. The project can be repeated to many NWSDB site in the island. The project income was Rs. 840,000.00

4.1.1.2 Solar Powered Hoarding

The project consists of 02 diamond shaped solar powered hoardings with an efficient illumination system using long life, maintenance-free, white LEDs.

It was developed by customizing the solar powered Advertisement Holder designed and developed in 2012 and was successfully commercialized to Sri Lanka Institute of Information Technology (SLIIT).

4.1.1.3 Mobile operated vending machine

Upon the request by Ceylon Business Appliances, the ACCIMT submitted a project proposal for the mobile operated vending machine. Project objective is

to design and develop a control system with user interface, enabling the user to obtain merchandise from the vending machine using his / her mobile connection credit balance to make the payment.

4.1.1.4 Recovery of Microprocessor / Digital Signal Processor based electronic control subsystems of the Class M9 Locomotives Alstom (France) AD32C

Continuing with the same activity flowing from the past due to the Sri Lanka Railways requirement on locomotive service maintenance below units was successfully recovered.

- Two Driver Display Consoles
- Two Traction Control Units

4.1.1.5 Recovery of Microprocessor based electronic control subsystems of the Class S9 Power Coaches (Sefang)

Further assistance during this year was provided to Sri Lanka Railways in recovering the below sub units for the in-service coaches.

- Five Driver Display Consoles

4.1.2 Information Systems Development Projects

The Information Technology Division of the institute has been developing information systems solutions for the public and the private sector organizations on various organization-specific applications upon request. The main information system projects undertaken by the institute during the year include the following:

4.1.2.1 On-line Administration System - Buddhist & Pali University

This on-line system consists of 07 modules, namely, Student Registration module (Internal & External), Examinations module (Internal & External), Employee Information module, Payroll & Accounts module, Library module, Stores module and Official Web Site.

This project was completed in 2013 except Student Registration (External) and Examination modules which could not be implemented due to lack of infrastructure required at client's site.

4.1.2.2 Payroll & Accounting System - Postgraduate Institute of Management

A project to computerize the functions of the Finance Division including the payroll was commenced in 2011. The project was completed in 2013.

4.1.2.3 Library System for Sri Lanka Bhikshu University

A project to computerize the functions of the library of Sri Lanka Bhikshu University, Anuradhapura was submitted. Necessary upgrading of Data Entry modules and modules required for Report Printing were installed at client's site during the year.

4.1.3 Test and Measurements, Hardware Recovery and Consultancy Services

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

During the year, the division issued 252 performance test reports mainly for testing of surge protective devices, cables, socket outlets, switches, PSTN phones, routers and batteries. The division also carried out safety testing & power quality measurement.

The major clients were Sri Lanka Telecom PLC and Obo Bettermann India Pvt Ltd.

4.1.3.2 Troubleshooting / Repair Services and Consultancy Assignments - Electronics & Microelectronics Division

13 nos. of major troubleshooting and repair jobs were undertaken by the division. The key benefited clients include Sri Lanka Standards Institution, Brandix Casual Wear, BCC Lanka (Pvt) Ltd, etc. Further 31 nos. miscellaneous jobs were carried out by the Electronics & Microelectronics Division for Industry.

4.1.3.3 Test and measurements services and hardware recovery - Communication Division

Communication Division offered testing and measurement services, general hardware recovery during the year for multiple clients including, testing of coaxial cables, memory chip and microcontroller programming, Base Transmitter Measurements, Antenna system measurements, Interference measurements, FM Combiner tuning, Field Strength Measurement and hardware recovery of Jingle Units.

4.1.3.4 Instrument Calibration Service / Performance test Services offered by the Calibration Laboratory - Industrial Services Division

During 2013, 52 numbers of calibrations / performance test and measurements of electrical / electronic test equipments / systems were performed and test reports were issued to the industry.

Calibrations / Performance Tests	Major Clients
Digital and Analog Multimeters / Clamp meters / Voltmeters	FDK Lanka (Pvt) Ltd.
Oscilloscopes	Colombo Dockyard (Pvt) Ltd.
Insulation testers / Power / Earth Testers	Sri Lanka Ports Authority
Miscellaneous instruments used for voltage, current, resistance and time measurements	Loadstar (Pvt) Ltd.
	Sri Lanka Navy Dockyard
	Dipped Products (Pvt) Ltd.
	SGS Lanka (Pvt) Ltd.
	Venora International Projects (Pvt) Ltd.
	David Peiris Motor Company Ltd.
Total Revenue Rs. 413, 518.60	

4.1.4 Contractual Services

Contractual maintenance of Databases and other Information Systems are given below

- Accounts System – University of Moratuwa. Maintenance agreement has been signed.
- Accounts System – University of Sri Jayewardenepura. Maintenance agreement has been signed.
- Payroll System – Development Lotteries Board - Maintenance agreement has been signed.
- Accounts System – Kothalawala Defense University. Maintenance agreement has been signed.

4.2 In-house R & D Projects and Internal Capacity Building

4.2.1 In-house R & D Projects

4.2.1.1 Tea Quality Grading System (Tea Colour Separator)

As initiated during year 2012, research and development work of module prototypes of the above system continued.

During the year technical details for mechanical system construction was finalized. Some problems in the FPGA frame buffer implementation for the line camera in tea color detection has to be sorted out to complete the electronic system.

4.2.1.2 Telemedicine System

This in-house project was to design and develop a system to remotely collect patient data (blood pressure, temperature, heart beat). The product is aimed to be used at a social centre (or nanasala) initially for testing and the ultimate desire is to use the jacket connected to communication equipment (PC) in transferring the patient data gathered remotely to a doctor for diagnosis purpose.

During the year, the web based preliminary software was developed to communicate the data through internet.

4.2.1.3 RF-ID Readers for Automation

The initial proposal was made to develop this product for the ACCIMT library. According to the project modules the book issuance desk, computer related interfacing, person identification modules are completed. The security gate module is to be integrated to the system.

4.2.1.4 Robotics Laboratory

- Construction of mobile platform based applications for exhibition purposes amidst staff shortage.
- Second intermediate Workshop on Robotics was successfully completed providing practical exposure to 18 participants and income generated amounting to Rs. 270,000/=.

4.2.2 Research Work in Astronomy

4.2.2.1 Morphology study of comet 2012 S1 (ISON)

Comet ISON found in 2012 was a new comer to the solar system from ort cloud where most of the icy objects found to be lurking around. The study of such new comers provides valuable insights on the origin of the solar system. Previous research works on comet morphology were studied. Optical filters, 445/20nm

Brightline Single band filter and 387/11nm Brightline Single band filter were procured for carrying out the scientific observation on comet ISON. Unfortunately, Comet did not survive during its perihelion passage around Sun on 28th October, 2013. Therefore, Research had to be abandoned.

4.2.2.2 Study of Solar Flares using CALLISTO Radio Spectrometer

CALLISTO is a radio spectrometer which has a log periodic Antenna and a radio frequency receiver that can detect the radio burst emerging from the sun during solar flares. One such a CALLISTO system has been successfully set up at ACCIMT by the scientists of the Space Applications Division of the institute. Now the data gathered from the CALLISTO is being uploaded to the e-Callisto main server at Switzerland. The first result was observed by the system detecting type III solar radio burst. Abstract was submitted to a conference "Radio and Antenna Days of the Indian Ocean" under the title of "Construction of an e-CALLISTO Station in Sri Lanka". Research paper was submitted to the 30th Technical Sessions of the Institute of Physics Sri Lanka (IPSL)

4.2.2.3 Study on P Cygni type stars

The P Cygni type stars have expanding atmospheres and the studies of the star have revealed a unique spectral feature due to the Doppler Effect, called the P Cygni spectral line profile. The P Cygni type star HD 193237(34 Cyg) was observed in medium resolution spectroscopy at the GOTO 45cm telescope at ACCIMT. The equivalent width of the H α line was found to be 49Å. The radial velocity of the blue shifted component of H α line was found to be 221km/s and agrees with the value found in previous studies. The radial velocities of blue shifted absorption components of H β found in the research is 238 Km/s and is higher than the value found in previous studies. The blue shifted component of the HeI line found in this study is around 185km/s and is in agreement with the previous values.

The radial velocity values for blue shifted Balmer series spectral lines H α , H β , H γ and H δ which should be originated in the different regions of the expanding envelope have found to be decreasing with the higher orders of the series. Project completed.

4.2.2.4 Study the different orientations of the disk-like envelopes surrounded in Be Stars through their emission line spectra

Be stars are mainly characterized by their Balmer emission lines in their optical spectra, which originate in an envelope of circum-stellar matter. It has been found that these envelopes are indeed quite flattened and are consistent with

some kind of equatorial disk. Determining the actual geometry of Be star disks has been the focus of many theoretical and observational investigations. In this project 29 H α emission line profiles of randomly selected Be stars were analyzed and identified their disks orientations as Pole-on, normal and shell. Although HD 58343, HD 76868 and HD 56139 stars are in good agreement with the theoretical profiles they showed peculiar behavior in their projected rotational velocities. Also found that the separations between double H α peaks decrease with increasing H α Equivalent Widths. When the Equivalent Widths (EWs) of H α emissions increase, the photospheric absorption line wings start to disappear and at the same time H alpha profiles appear as single peaks instead of double peaks. It was also found that H α emissions with small EWs (EW<10A $^\circ$) have photospheric absorption line wings in both side of the profiles.

4.2.2.5 The following collaborative astronomical research projects were undertaken with the local Universities.

Determination of chemical abundance of few selected stars observed through 45cm telescope at ACCIMT

The curve of growth method is used to find the chemical abundances of the stellar atmospheres. The main objective of this project is to observe several bright stars through the 45cm telescope in medium resolution spectroscopy at Arthur C Clarke Institute (ACCIMT) and find out the chemical abundances of the stars and compare them with the accepted values. Observed few bright stars through 45cm telescope in medium resolution spectroscopy. Observed spectra were wavelength calibrated using IRAF facility.

Theoretical spectra were generated using spectral synthesis computer code "Spectrum" using Kuruz model atmosphere data files corresponding to the observed stars. Equivalent widths of few selected iron spectral lines were measured. Element abundances are being measured using curve of growth method. Research continues.

4.2.3 Research Work in RS/GIS

4.2.3.1 Development of Geospatial Agricultural Information System (GAIS)

The objective of this project is to develop a comprehensive web GIS based application for Geospatial Agricultural Information System for Sri Lanka using open source technologies. The Geospatial Agricultural Information is available with various resources in various formats across the country. The standardized and centralized application of information makes it convenient to disseminate access and visualize the geospatial data to cater the various application user needs.

The project will be worked out in classifying the various tree species in the agriculture sector. Comparing library values and the analyzed values by the clustered imagery data, it will allow to verify the tree species in the agriculture sector and predict the changes in the tree species for a specific area. The summary can be viewed in a graphical user friendly method on the web GIS application.

For the feasibility study, a database is developed for disseminate the spatial data to access from client machine. We have selected 4 sample areas from each two set of Spatial data (two images taken for the study). Using by flowing three steps each of every samples was analyzed.

Developed NDVI(Normalized Difference Vegetation Index) image for each samples. A NDVI is an equation that takes into account the amount of infrared reflected by plants. Live green plants absorb solar radiation. The reason NDVI is related to vegetation is that healthy vegetation reflects very well in the near-infrared part of the electromagnetic spectrum.

Classified NDVI images. The most common approach in classifying composited time series of the NDVI is unsupervised classification, where pixels are assigned to a user-defined number of classes based on a cluster analysis.

Exported the pixel detail in text format from classified NDVI image. Conversion of spatial data in text format is a important for coding to query the data from database.

Thereby 12 images out of 24 were generated and 4 tables out of 8 were created.

Stored the created the NDVI images and pixel details to analyze how the surface variation of vegetation coverage in the same area. Found specific different between the classified 12 NDVI images and 4 tables in the year 1992 and 2001. Project continues.

4.2.4 Internal Capacity Building

The following measures of internal capacity enhancement / improvement were carried out during the year.

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

Accreditation of the Surge Testing Facility

The surge simulation facility was granted accreditation by the Sri Lanka Accreditation Board in year 2012. In order to continue the accreditation, the divisional staff successfully faced the surveillance audit.

Development of RCCB testing facilities

With the objective of enhancing the test & measurement services offered by the division, the RCCB testing facility was established. The division procured the required instruments [28 days & Temperature Rise Test Panel with 3 Phase Source, Endurance Test Setup, Test Panel for RCCB Type Test, Three Phase(3 stations)Temperature Rise & Power Loss Test Bench, High Voltage Tester, Impulse Tester] in order to carry out testing of RCCBs/MCBs as per SLS 1099/IEC 610008-1. The division carried out the necessary infrastructure development work such as the wiring and commissioned the laboratory. Trial runs of the testing were carried out.

Development of facilities for testing switches, socket outlets and power cables

The divisional staff studied the relevant standards (SLS 734 & SLS 948 for testing of switched & unswitched socket outlets, SLS 1000 for switches for household and similar fixed electrical installations, SLS 733 for testing of cables for voltages upto and including 450/750V), formulated test procedures & test set ups and commenced testing of all the electrical tests.

Designing of testing process automation units

The divisional staff designed 02 units to automate the testing processes for testing of socket outlets and switches. (To test the normal operation of switches as per SLS 1000 & normal operation of socket outlets as per SLS 734 & SLS 948)

4.2.4.2 Infrastructure Development in Astronomy

Project Proposal for a National Astronomical Observatory, Sri Lanka

A project proposal to develop a National Astronomical Observatory consisting of a research class 1.5 meter robotic telescope was submitted to the National Planning Dept. The project will play an important role in developing astronomy research and education in the country. The new facility described in this proposal will be the largest optical telescope facility in the country. Analyzing Kalpana 1 satellite infrared data the mountain range called “Wehigala Kanda” in Dambulla was selected as a potential site for setting up a National Astronomical Observatory. Using contour maps calculated the approximated length of the road access to the summit of the mountain. Writing the project proposal is completed. Land acquisition is in progress.

Construction of the Remote controlling unit of the automated optical Filter wheel assembly for the 45cm telescope

An optical filter wheel assembly for the 45cm telescope at ACCIMT was designed and developed locally. A Remote control filter selection module was designed and developed for this filter wheel assembly.

4.2.4.3 Trouble-shooting and Repair Service for PCs / Laptops / Printers and UPSs of Non-Technical Divisions

Electronic & Microelectronic division provided trouble-shooting and repair support for office equipment used by non-technical divisions of ACCIMT by recovering faulty PCs/ Laptops/ Printers and UPSs during the year.

4.2.4.4 In-house Software Development

The work undertaken by the IT division during the year to develop the in-house ICT facilities includes,

- Maintenance of the Payroll System with upgrades as and when required.
- Maintenance of the Attendance System with upgrades as and when required.
- Maintenance of the Accounts System with upgrades as and when required.
- Maintenance of the Vehicle Movement and Maintenance System with upgrades as and when required.
- Maintenance of the Invoice System with upgrades as and when required.
- Testing and minor modifications on the ‘On-line Library System’ with RFID tags. (Joint development with the Communication Division where the IT division is responsible for the web based software development.)

4.3 Training Programmes Conducted by the Institute

During the year the institute conducted a variety of training programmes ranging from Continuing Professional Development (CPD) programmes, conducted on several subjects for practicing engineers, technicians and other professionals in the industry, to basic and intermediate level technical training programmes on electronics, computer hardware engineering, etc. A number of training workshops were also conducted under “Vidatha” technology transfer programme.

4.3.1 Continuing Professional Development (CPD) Training Programmes for professionals

4.3.1.1 Modern Electronic Test & Measuring Instruments with Digital Emphasis

One CPD course was conducted for the benefit of the local industry, training 27 industry engineers / technicians / managers, earning an income of Rs. 405,000/= . 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 analysers, etc.

4.3.1.2 Modern Power Electronics

One CPD course was conducted for the benefit of the local industry, training 29 industry engineers / technicians / managers, earning an income of Rs. 290,000/= . The participants were given the knowledge and practical experience on the modern power semiconductors; switch mode power supplies; UPS; power conditioning and protection; energy saving lamps and electronic ballasts; modern batteries and management techniques ; power factor correction and harmonic control etc.

4.3.1.3 Embedded Control Systems

This Continuing Professional Development Course was conducted for three batches during the totaling 90 participants from the industry. These participants on their return do their own design solutions for the industry requirements using the knowledge acquired and the development kits supplied to them. The resource personnel will provide continuous guidance upon completion of the course since it's an attempt to develop Sri Lankan products to the industry needs. The course is well received by industrial community today due to these special attributes. The institute also generated revenue of Rs. 2,000,000/- from the above courses.

4.3.1.4 Professional Course on Electronics / Communications to Sri Lanka Navy

On a special request from the Sri Lanka Navy to train a technical group engaging in electronics and telecommunication equipment maintenance, a training program was planned and conducted. The group consisted of about 20 personnel and the course content customized to their requirements on the topic of both theory and practical sessions. The income generated was Rs. 350,000.00

4.3.1.5 Computer Networking and Linux Server Administration Course (CNLA)

Three 16-Days CPD courses were conducted for the benefit of engineers, technicians, managers and youth to get training on Computer Networking and Free-and-Open-Source Server solutions.

Course	No. of Participants	Duration	Income (Rs)
1. CNLA	20	13 th Oct 2012 - 26 th Jan 2013	380,000/-
2. CNLA	20	24 th Aug 2013 - 21 st Dec 2013	451,200/-
3. CNLA for HETC Project	30	03 rd June 2013 – 19 th June 2013	1,230,750/-

4.3.1.6 Course on the Programmable Logic Controller

Four courses on the Programmable Logic Controller were planned & conducted for the industrialists.

Course	No. of Participants	Duration	Income
1. Programmable Logic Controller Course 2013 (1 st)	14	10 th March - 28 th April	Rs. 182,000.00/-
2. Programmable Logic Controller Course 2013 (2 nd)	19	10 th - 21 st June	Rs. 299,000.00/-
3. Programmable Logic Controller Course 2013 (3 rd)	35	26 th August - 13 th September	Rs. 445,250.00/-
4. Programmable Logic Controller Course 2013 (4 th)	17	13 th October - 03 rd November	Rs. 221,000.00/-
Total Income			Rs. 1,147,250.00/-

4.3.1.7 Short course on Introduction to Remote Sensing and GIS

The 1st 4-day CPD course on ‘Introduction to Remote Sensing and GIS’ was conducted by the Space Applications Division from March 9th to April 6th 2013. 22 persons from several government institutes and Universities participated in the course.

4.3.1.8 The 3 Day Course on Introduction to GPS & Satellite Navigation

The 3 Day CPD Course on Introduction to GPS & Satellite Navigation has been conducted on 3rd, 10th & 17th August 2013 with the participation of 22

participants from different government and private sector institutions. This is the first time such course is conducted by ACCIMT.

4.3.2 Basic and Intermediate Level Technical Training Programmes

4.3.2.1 Practical Electronics to technical personnel of UGC affiliated universities and institutes.

A special request was made by the University Grant Commission under for the Twenty First Century (HETC) World Bank project to up-grade technical personnel knows how in above institutes. A nine day residential program was planned with ample practical exposure on the requested areas. A group of 30 participants followed the program successfully and the ACCIMT also generated an income amounting to Rs. 1.1 Million.

4.3.2.2 Mobile Phone Repairing

This six-day technical courses was conducted for two batches during the year for a total of 54 participants engaged in repairing hand phones / or interested in setting up their own mobile phone repair & service centers, earning an income of Rs. 432,000/-.

4.3.2.3 Computer Hardware Engineering Course

This course which was started towards the end of the year 2012 was successfully completed during year 2013. This was the ninth batch with 40 students and generated revenue was about Rs. 400,000/=. The course content was reviewed this year to accommodate technology advancements in computer hardware. The course participants were school leavers, enthusiastic, teachers and professionals interested in learning computer hardware.

4.3.2.4 Practical Electronic Course

For the 21st time, regular Practical Electronic Course was started with 110 participants and successfully completed during the year. The course participants were school leavers, enthusiastic, teachers and professionals interested in learning electronics. The revenue from the course was approximately Rs.1,100,000/-

4.3.3 “Vidatha” Programmes

In contributing to the Vidatha Programme initiated by the Ministry of Technology & Research, the ACCIMT conducted the following workshops and training programmes during the year 2013. A total of 547 potential

entrepreneurs, channeled through the Ministry of Technology and Research, received training under the said programmes during year 2013.

4.3.3.1 Workshop on Computer Hardware Engineering – 02 days

Workshop helps to develop following underpinning knowledge and skills.

- Introduction to Computers
- Knowledge of Microprocessors, Expansion Cards, Storage Devices, Keyboard & Mouse
- Understanding of Operating Systems
- Introduction & Functioning of peripheral devices such as Multimedia, Monitors, Scanners and Printers
- Computer Networking system
- The methods of maintenance of Personal Computers & trouble shooting

Workshop on TV Antenna Design – 02 day

Workshop helps to develop following underpinning knowledge and skills.

- Introduction of antennas
- All necessary information of manufacturing 500 MHz Corner Reflector Antenna & 200 MHz Yagi Antenna
- Introduction and design of Booster circuit

Workshop on Mobile Phone Repair – 02 days

Workshop helps to develop following underpinning knowledge and skills.

- Introduction to mobile phone communication systems
- Mobile phone troubleshooting hints
- Introduction to cellular communications principles
- Circuit analysis and troubleshooting of Mobile Phones

Workshop on Practical Electronics – 02 days

Workshop helps to develop following underpinning knowledge and skills.

- Introduction of Passive components
- The topologies of winding a 230V to 12V step down transformer
- Practical knowledge of manufacturing 12 V regulated power supply
- Introduction of FM theories
- Practically design a FM radio set
- Knowledge and practical experiences of Digital electronics

Workshop on TV and Radio Repair – 03 days

Workshop helps to develop following underpinning knowledge and skills

- Introduction of basic Electronics components
- Basic theories of Modulation & Demodulation
- Basic electronics modules in Radio & Television
- Practical enhancement of basic electronic modules & troubleshooting techniques of Black & White and colour TVs

Workshop on PCB Construction – 03 days

Aimed for people with good electronic knowledge and ability to identify electronic components. At the end of the programme the participants will be familiarized with circuit symbols and Orcad software.

The programme will cover schematic drawings and layout drawings of a circuit. Participants will be given hands on experience on PCB construction after drawing a layout. PCB construction will be done using screen printing. The participants will also be trained on building the circuits and testing for functionality.

	Name of Workshop	Number of workshops which held in 2013	Total number of participants
01	Computer Hardware Engineering	03	133
02	TV Antenna Design	02	72
03	Mobile Phone Repair	03	108
04	Practical Electronics	03	100
05	TV and Radio Repair	03	108
06	PCB Construction	01	26
	Total	15	547

In addition, the ACCIMT conducted one workshop and trained 22 potential entrepreneurs under the Vidatha Restructuring Programme, a special programme conducted by the Ministry of Technology and Research.

Special Programme in TV Repairing - 02 days

Aimed for people with good electronic knowledge and currently involved in Electronic equipment repair business preferably Television repairing.

- Introduction to basic electronic components
- Basic theories of Modulation & Demodulation

- Introduction to electronic modules in TV sets
- Practical knowledge related to basic electronic modules and troubleshooting
- Question and answer sections to address specific issues and problems

	Name of Workshop	Number of workshops which held in 2013	Total number of participants
01	Special Programme in TV Repairing	01	22
	Total	01	22

4.4 Science & Technology Popularization and Information Dissemination Programmes

4.4.1 Astronomy and Space science Popularization Programs and Information Dissemination

4.4.1.1 Night Sky Observation Camps

Participated as resource persons at the night sky observation camp organized at National Institute of Education at Maharagama. About 300 school children participated in this night sky observation camp.

4.4.1.2 Educational Visits to the ACCIMT

- Lectures and telescope demonstrations were conducted for about 1325 students and 123 teachers visited from 14 schools.
- Lectures and telescope demonstrations were conducted 409 persons from Sri Lanka Navy visited ACCIMT.
- Lectures and telescope demonstrations were conducted 59 persons from Vocational Training Authority visited ACCIMT.

4.4.1.3 Astronomical Information and Space Science Dissemination for Schools

Information on astronomy and space science were disseminated among 40 students.

4.4.1.4 Annual Water Boost Rocket Competition

9th Annual water rocket competition was held on 24th July 2013 at the Moratuwa University grounds. 33 students and 25 teachers participated in this event. Master Inura Kulathunga of Nalanda College, Colombo won the first place of

the competition and he and his teacher Mr. K.S.K Amarasinghe nominated to participate in the APRSAF water rocket competition which was held in Hanoi, Vietnam in December, 2013.

4.4.1.5 Poster competition organized by APRSAF

Organized local Poster competition under the theme of “Space and Me” among school children and selected the best 3 posters for the international competition held during the 20th Session of the Asia-Pacific Regional Space Agency Forum(APRSAF-20), Hanoi, Vietnam, December 3-6, 2013.

4.4.2 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 is to facilitate and provide information to professionals and personnel engaged in Research and Development projects, graduates and postgraduates students, etc.

4.4.2.1 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 and standards etc. Also, The specific magazines allocated to Communication, Information Technology, Space Technologies, Electronics are available in the periodical section.

Total collection:-

Books	- 8773
CD-ROMs	- 745
Video Tapes	- 368
Audio Tapes	- 94
VCDs	- 130
DVDs	- 87

New Acquisitions

Books	-	109
CD ROMS	-	04
VCD	-	01
DVDs	-	02

4.4.2.2 Services

- Lending & Reference Facilities:- ACCIMT staff and trainees
- Reference Facilities: - Visiting lectures and instructors, Graduate and Postgraduate students engage in projects, Course Participants, and Personal and Institutional membership.
- 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.
- Service to Community:- Membership offers for the professionals in the public and private organizations, Information & document supply service professionals & scholars.

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

Those who wish to get the information about the collection can access our on-line catalogue through the internet (www.accimt.ac.lk) computers are also provided for our clients to search and access the library collection via our LAN. Client can search for materials by Author, Title or Key words.

Digital Library (E-Repository) <http://dl.accimt.ac.lk/>

4.4.3 Exhibitions

The Institute participated number of public and technological exhibitions in the Year 2013, including the National Engineering Exhibition ‘Techno 2013’ organized by the Institution of Engineers, ‘Deyata Kirula 2013’ National Exhibition and ‘Technology Marketplace 2013’ Exhibition organized by the Ministry of Technology and Research.

	Exhibition / Event	Dates
1	Deyata Kirula National Exhibition 2013 Ampara	23 rd to 29 th of March
2	Techno 2013, BMICH	12 th to 14 th of October
3	Technology Marketplace 2013, BMICH	14 th and 15 th of December

Further to that, the institute was represented at the following exhibitions and events.

	Exhibition / Event	Dates
1	“SeethawakaAbimana 2013”, Sri Piyarathana Collage, Padukka	10 th to 12 th of January
2	World Water Day, BMICH	20 th to 22 nd of March
3	World Science Day DharmapalaVidyalaya, Pannipitiya	11 th November
4	World Science Day GnanodayaNavodya School, Kalutara	14 th November
5	ICT Exhibition, SwarnamaleeBalikaVidayala, Kandy	29 th November to 1 st of December

4.4.4 Special Events

4.4.4.1 Arthur C Clarke Memorial Lecture - 2013

A memorial lecture was organized on 25th of March 2013 at the Bandaranayake Center for International Studies to mark the fifth anniversary of the demise of Sri Lankabhimannya Sir Arthur C Clarke, the founder patron of the institute. The lecture was delivered by Prof. Gehan Amaratunga, Professor of Engineering and Head of Electronics, Power and Energy Conservation at the University of Cambridge.

The lecture, titled “Value creation for economic development through technology”, was attended by a large audience of policy makers, senior public officials, engineers, scientists, academic and other professionals.

4.4.4.2 Conferences

CEOs’ forum on space technology applications for national development

The CEO's forum aims to create awareness about space technologies whilst allowing for the possibility of collaboration between CEOs and senior executives of public sector agencies who are either already using these applications, or are planning to do so in the future.

Honorable Minister of Technology and Research Patali Champika Ranawaka addressed the forum. There were few presentations from a panel of experts representing the United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP) and the National Remote Sensing Centre in India (NRSCI). The Chief of the Space Applications Section from UNESCAP, Bangkok Dr. Wang Keran was presenting alongside Dr. Michio Ito, Disaster Risk Reduction Expert in the Space Application Sector of UNESCAP. Deputy Director of the National Remote Sensing Centre in India, Dr. P.G Diwakar also served as a resource person.

The forum was spearheaded by the Arthur C Clarke Institute for Modern Technologies (ACCIMT), an institution which has the mandate to introducing modern technologies to the country is also designed as the national focal point for space technology.

4.5 Publications:

A research paper titled “Determination of spectral parameters of few selected bright stars using spectrum synthesis method” was Presented and published at the Annual Sessions of SLAAS, in December 2013.

A research paper titled “Observation of Solar Radio Bursts using e-Callisto System” was prepared for 30th Technical Sessions of the Institute of Physics Sri Lanka (IPSL)

A research paper titled “Remote sensing based analysis of urban heat islands with vegetation cover in Colombo city, Sri Lanka using Landsat-7 ETM+ data” was published in Urban Climate, Elsevier B.V. Publication.

A research paper titled ”A remote sensing and GIS approach for analysis of urban green spaces for development planning in Colombo, Sri Lanka” was published in Urban Forestry & Urban Greening, Volume 12, Issue 3, Elsevier B.V. Publication

5.0 Human Resources Development

5.1 Staff Position

As per the Scheme of Recruitment approved by the DMS letter Ref. DMS/F2/61/41287 of 19/11/2012, the following appointments and promotions were done.

Accordingly, Seventeen (17) new appointments were done during the year 2013. Two Research Engineers and one Electronics Engineer were among them. Six (6) staff grade employees were resigned and five (5) of them were Research Engineers. The other employee is Deputy Director (Administration)

Total cadre approved for the year 2013 was 176. Out of them 83 positions were filled and 93 vacancies exist as at 31st December 2013' Details are in Annex I.

Fourteen (14) internal recruitments and promotions were done during the year. One Principal Research Engineer position, two Senior Engineer positions and one Research Scientist position were among them and the details are given in Annex I. Staff Grade positions are given in the Annex II.

5.2 Post Graduate Degree /Professional Development Courses/Workshops

Title of the Course	Course Duration	No. of Participants
Fire Demonstration	1 day	47
Staff Development Training Programme	1 day	48
Work Shop on "Productivity & 5S implementation"	1 day	
Work Shop on "Productivity"	1 day	
Accreditation Certificate Bodies	2 days	01
Design of Electrical Installation	4 days	01
Measurement Traceability and calibration in laboratory Testing	1 day	09
Protecting building from lightning damage	1 day	01
Protection of Equipment and Data Systems From lightning surges	1 day	02
Financial Reporting in compliance with accounting Standards	2 days	01
Patent Drafting	2 days	01
Disciplinary Management	2 days	01
Diploma in Tamil	1 year (1 weekend)	01
New trends of deweydesemalclacification	1 day	01
National Conference on Library and Information Science	1 day	01
Protecting building from lightning damage	1 day	01
Compus Network Basics and trouble Shooting	2 days	01
Business Writing for administrative professionals	2 days	01
Super 5S & KAIZEN Management	3 days	02
Operation & Maintenance of Generators	2 days	01
Sri Lanka Public Sector Accounting Standards	2 days	02
Salary Conversions	1 day	02
Communication Skills for Executives	1 day	01
Certificate Course in Human Resource Management		01
Procurement principals& management	2 days	01
Seminar on Effective Proposal Writing	1 day	07

5.3 Official Overseas Visits – 2013

Official Visits abroad for 2013

Name/Designation	Country Visited	Duration	Purpose
Prof. H.Y Ranjith Perera, Chairman	Hanoi, Vietnam	3 – 6/12/2013	Participate at the 20 th Session of the Asia- Pacific Regional Space Agency Forum (APRSAF – 20)
Eng. P S Panawennage, Director General /CEO	Hong Kong, China	5 - 9/8/2013	To participate at the Stakeholders Meeting on Regional Cooperative Mechanisms on Space Applications in Asia Pacific Region and the Regional Training Workshop on Applications of Space Technology for Disaster Risk Management and Sustainable Development
-do -	India	20 –21 /11/2013	Attending the 18 th Meeting of the Board of Governors of the Centre for Space Science and Technology Education in Asia and the Pacific (CSSTE-AP)
-do-	Thailand	26 -28/11/2013	Attending the 17 th Intergovernmental Consultative Committee on Regional Space Application Programme (RESAP) of UNESCAP and the High Level Decision Makers Meeting on Implementing the Asia-Pacific Five years Action on Space Technology for 2012
Mrs.J P D S Athuraliya, Principal Research Engineer	India	13/5- 17/5/2013	Equipment Training on RCCB Tester
Mrs. L N Ratnayake, Senior Research Engineer	India	-do-	-do-
Mr. J K Jayawardena Senior Research Engineer and Acting Senior Deputy Director	Seoul, Korea	12/08 to 14/08/2013	To participate at the Multi–Year Programme on Advanced Railway Operation organized by the Korea International Co-operation Agency (KOICA)
Mr. P D S Pushpakumara, Research Scientist	-do-	-do-	-do-
Mr. G D N Silva, Engineering Assistant	-do-	-do-	-do-

Mr. R P Dasanayaka, Systems Analyst	India	7/1 - 29/3/2013	To participate at the training programme on “Internetworking Design and LAN WAN Administration” under ITEC Programme
Mr. U D Niriella, Research Engineer	India	8/3 - 10/5/2013	To participate at the Training programme on “Standardization and Quality Assurance” under the ITEC Programme
Mr. I P Senananayake Research Engineer	India	22- 26/7/2013	To participate at the International Training Programme on ‘National Flood Risk Mapping, Modeling and Assessment’”
Ms. M L Karunarathne, Systems Analyst	30/3 – 5/7/2013	India	To participate at the training Programme on “ Advanced Certificate in Web Design and Development ” under ITEC Programme.
Mr. J Adassuriya, Research Scientist	India	1/12/2013 - 5/2/2014	To complete the M.Tech Degree in Space and Atmospheric Science
Mr. S A ASiriwardhana Engineering Assistant	India	18/2/ - 12/4/2013	To participate at the training programme on “Broadband Technologies and Future Trends”
Mr. M R M Rila, Research Scientist	Seoul, Korea	28/10 – 16/11/2013	To participate at the ESCAP-KOICA joint Capacity Building Programme on Space Technology and GIS Applications for Disaster Risk Reduction

5.4 Staff Grade Employees As at 31-12-2013

S/No.	Name	Designation
1.	Eng. S Panawennage	Director General/CEO
2.	Mrs. K Ediriweera	Additional Director (Technical Operations)
3.	Mr. W A P Silva	Additional Director (Admin. & Finance)
4.	Mrs. S A Godamunne	Senior Deputy Director (Finance)
5.	Mrs. J P D S Athuraliya	Principal Research Engineer
6.	Mr. J K Jayawardena	Principal Research Engineer

7.	Mrs. L N Ratnayake	Senior Research Engineer
8.	Mrs. L R N Somathilake	Senior Systems Analyst
9.	Mrs. P D C Janashanthi	Senior Electronics Engineer
10.	Mr. B A Jayasinha	Senior Software Engineer
11.	Mr. R A S S Gunasekera	Senior Research Scientist
12.	Mr. S A Welikala	Senior Deputy Director (Industrialization)
13.	Mr. R P Dasanayake	Senior Systems Analyst
14.	Mr. S P K K A Liyanage	Librarian – Grade I
15.	Mrs. M A D C Medagama	Accountant
16.	Mrs. G H C Jayarani	Deputy Director (HR)
17.	Mr. C K Wijayawardena	Deputy Director (Media)
18.	Mr. R A Gamini	Assistant Director (Administration)
19.	Mr. N I Medagangoda	Research Scientist – (AR 2)
20.	Mr. J Addassuriya	Research Scientist – (AR I - Grade I)
21.	Mr. T C Peiris	Research Scientist – (AR I - Grade II)
22.	Mr. P D S Pushpakumara	Research Scientist – (AR I - Grade II)
23.	Mr. J S B Ratnayake	Internal Auditor
24.	Mrs. Dilkusha de Silva	Confidential Secretary
25.	Mrs. V K Aluthge	Confidential Secretary
26.	Mr. N T M Sajith	Research Engineer (AR 1-Grade II)
27.	Ms T V JayasingheArachchi	Research Engineer (AR 1-Grade II)
28.	Mr C M Karunarathna	Research Engineer (AR 1-Grade II)

29.	Ms M L Karunarathna	Systems Analyst (AR 1-Grade II)
30.	Mr A R M Rila	Research Scientist (AR 1-Grade II)
31.	Mr W R S C Ranatunga	Research Engineer (AR 1-Grade II)
32.	Mr U D Niriella	Research Engineer (AR 1-Grade II)
33.	Ms K G Lakmali	Rsearch Engineer (AR 1-Grade II)
34.	Mr W R W M Y S B Bulumulla	Research Engineer (AR 1-Grade II)
35.	Mr. C R Ranasinghe	Research Engineer (AR1 – Gr. II)
36.	Ms.N A A NadeeshaDilrukshi	Research Engineer (AR1 – Gr. II)
37.	Ms. Vijayasothy V	Electronic Engineer (AR1 – Gr. II)
38.	Mr . R A Gamini	Asst. Director (Administration)
39.	Mr. S A ASiriwardena	Engineering Assistant
40.	Mr. E B D P Jayadewa	Engineering Assistant
41.	Mr P K P Anuruddha	Engineering Assistant
42.	Mr. G D N de Silva	Engineering Assistant
43.	Mrs. W B A Weerawarnasuriya	Training Officer
44.	Mrs. H C Weerasekera	Confidential Secretary
45.	Mr. J A K Jayakody	Administrative Officer
46.	Mrs. M L A N Pushparani	Accounts Officer

6.0 Final Accounts for Year 2013

6.1 Public Sector Entity - Statement of Financial Position as at 31st December 2013

	NOTE	2013 Rs.'000 s	2012 Rs.'000 s
ASSETS			
Current Assets			
Cash and Cash Equivalents	2	20,515	13,286
Trade and Other Receivables	3a&b	43,686	43,054
Inventories / Stocks	4	9,669	10,237
Prepayments	5	16,366	1,617
		90,236	68,194
Non - Current Assets			
Investments	6	4,596	4,550
Property , Plant and Equipment	7	157,034	115,919
		161,630	120,469
Work - in - Progress-Construction			24,543
Total Assets		251,866	213,206
LIABILITIES			
Current Liabilities			
Payables	8	10,998	5,503
Accrued Expenses	9	2,991	6,392
		13,989	11,895
Non - Current Liabilities			
Deferred Income	10	16,397	11,315
Provision for Gratuity	11	15,718	14,961
		32,115	26,276
Total Liabilities		46,104	38,171
Net Assets		205,762	175,035
NET ASSETS / EQUITY			
	12		
Capital contributed by Govt		220,930	187,862
Reserves		67,492	67,220
Accumulated Surplus/(Deficit)		(82,660)	(80,047)
Total Net Assets / Equity		205,762	175,035



Director General



Senior Deputy Director (Finance)

ARTHUR C CLARKE INSTITUTE FOR MODERN TECHNOLOGIES**PUBLIC Sector Entity – Statement of Financial Performance for the Year Ended 31st December 2013**

	2013	2012
	Rs.'000	Rs.'000
Revenue		
Recurrent Grant	72,676	69,460
Other Revenue	24,613	36,641
Revaluation on disposed Motor Vehicles		2,025
Amortization	19,359	16,413
Total Revenue	116,648	124,539
Expenses		
Personal Emoluments	54,326	48,935
Travelling Expenses	2,092	1,692
Supplies & Requisites	5,762	3,936
Depreciation	19,359	16,413
Repairs & Maintenance	4,788	4,322
Transportation, Communication		
Utility & Other Services	13,415	13,982
Project Expenses	10,239	16,283
Other Operating Expenses	709	297
Total Expenses	110,690	105,860
Surplus / (Deficit) for the period	5,958	18,679
Income & Expenditure Appropriation Account for the Year Ended 31.12.2013		
Surplus / (Deficit) for the period	5,958	18,679
Transfer of surplus out of generated funds from PC a/c	(Note 13) (8,571)	(6,379)
Net Surplus/(Deficit) for the period	(2,613)	12,300

**ARTHUR C CLARKE INSTITUTE FOR MODERN
TECHNOLOGIES**

**Public Sector Entity - Statement of Changes in Net Assets / Equity for the Year Ended
31st December 2013**

**Rs.
000s**

	Govt. Capital Grant	Govt. Capital Grant (Non Monetary)	General Reserve	Celltel Donation	R & C Fund	Foreign Grant	Re-Valuation Surplus	Other Grants & Donations	Revolving Fund	Directors Fund	FINDS Grant	NASDA Grant	Accumulated Surplus/ (Deficit)	Total
Balance as at 1st Jan 2012	164,698		273	213	1,068	3,464	29,608	23,341	1,830	764	3,809	443	(92,347)	137,164
Grants received	23,727													23,727
Amortization	(13,243)	(3,170)												(16,413)
Gain on Fixed Assets Revaluation							(2,025)							(2,025)
Fixed Assets/Tools		15,850						3,204						19,054
Depreciation								(839)						(839)
Other Receipts					273				1,780					2,053
Interest Income											13			13
Expenses														0
Surplus for the period													12,300	12,300
Balance as at 31st Dec 2012	175,182	12,680	273	213	1,341	3,464	27,583	25,706	3,610	764	3,822	443	(80,047)	175,034
Balance as at 1st Jan 2013	175,182	12,680	273	213	1,341	3,464	27,583	25,706	3,610	764	3,822	443	(80,047)	175,034
Grants received	52,427													52,427
Amortization	(16,189)	(3,170)												(19,359)
Gain on Fixed Assets Revaluation														0
Fixed Assets/Tools								101						101
Depreciation								(692)						(692)
Other Receipts									1,358					1,358
Interest Income											26	129		155
Expenses											(83)	(566)		(649)
Surplus for the period													(2,613)	(2,613)
Balance as at 31st Dec 2013	211,420	9,510	273	213	1,341	3,464	27,583	25,115	4,968	764	3,765	6	(82,660)	205,762

ARTHUR C CLARKE INSTITUTE FOR MODERN TECHNOLOGIES

6.2 Indirect Method Cashflow Statement

Cashflow Statement for the Year Ended 31st December 2013

	2013 Rs.000s	2012 Rs.000s
Cash flows from operating activities		
Surplus/(deficit) from ordinary activities	(2,613)	12,300
Non-cash movements		
Depreciation	20,051	16,413
Amortization	(20,051)	(16,413)
Revaluation / W/off adj	-	
Increase in payables	2,094	4,860
Increase in provisions relating to employee costs – Gratuity	757	556
Increase in other current assets	(14,181)	(643)
Increase in receivables	(632)	(4,890)
Deferred revenue	5,082	(4,700)
Interest income	(1,594)	(1,516)
Deficit on disposal of property plant & equipment		
Net cash flows from operating activities	(11,087)	5,967

	2013 Rs.000s	2012 Rs.000s
Cash flow from Investing Activities		
Purchase of plant and equipment proceeds from disposal of .a	(35,931)	(41,183)
Fixed assets received on grants		840
Work in Progress		(24,543)
Capital investments on other financial assets	(46)	(368)
Changes in grants	272	2,394
Interest income	1,594	1,516
	<hr/>	<hr/>
Net cash flows from investing activities	(34,111)	(61,344)
Cash flow from Financing Activities		
Capital grant	52,427	39,577
	<hr/>	<hr/>
Net Cash flows from financing activities	52,427	39,577
Net increase/(decrease) in cash and cash equivalents	7,229	(15,800)
Cash and cash equivalents at beginning of period	13,286	29,086
	<hr/>	<hr/>
Cash and cash equivalents at end of period	20,515	13,286

6.3 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 Bandaranayake Mawatha, Katubedda, Moratuwa.

Principle Activities and Nature of Operations

The Principle 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 was as at the end of the reporting period was 83.

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 appropriate disclosures are made with regard to fair value under relevant notes.

c) Comparative Information

Comparative information including quantitative, narrative and descriptive information 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 recognized 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 derecognizes the replaced part, and recognizes the new part with its associated useful life and depreciation. All other repair and maintenance costs are recognized 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 capitalized. Other subsequent expenditure is capitalized 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 charged to the income statement on the straight-line method at the following rates per annum in order to write off the cost of such assets over their estimated useful lives.

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

Full year depreciation is provided in the year of acquisition and no depreciation is provided in the year of disposal.

An item of property, plant and equipment is derecognised upon disposal or when no future economic benefits are expected from its use. Any gain or loss on derecognition of the assets is included in the income statement in the year the asset is derecognised.

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 comprise cash in hand, deposits at bank and investment of surplus funds in Treasury Bills.

Cash flow statement has been prepared using the “indirect method”.

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) Provision for retiring gratuity

The Institute has adopted the benefit plan as required under the payment of Gratuity Act No.12 of 1983 for all employees who have completed more than one year of continuous service with the Institute. The Gratuity Liability is not externally funded or actuarially valued.

Defined benefit plans estimate the amount of benefit that an employee will receive on retirement. Usually dependent on one or more factors such as age, years of service and compensation.

b) Defined contribution plans

A defined contribution plan is a post-employment plan under which an entity pays fixed contribution into a separate entity and will have no legal or constructive obligation to pay a further amount. Obligations for contributions to defined contribution plans recognized as an expense in the income statement as and when they are due.

c) Employees' Provident Fund

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

d) 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 income statement in the same period in which the expenses are recognized. Grants that compensate the Institute for the cost of an asset are recognized in the income statement on a systematic basis over the useful life of the related asset.

Revenue Recognition

Revenue is recognized 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 recognized as revenue on accrual basis.
- b) Project income, consultancy income are recognized 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 recognized in the income statement 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 income statement on accrual basis.

Cash Flow Statement

The cash flow statements have been prepared in accordance with SLPSAS 2. Interest received is classified as investing cash flows.

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.

ARTHUR C CLARKE INSTITUTE FOR MODERN TECHNOLOGIES

6.4 Detailed Financial Performance for the Year Ended 31st December 2013

2012		2013	
Rs.		Rs.	
	<u>Revenue</u>		
69,460,000.00	Govt. Grant - Recurrent		72,675,500.00
5,520,000.00	Course Fees	10,255,450.00	
21,937,623.74	Project Income / Consultancy Income	5,958,624.02	
1,687,644.65	Vidatha Income	2,539,913.06	
2,757,545.82	Divi Neguma Income		
1,185,653.74	Interest Income from Treasury Bills	1,273,731.71	
330,763.97	Interest Income	319,877.48	
259,000.00	Tender Deposits	80,000.00	
861,560.28	Sundry Income	4,186,023.14	
2,101,361.60	Income from Disposal of Fixed Assets		
2,025,000.00	Revaluation on disposed Motor Vehicles		
<u>16,413,307.76</u>	Amortization	<u>19,358,850.31</u>	<u>43,972,469.72</u>
124,539,461.56	Total Revenue		116,647,969.72

Expenses

Personnel Emoluments

36,037,294.96	Salaries & Wages	39,236,404.72	
776,531.38	Overtime & Holiday Pay	1,016,557.59	
256,000.00	Allowance to Board Members	214,400.00	
4,843,157.00	Other Allowances	5,539,965.34	
5,099,399.91	E.P.F.	5,454,643.25	
1,019,997.28	E.T.F.	1,090,927.93	
<u>902,263.50</u>	Gratuity	<u>1,772,936.50</u>	54,325,835.33
48,934,644.03			
2012		2013	
Rs.		Rs.	

Travelling Expenses

891,950.06	Travelling - Local	597,505.75	
<u>800,236.86</u>	Travelling - Overseas	<u>1,494,596.80</u>	2,092,102.55
1,692,186.92			

Supplies & Requisites

847,517.02	Stationery & Office Requisites	1,108,819.97	
1,033,564.78	Fuel	1,769,415.80	
86,886.93	Mech & Elect Goods / Lab Components	399,265.13	
103,486.00	Uniforms	205,519.00	
53,989.05	Periodicals	33,522.52	
805,409.25	Welfare Items	841,905.14	
<u>1,005,295.45</u>	Exhibitions & Seminars	<u>1,403,918.81</u>	5,762,366.37
3,936,148.48			

	Repairs & Maintenance		
1,998,469.05	Buildings	2,786,309.56	
920,566.36	Equipment	226,707.39	
1,403,211.12	Motor Vehicles	1,775,505.71	
<u>16,413,307.76</u>	Depreciation	<u>19,358,850.31</u>	24,147,372.97
20,735,554.29			
	Transportation, Communication Utility & Other Services		
1,187,382.15	Telephone	1,120,439.82	
106,467.00	Postage	108,455.00	
36,520.00	Bank Charges	100,260.88	
1,878,369.66	Insurance	2,413,734.50	
1,126,988.80	Advertisement	1,905,825.60	
119,664.80	Hospitality & Entertainment	194,404.30	
1,853,024.55	Security	1,495,574.80	
1,577,706.80	Other Expenses	1,000,283.94	
3,531,948.74	Electricity	4,588,235.42	
461,509.79	Water	487,532.34	
<u>2,101,361.60</u>	Expenses of Disposal of Fixed Assets	<u>13,414,746.60</u>	
13,980,943.89			
2012		2013	
Rs.		Rs.	
	Project Expenses		
12,153,792.78	Courses/Projects	8,087,654.59	
2,473,806.71	Divi Neguma		
<u>1,655,266.46</u>	Vidatha	<u>2,151,631.81</u>	10,239,286.40
16,282,865.95			

Other Operating Expenses

	117,997.65	Membership Fees	62,977.88	
	179,451.25	Staff Training	645,640.40	708,618.28
	297,448.90			
105,859,792.46		Total Expenses		110,690,328.50
18,679,669.10		Surplus / (Deficit) for the period		5,957,641.22

(2) Cash & Cash Equivalents

	Rs.
Bank of Ceylon - C/A 7054733	1,072,483.57
Bank of Ceylon - C/A 307144	6,422,197.99
FINDS Bank A/c - S/A 326764	264,630.65
NASDA Bank A/c - S/A 328391	5,334.89
Directors Fund Bank A/c - C/A 307399	64,221.76
Revolving Fund Bank A/c- C/A 2479737	3,573,457.97
Invest. of surplus funds in Treas.Bills - Projects/Courses Fund	6,433,124.46
Invest. of surplus funds in Treas.Bills - Directors Fund	907,620.80
Invest. of surplus funds in Treas.Bills - Revolving Fund	1,772,150.31
	<u>20,515,222.40</u>

(3a) Trade and Other Receivables

	Rs.	
Staff Debtor – TG	17,750.00	(Schedule 3a.1)
Insurance Corporation Debtor	9,700.00	
Accounts Receivable – TG	1,942,050.40	(Schedule 3a.2)
Accounts Receivable - P/C	16,739,828.71	(Schedule 3a.3)
Debtor - Miss K.N.Lakmali	129,784.11	
Debtor - Mr P T Fernando	4,000.00	
Debtor - Mr.Jayathu Fernando	106,894.72	
Debtor - Mr B R P Perera	115,699.66	
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	80,500.00	(Schedule 3a.4)
Staff Loans	7,601,561.00	(Schedule 3a.5)
Motor Cycle Loan	451,683.00	(Schedule 3a.6)
Motor Vehicle Loan	1,558,824.00	(Schedule 3a.7)
FINDS Control	174,497.13	
TG Control	1,619,298.31	
	<u>30,763,362.05</u>	

(3b) Trade and Other Receivables

Work-In-Progress

Rs.

Courses

Modern Power Electronics 2013	79,449.22
C H E C 2013	242,001.01
E C S 22	748.60
	<hr/>
	322,198.83

Projects

RS - GIS Project	2,050.00
Traffic Light System	2,797.57
Telescope Project	2,751.10
Tea Colour Separator Project (Comm Div)	4,010,096.13
National Astronomical Observatory	3,502.00
Web Controlling Telescope Project	5,344.22
Callisto Radio Spectrometer	66,769.55
Solar Street Lamp - MOST (Electr. Div)	109,638.77
Robotics Laboratory Project (Comm Div)	90,637.38
RFID Library Automation - ACCIMT (Comm Div)	87,884.36
University of Buddhist Pali - Homagama (IT Div)	87,642.58
Wireless Irrigation Automation Project (Electronic Div)	55,222.91
SLR R C M9 LPM Project	1,322,829.04
RCM9 PM 2011 - 07 Railway Project (Comm Division)	1,245,218.80
Traffic Light System (Inhouse) (Electronic Division)	560,402.90

Hardware Recovery of Jingle Boxes HRJB	53,590.19
Sri Lanka Railway RM 9 2012- 12 (Comm Div)	2,310,898.76
Battery Testing Project 2013 Q2	102,462.00
2012 - 13 NWSDB	579,616.05
Imagine/Telemedicine Project	223,385.66
2012 Peoples' Bank CCTV Project	26,500.00
2013 - 18 - CHEC - UGC Project	19,500.00
SLIIT Project 2 - Solar Hording Project	83,323.37
Project 2012/ 2013 - SS - CCTV - NWSDB	28,419.53
2013 - 22 - SLR Project	57,486.90
ACC/Comp/Pro/Rep 1302	630.00
Battery Testing Project 2013 - Q3	148,973.66
Battery Testing Project 2013 - Q4	19,383.00
2013 - 26 - SL Navy	85,898.19
2013 - 18 - SLR Project	1,177,482.18
Holcim Pvt Ltd Project - Puttlam	2,400.00
2013 - 23 LTL Measurement	425.00
MMS Project for Agriculture Dept (IT Division)	323.75
Agriculture Dept Project Gannoruwa (ISD)	1,500.00
Calibration Jobs	<u>25,000.00</u>
	<u>12,599,985.55</u>
	<hr/>
Total (3a+3b)	<u>43,685,546.43</u>

(4) Inventories/Stocks

Electronic Components	4,121,157.01	
Stationery	1,231,622.96	
Others	53,533.48	
Electrical & Mechanical	122,328.13	
Welfare	65,733.00	
Accessories –TG	199,218.03	
Inventory Items – TG	518,035.98	
Inventory Items - Projects (P/C)	1,990,378.52	
Tools – TG	1,366,569.64	
	<u>9,668,576.75</u>	

(5) Prepayments

	Rs.	
Pay-in Adv – TG	1,438,312.42	(Schedule 5.1)
Pay-in Adv - P/C	50,800.00	(Schedule 5.2)
W I P Elevator	1,862,722.60	
S D B Equipment	12,993,368.07	
Stamp Imprest	20,453.00	
	<u>16,365,656.09</u>	

(6) Investments

	Rs.	
Invest. of surplus funds in Treas.Bills - FINDS Grant	4,596,195.32	
	<u>4,596,195.32</u>	

(7) PROPERTY, PLANT & EQUIPMENT

Rs.							
	Cost as at 01.01.13	Additions during the year	Total as at 31.12.13	Cum Dep as at 01.01.13	Depn during the year	Cum Dep as at 31.12.13	W D V as at 31.12.13
Buildings	47,840,724.40	49,134,917.10	96,975,641.50	11,669,359.24	4,848,782.08	16,518,141.32	80,457,500.18
Satellite Antenna	2,959,797.83	-	2,959,797.83	2,854,054.09	45,112.00	2,899,166.09	60,631.74
Computers	46,968,557.50	1,948,340.74	48,916,898.24	30,326,521.56	3,264,906.95	33,591,428.51	15,325,469.73
Lab Equipment	129,935,372.31	908,526.83	130,843,899.14	90,341,969.07	6,149,967.86	96,491,936.93	34,351,962.21
Office Equipment	19,590,196.69	2,853,232.26	22,443,428.95	12,493,195.37	1,252,947.94	13,746,143.31	8,697,285.64
Furniture & Fittings	8,061,886.66	6,317,324.82	14,379,211.48	6,722,900.21	899,347.42	7,622,247.63	6,756,963.85
Motor Vehicles	28,323,389.00	-	28,323,389.00	14,618,326.02	3,170,000.00	17,788,326.02	10,535,062.98
Library Books	23,359,226.35	4,257.80	23,363,484.15	22,094,034.08	420,066.82	22,514,100.90	849,383.25
	307,039,150.74	61,166,599.55	368,205,750.29	191,120,359.64	20,051,131.07	211,171,490.71	157,034,259.58

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 assets over their estimated Useful lives.

Rates at which the depreciation provided are as follows.

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

(8) Payables

	Rs.	
Accounts Payable –TG	74,544.99	(Schedule 8.1)
Accounts Payable - P/C	65,749.77	(Schedule 8.2)
Salaries & Wages Control	16,170.84	
E.P.F.Control	809,238.35	
E.T.F.Control	97,108.58	
Welfare Society Control	710.00	
Creditor - General Treasury	526,879.99	
AMW Creditor	25,704.00	
Refundable Deposit	459,746.00	
VAT Payable on receipts - T.G	195,231.79	
VAT Payable on receipts - P/C	1,537,775.39	
NBT Payable – TG	31,900.62	
NBT Payable - P/C	251,821.10	
Mr. B R P Perea's D.Loan recovery from Mr. S Rupasinghe	49,395.00	
Mr. B R P Perea's D.Loan Interest recovery from Mr. S Rupasinghe	5,276.20	
Stamp Duty Payable – TG	1,750.00	
Paye Tax Payable – TG	121,577.24	
Disbursement Control	1,864,265.07	
Buildings Dept Creditor	984,403.00	
Arpico Interiors – Creditor	1,255,246.51	
PC Control	1,619,298.31	
Retention on payments to Ruwan Traders - Creditor	1,004,668.53	
	<u>10,998,461.28</u>	

(9) Accrued Expenses

	Rs.	
Treasury Fund	2,834,392.20	(Schedule 9.1)
Projects/Courses	156,351.11	(Schedule 9.2)
	<u>2,990,743.31</u>	

	Rs.	
(10) Deferred Revenue	<u>16,396,723.60</u>	(Schedule 10)

	Rs.	
(11) Provision for Gratuity	<u>15,718,154.00</u>	(Schedule 11)

Analysis of Income & Expenditure Appropriation Account

Rs

No	Description	Division	Duration	Income	NBT/VAT/ Stamp Duty	Net Income	Expenditure	Surplus	Surplus			
									Gen Treasury 20%/25%	Utilities 5%	Direct Staff 60%/40%	Indirect Staff 15%/30%
1	Battery Testing Q 3 - 2012	Electronics	01.07 - 30.09.2012	438,681.60	54,681.60	384,000.00	36,117.00	347,883.00	69,576.60	17,394.15	208,729.80	52,182.45
2	Battery Testing Q 4 - 2012	Electronics	01.09 - 31.12.2012	349,574.40	43,674.40	305,900.00	38,060.00	267,840.00	53,568.00	13,392.00	160,704.00	40,176.00
3	R M 9 864 - 867 Retention	Communication	25.11.2011 - 24.11.2012	310,000.00		310,000.00		310,000.00	77,500.00	15,500.00	124,000.00	93,000.00
4	Hardware Recovery & Minor Consultancies	Electronics	01.01 - 30.09.2012	173,767.04	21,685.04	152,082.00	14,665.59	137,416.41	27,483.28	6,870.82	82,449.85	20,612.46
5	Intermediate Robotics Workshop 2011 Dec-2012 Jan	Communication	Dec 2011 - Jan 2012	198,000.00	3,960.00	194,040.00	94,643.10	99,396.90	19,879.38	4,969.85	59,638.14	14,909.54
6	Introduction to Astronomy workshop	Space Applications	21 & 22 Dec 2012	261,000.00	5,220.00	255,780.00	101,047.00	154,733.00	30,946.60	7,736.65	92,839.80	23,209.95
7	CHEP Workshop I & II	Communication	Aug - Sep 2012	405,000.00	8,100.00	396,900.00	104,327.31	292,572.69	58,514.54	14,628.63	175,543.61	43,885.90
8 (i)	Programmable Logic Controller - 3rd - 2012	Industrial Services	08 - 30 Nov 2012	364,000.00	7,355.00	356,645.00	69,701.10	286,943.90	57,388.78	14,347.20	172,166.34	43,041.59
8 (ii)	Programmable Logic Controller - 3rd - 2012	Industrial Services	08 - 30 Nov 2012	65,000.00	1,325.00	63,675.00	-	63,675.00	12,735.00	3,183.75	38,205.00	9,551.25
9 (i)	Modern Electronic Components - 2012	Electronics	01 - 05 Oct 2012	390,000.00	7,975.00	382,025.00	111,854.87	270,170.13	54,034.03	13,508.51	162,102.08	40,525.52
9 (ii)	Modern Electronic Components - 2012	Electronics	01 - 05 Oct 2012	135,000.00	2,725.00	132,275.00	-	132,275.00	26,455.00	6,613.75	79,365.00	19,841.25
10	Project 2012 - 14 - ITN	Communication	22 - 24 Oct 2012	350,000.00	7,075.00	342,925.00	111,070.50	231,854.50	46,370.90	11,592.73	139,112.70	34,778.18
11	Battery Testing Q1 - 2013	Electronics	01.01 - 31.03.2013	460,387.20	57,487.20	402,900.00	78,218.00	324,682.00	64,936.40	16,234.10	194,809.20	48,702.30
12	Project 2011 - WCDT - SLR	Communication	27.09 - 19.12.2012	456,960.00	56,985.00	399,975.00	200,558.85	199,416.15	39,883.23	9,970.81	119,649.69	29,912.42
13	ARS Lakvijaya - CEB	Communication	29.05 - 30.11.2012	567,772.80	70,872.80	496,900.00	207,004.27 **	233,118.45	46,623.69	11,655.92	139,871.07	34,967.77
14	Remote Sensing GIS 2013	Space Applications	Mar - Apr 2013	264,000.00	5,305.00	258,695.00	52,028.00	206,667.00	41,333.40	10,333.35	124,000.20	31,000.05
15	Vidatha - ECS - 2013 - Ratnapura	Communication	Feb - Mar 2013	350,000.00	7,050.00	342,950.00	133,008.14	209,941.86	41,988.37	10,497.09	125,965.12	31,491.28
16	PSTN Phone Testing - SLT (3 - 25 Jan'13)Q1 - 1	Electronics	03 - 25 Jan 2013	359,856.00	44,881.00	314,975.00	10,800.00	304,175.00	60,835.00	15,208.75	182,505.00	45,626.25
17	S L R - RM 864-867 - Retention	Communication	28.04.2012 - 30.05.2013	408,600.00		408,600.00	11,350.00	397,250.00	99,312.50	19,862.50	158,900.00	119,175.00
18 (i)	Project 2013 - 17- UGC	Communication	12 - 28 Mar 2013	1,159,000.00	23,205.00	1,135,795.00	452,227.07	500,000.00	100,000.00	25,000.00	300,000.00	75,000.00
18 (ii)	Project 2013 - 17- UGC	Communication	12 - 28 Mar 2013				-	183,567.93	45,891.98	9,178.40	73,427.17	55,070.38
19 (i)	PSTN Phone Testing - SLT (20 Feb - 11 Mar'13)Q1 - 2	Electronics	20 Feb - 11 Mar 2013	1,052,150.40	131,175.40	920,975.00	20,520.00	500,000.00	100,000.00	25,000.00	300,000.00	75,000.00
19 (ii)	PSTN Phone Testing - SLT (20 Feb - 11 Mar'13)Q1 - 2	Electronics	20 Feb - 11 Mar 2013					400,455.00	100,113.75	20,022.75	160,182.00	120,136.50
20 (i)	CNLA - HETC 2013/01	Information Tech	03.06 - 19.06.2013	1,260,750.00	25,240.00	1,235,510.00	385,451.05	500,000.00	100,000.00	25,000.00	300,000.00	75,000.00
20 (ii)	CNLA - HETC 2013/01	Information Tech	03.06 - 19.06.2013					350,058.95	87,514.74	17,502.95	140,023.58	105,017.69
21 (i)	Wi Fi Router Testing - Sri Lanka Telecom	Electronics	12.09 - 15.10.2013	742,560.00	92,585.00	649,975.00	30,413.26	500,000.00	100,000.00	25,000.00	300,000.00	75,000.00
22(ii)	Wi Fi Router Testing - Sri Lanka Telecom	Electronics	12.09 - 15.10.2013					119,561.74	29,890.44	5,978.09	47,824.70	35,868.52
23	Modern Electronic Test & Measurements	Electronics	29.07 - 02.08.2013	225,000.00	4,650.00	220,350.00	98,887.67	121,462.33	24,292.47	6,073.12	72,877.40	18,219.35
24	GPS & Satellite Based Navigation	Space Applications	03.08 - 17.08.2013	330,000.00	6,750.00	323,250.00	55,412.00	267,838.00	53,567.60	13,391.90	160,702.80	40,175.70
25	Programmable Logic Controller - 2nd	Industrial Services	10.06 - 21.06.2013	299,000.00	6,030.00	292,970.00	54,977.50	237,992.50	47,598.50	11,899.63	142,795.50	35,698.88
26	Programmable Logic Controller - 3rd	Industrial Services	26.08 - 13.09.2013	445,250.00	9,005.00	436,245.00	72,941.00	363,304.00	72,660.80	18,165.20	217,982.40	54,495.60
27	ARS Lakvijaya - CEB (Retention) **	Communication	29.05 - 30.11.2012	56,777.28		56,777.28		56,777.28	11,355.46	2,838.86	34,066.37	8,516.59
				11,878,086.72	704,997.44	11,173,089.28	2,545,283.28	8,571,028.72	1,802,250.43	428,551.44	4,790,438.51	1,549,788.35

** Retention Rs 56,777.28

(12) Net Assets / Equity

	2013		2012
	Rs.		Rs.
Government Capital Grant			
Opening Balance	175,181,564.90		164,697,443.66
Grants received	52,426,936.00		23,727,429.00
Amortization	(16,188,850.31) *		(13,243,307.76)
	<u>211,419,650.59</u>		<u>175,181,564.90</u>

Non Monetary Government Capital Grant **

Opening Balance	12,680,000.00		15,850,000.00
Grants received			
Amortization	(3,170,000.00)		(3,170,000.00)
	<u>9,510,000.00</u>		<u>12,680,000.00</u>

** Value of 2 nos vehicles amounting to Rs 15,850,000.00, received in 2012 was included in the Government Capital Grant, This amount was transferred to non - monetary government capital grant a/c in 2013.

Reserves

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	27,582,504.54		27,582,504.54

Other Grants Donation

Opening Balance	25,706,407.00		23,341,365.17
Fixed Assets received	100,500.00		3,204,509.96
Depreciation	(692,280.76) **		(839,468.13)
Tools received			
	<u>25,114,626.24</u>		<u>25,706,407.00</u>

Revolving Fund

Opening Balance	3,610,120.96		1,830,247.31
Receipts	1,358,335.43		1,779,873.65
Expenses			
	<u>4,968,456.39</u>		<u>3,610,120.96</u>

Director's Fund		
Opening Balance	764,220.86	739,090.00
Receipts	-	30,000.00
Expenses	-	(4,869.14)
	764,220.86	764,220.86
FINDS Grant		
Opening Balance	3,821,958.47	3,809,333.19
Interest Income	25,806.73	12,625.28
Expenses	(83,135.00)	-
	3,764,630.20	3,821,958.47
NASDA Grant		
Opening Balance	442,503.96	440,838.96
Interest Income	128,660.93	1,665.00
Expenses	(565,830.00)	
	5,334.89	442,503.96
	67,491,570.25	67,219,512.92
	2013	2012
		Rs.
Accumulated Surplus/(Deficit)		
Opening Balance –TG	(101,661,494.56)	(102,417,340.76)
Opening Balance - P/C	21,614,923.60	10,070,472.61
Excess of income over expenditure	(2,613,387.50)	12,300,297.19
	(82,659,958.46)	(80,046,570.96)
TOTAL NET ASSETS / EQUITY	205,761,262.38	175,034,506.86

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 அறிபதி திணைக்களம்
AUDITOR GENERAL'S DEPARTMENT



මගේ අංකය
எனது இல. }
My No. }

LS/H/ICCIMT/1/13/35

ඔබේ අංකය
உமது இல. }
Your No. }

දිනය
திகதி }
Date }

07 October 2014

The Director,
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 2013 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 2013 comprising the Statement of Financial Position as at 31 December 2013 and the Statement of Financial Performance, Cash Flow Statement and the Statement of Changes in Equity 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 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 Director of the Institute on 23 May 2014.

1.2 Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these Financial Statements in accordance with Sri Lanka Public Sector Accounting Standards and 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 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 judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those 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 for the effects 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 2013 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 Standards - 02

Although the cash flow statements should be prepared by disclosing cash inflows and outflows during the year under review in accordance with the Standard the following deficiencies were observed.

- (i) Only the net cash flow had been included by setting off the gratuity paid during the year against the annual provision for gratuity.
- (ii) According to the statement of financial position the provision for depreciation for the year on Property Plant and Equipment amounted to Rs.19,358,850 while it was shown in the cash flow statement as Rs.20,051,131.

(b) Sri Lanka Public Sector Accounting Standard - 03

Accounting policies should be introduced in such a manner that the financial position and the financial performance be reliably represented. Nevertheless, a policy in respect of making provision for doubtful debts arising from long outstanding loan balances had not been introduced.

(c) Sri Lanka Public Sector Accounting Standard - 07

Depreciation of an asset should be started since the time it was brought to usable position. Contrary to that, the basis of full depreciation for the year of purchase and not depreciating for the year of disposal had been applied.

2.2.2 Accounting Policies

The following observations are made.

- (a) According to the accounting policy 1.4, following the accrual basis had been indicated. But the project income had been brought to account on cash basis.
- (b) Even though the depreciation percentage should be determined in considering the useful life of an asset, an appropriate depreciation policy had not been adopted in respect of computers and accessories.

2.2.3 Accounting Deficiencies

The following observations are made.

- (a) The expenditure of recurrent nature amounting to Rs.483,175 incurred on training had been brought to accounts as a prepaid expense under current assets instead of being written off against the profit of the year under review.

- (b) A sum of Rs.174,497 to be incurred from the Treasury Grants Account had been charged to the Foundation for the International Non-Governmental Development of Space (FINDS) Account. Although that expenditure had been shown as receivable to the Fund Account under current assets, it had not been posted as a current liability in the Treasury Grants Account and as such the balancing of financial statements had become questionable.

2.2.4 Accounts Receivable and Payable

The following observations are made.

- (i) The unsettled creditors balances amounting to Rs.392,208 older than 3 years included refundable deposits amounting to Rs.243,246 older than 5 years and action had not been taken to bring it into government revenue in terms of Financial Regulation 571(2).
- (ii) Action had not been taken to settle the Value Added Tax, Nation Building Tax, Pay As You Earn Tax and Stamp Duty totaling Rs.2,140,054 which should have been settled during the year under review.

2.3 Non-compliance with Laws, Rules, Regulations and Management Decisions

In terms of Financial Regulation 371(2) of the Financial Regulations of the Democratic Socialist Republic of Sri Lanka advances given for special purposes should be settled immediately after the completion of the purpose for which it was given. However advances totaling Rs.74,463 had been settled in 9 instances after delays ranging from 25 to 95 working days.

3. Financial Review

3.1 Financial Results

Operation of the Institute for the year under review had resulted in a surplus of Rs.5.9 million as compared with the surplus of Rs.18.7 million for the preceding year thus indicating a decrease of Rs.12.8 million in the financial result. Decrease in external project income by Rs.16 million and increase of personal emoluments by Rs.6 million as compared with the preceding year had been the main reasons for the decrease of financial results.

3.2 Analytical Financial Review

The current ratio and the liquidity ratio had been at a high level as 1.6 thus indicating that current assets management had not been at the optimum level.

4. Operating Review

4.1 Performance

The following observations are made.

- (a) None of the activities expected for implementation in the year under review had been quantitatively estimated in the Action Plan for the year under review by showing the performance indicators. As such it could not be evaluated whether the progress achieved had been at the expected level.
- (b) None of the activities relating to the researches of the Robot Machine Laboratory had been done in the year under review.

4.2 Management Inefficiencies

A sum of Rs.12,960,213 had been spent on 25 June 2013 for the purchase of a Residual Current Circuit Breaker including bank charges, training and other expenses. A feasibility study and cost benefit analysis had not been carried out in this connection. This equipment had not been utilized for the intended purpose even by 01 August 2014.

4.3 Underutilization of Funds

Surplus money amounting to Rs.2,215,199 exceeding the requirement for daily operations of the Institute remained idle in a current account.

4.4 Personal Administration

The total approved cadre for the year under review had been 176 whereas the actual cadre had been 83. Accordingly 93 posts or 53 per cent had been vacant. Action had not been taken to fill those vacancies even by 30 April 2014.

5. Accountability and Good Governance

5.1 Action Plan

The Action Plan prepared by the Institute for the year 2013 had not been prepared in accordance with Section 5.1.2 of the Public Enterprises Circular No. PED/12 of 02 June 2003. As the financial information for each activity had not been included therein, it was not possible to ensure whether the targets expected from recurrent and capital expenditure budgets had been achieved.

5.2 Internal Audit

As only the Internal Auditor had been attached to the Internal Audit Unit established it had not been possible to achieve the activities expected from the Internal Audit.

5.3 Budgetary Control

Significant variances between the budgeted expenditure and the actual expenditure ranging from 8 per cent to 92 per cent were observed, thus indicating that the Budget had not been made use of as an instrument of management control.

6. Systems and Controls

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

- (a) Budgetary Control
- (b) Planning and Progress Review
- (c) Assets Management
- (d) Motor Vehicles Control
- (e) Advances Control
- (f) Debtors and Creditors Control
- (g) Stock Control
- (h) Accounting

H.A.S. Samaraweera
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 st December 2013 ,in terms of the section 14/2/C of the Finance act No 38,of 1971.

2.2 Comments on Financial statements

2.2.1 Sri Lanka Public Sector Accounting Standards

(a) Sri Lanka Public Sector Accounting Standard No 02

1. Corrective action will be taken to rectify the discrepancies highlighted in the audit.
2. Corrective action will be taken to rectify the discrepancies highlighted in the audit, about depreciation for the property plant and equipment

(b) Sri Lanka Public Sector Accounting Standard No 03

Action will be taken to grant the provision for doubtful debts for the long outstanding balances identified since 2014.

© Sri Lanka Public Sector Accounting Standard No 07

The present policy adopted by the Institute was the provision for depreciation has been provide for the year of purchase and no depreciation has been provided in the year of disposal.

The policy decision will be taken to implement, to provide the deprecation based on "Assets ready for use "in accordance with the Sri Lanka Public sector Accounting Standard No 7 ,in the year of 2014 onwards .

2.2.2 Accounting Policies

(a) The project and Courses income has been recorded in the accrual basis .That was disclosure under accounting policies 1.4, in the financial statements .However the surplus of project and Courses, has been distributed as per the provisions made by the PF circular 380 issued in relation to universities and the research Institutes .as a result projects and courses income could not be recorded accrual basis due to following Issues.

The surplus generated by the project and courses under PF 380, has been distributed through the Income and expenditure appropriation account. The distribution of surplus can be proceed if the true income and expenses totally recorded in the appropriation account. Some expenses relating to project and courses will be accounted in the following financial year therefore that income would be accounted in the differed revenue account until the finalization.

However the remedial action will be taken to avoid the delay to distribute the income surplus among the employees.

(b) Recommendation will be taken from the department of public enterprises to change the rate of depreciation of property plant and equipment.

2.2.3 Accounting deficiencies

(a) Corrective action will be taken as instructed by the Audit.

(b) Accounting error will be corrected.

2.2.4 Accounts receivable and payable

(1) The total payable Rs 392,208 which include the refundable deposits amounting to Rs 243,246 , the depositors did not submit the slips for their refundable, therefore unrefundable amount will be taken to revenue up to year 2012.

(11) Unpaid Value added tax (VAT) National Building tax (NBT) has been calculated based on the receivable income; therefore the relevant tax could be remitted after realization the said income.

2.3 Non compliances with Laws, Rules, Regulations and Management Decisions

Action has been taken to avoid the delay of settlement of Cash advances, and instructions are given to the staff about this matter at the senior Management meeting.

3. Financial review

3.1 Financial results

The income was increased in the year of 2012 due to mainly, services provided to Department of Railway and the income received from disposal of used vehicles, although the said project was finished in the year of 2013 that was adversely affected to reduce the income in the current year. However the ACCIMT functions will not be considered only the financial rewards as a state research and development organization.

3.2 Analytical Financial review

The ratios have been calculated based on the financial indications and the statistics ,Although our view is that could not be justifiable to measure only based on the financial indications because institute is being involved several activities of research and development

4. Operationg Review

4.1 performance

(a) The performance indicators have been included in the Action plan and as well as parallel report is prepared " Balanced scare card " (BSC) based on the same statistics as instructed by the Ministry of research and development .

(b) The robotics technology is a new subject area, commenced by us in few years back. Although continuity of activities were difficult due to shortage of engineers in the relevant field. The steps taken by the recruitments were unsuccessful due to low salary compare to private sector, in 2011 one of a engineer has been recruited as permanent basis although he was resigned the post in the year under review .subsequently one engineer has been recruited assignment basis, He also resigned .even through by facing lot of human recourses issues , the institute has launched a course about the robotics technology in 2013.

4.2 Management Inefficiencies

The objective of purchase of Residual Current Circuit Breaker (RCCB) is testing the standard of the imported electrical items ,for home uses and the industry purposes .which assist to protect the human and the durability of the electronic items .These testing has been conducted by the institute as a legal requirement of the Sri Lanka standard Institute (SLSI),the involvement of this project is considered by the institute as social economic benefits rather cost benefits .However the said system will be planed to develop high level laboratory for measurement and research in the future .Therefore the purchase cost can be earned in the next few years.

The unit of the system has been certified by the Manufacturer and GRN has been issued and inventoried in the year 2014.

The GRN has been issued after fitting all the component of the unit, until the cost has been recorded as work in progress (WIP), before finalizing.

It is noted that the procedure of Manufacturing is commence after the order confirmed. The letter of credit (LC) has been opened by March 2013, and spent 4 month for Manufacturing and received it to us by June 2013. There are seven units (7) of the machine and located in the division with special electrically connection need to be required .that was finished by October 2013 and the representatives of the Manufacturer arrived to hand over the equipment in the month of November 2013. When the inspections done by the manufacturer team It was observed that one unit was not working properly .Therefore Alternative unit has been submitted on January 2014. At that time the machine was using as test running .Test running is major technical requirement before given the service to the public. The services have been given to the public since the 1st quarter of 2014. Therefore whole time utilize for this exercise is reasonable.

4.3 Underutilization of Funds

Steps will be taken to invent the Surplus Money as considered more productivity.

4.4 Personal Administration

90 percent of the vacancies are in the technical fields. Seven advertisements have been published to fill the vacancies although the technical staff recruitments and the retention was the major issue facing by the institute from the long period of time.

Even though the paper advertisements have been published three times till July 2014 no single application was received for senior positions of technical staff.

5 .Accountability and Good Governance

5.1 Action plan

The action plan has been prepared in the format given by the Ministry of research and technology. The financial information are not indicate in the format. In our view is that most of the project and the research activities difficult to identify financially .Therefore action plan has been prepared by the institute based on the cost and the outcome of the project and the research activities. It was observed that several project and the research activities are gaining social economic value rather financial viability.

5.2 Internal Audit

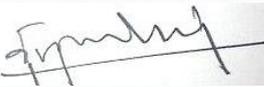
Internal Audit division is performing the duties as expected level. Although avoid such barriers, steps will be taken to recruit the staff in the future.

5.3 Budgetary control

The Annual Budget has been prepared based on the pre determined expenditure before commence the year ,However the prices fluctuations, using substitute instruments ,the proposed instrument not available , re using exiting instruments after repaired instead of new instruments ,new projects proposed by the management will be caused to differ the budgeted figures .Although our view is that the individual variances would have not been caused to total budget exceeded .

6. Systems and Controls

Every possible action has been taken to avoid the discrepancies highlighted in the Audit.



Engineer Sanath Panawennage
Director General / CEO

Annexure 1

Carder Positions and vacancies as at 31st December 2013

No.	Designation	Designation	Salary Code	Approved Cadre up to 2013	Existing Cadre 31/12/2013	Vacancies As at 31/12/2013
1.	Director	Director (CEO)	HM 2-3	01	01	-
2.		Professor (Senior)/Professor/Senior Fellow/Fellow	HM 2-3 HM 2-2 HM 1-3	07	-	07
3.		Addl. Dir. (Space Technology)	HM 2-2	01	-	01
4.	Head of Technical	Addl. Dir. (Tech. & Op.)		01	01	-
5.		Addl. Dir. (Planning & Devp.)		01	-	01
6.	Executive Secretary	Addl. Dir. (Admin. & Finance)		01	01	-
7.	Principal Research Engineers	Principal Research Engineers	HM 2-1	07	02	05
8.	Principal Systems/Software Engineer	Principal Systems/Software Engineer				
9.	Principal Electronics Engineer	Principal Electronics Engineer				
10.	Principal Research Scientist	Principal Research Scientist		01	-	01

11.	Senior Electronics Engineer	Senior Electronics Engineer	HM 1-3	13	03	10
12.	Senior Research Engineer	Senior Research Engineer		01	01	--
13.	Senior Systems/Software Engineer	Senior Systems/Software Engineer		01	01	-
14.	Senior Research Scientist	Senior Research Scientist		01	-	01
15.	Senior Systems Analyst	Senior Systems Analyst		01	-	01
16.		Senior Dpty. Director (Electronics)		01	-	01
17.		Senior Dpty. Director (Communication)		01	-	01
18.		Senior Dpty. Director (IT)		01	-	01
19.		Senior Dpty. Director (Industrial Services)		01	-	01
20.		Senior Dpty. Director (Industrialization)		01	01	--
21.		Senior Dpty. Director (Space Tech.)		01	-	01
22.		Senior Dpty. Director (Space Tech. App.)		01	-	01
23.		Senior Dpty. Director (Astronomy)		01	-	01
24.		Senior Dpty. Director (Robotics)		01	-	01
25.	Financial Controller	Senior Dpty. Director (Finance)		01	01	-

26.	Electronics Engineers	Electronics Engineers	AR 1 (Gr.II- Gr. I) <i>Or</i> AR 2	30	10	20
27.	Research Engineers	Research Engineers				
28.	Systems/Software Engineers	Systems/Software Engineers				
29.	Research Scientists	Research Scientists				
30.	Systems Analyst/Programmer	Systems Analyst		08	05	03
31.	Media/Public Relations Officer	Asst./Dpty. Director (Media)	MM 1-1 (Gr. II - Gr. I)	02	02	-
32.	Administrative Officer	Asst./Dpty. Director (Admin)		01	01	-
33.		Asst./Dpty. Director (H.R.)		01	01	-
34.		Librarian		01	01	-
35.	Manager-Industry Relations	Asst./Dpty. Director (Industrialization)		01	-	01
36.	Accountant/Asst. Accountant	Accountant		01	01	-
37.	Internal Auditor (Higher/Lower)	Internal Auditor		01	01	-
38.	Confidential Secretaries	Confidential Secretaries	JM 1-2	03	03	-
39.		Administrative Officer		01	01	-
40.		Accounts Officer		01	01	-
41.		Training Officer		01	01	-
42.		Engineering Asst.		06	04	02
43.		Programmer		03	-	03
44.		Asst. Maintenance Engineer		01	-	01

45.	Works Superintendent	Works Superintendent	MA 2-2	01	01	-
46.	Technical Officer (Gr. I – II)	Technical Assistant	(Gr. III – Gr. I)	20	06	14
47.	Book Keeper – (Grade I – III)	Book Keeper		01	--	01
48.	Secretary (Gr. I – II)	Management Assistant	MA 1-2 (Gr. III – Gr. I)	22	15	07
49.	Stenographer (Gr. I – II)					
50.	Clerk (Grade I – IV)					
51.	Computer Application Assistant (Grade IV)					
52.	Receptionist/Telephone Operator (Gr. I-II)					
53.	Library Assistant					
54.	Storekeeper (Grade I – III)					
55.	Driver – (Higher/Lower)	Driver	PL 3(Gr. III – Gr. I)	08	06	02
56.	Lab Attendant- (Special/Higher/Lower)	Lab Attendant	PL 2 (Gr. III – Gr. I)	08	04	04
57.	Labourer/Peon	Office Aide	PL 1 (Gr. III – Gr. I)	07	05	02
58.	Plumber/Electrician	Plumber/Electrician	PL 3 (Gr. III – Gr. I)	01	01	--
	Total			176	83	93

Annexure 11

New Appointments, Promotions, Resignations & Retirements- year 2013

	Subject	No.	Name	Designation	Date
1.	New Appointments	17	Mr L H MalinduTilan	Management Assistant – Gr.III	01/02/2013
			Ms W A K Madumali	Management Assistant – Gr.III	
			Mr S A Welikala	Senior Deputy Director (industrialization)	06/02/2013
			Mr C R Ranasinghe	Research Engineer (AR I – Gr.II)	15/05/2013
			Ms N A A Nadeesha	Research Engineer (AR I – Gr.II)	
			Ms V Vijayasothy	Electronics Engineer (AR I – Gr. II)	
			Mr R A Gamini	Assistant Director (Administration)	17/06/2013
			Mr S R J S Bandara	Technical Assistant – Grade III	10/07/2013
			Mrs K C I Silva	Management Assistant – Gr.III	01/10/2013
			Ms H D N Fernando	Management Assistant – Gr.III	
			Ms P D T de Silva	Management Assistant– Gr. III	
			Ms K T C K Alwis	Management Assistant – Gr.III	
			Ms M B A Dissanayake	Management Assistant – Gr.III	
			Mr P C Ramanayake	Office Aide – Gr. III	03/10/2013
			Mr P B. Warnakula	Driver – Gr. III	09/10/2013
			Mr G M Rodrigo	Office Aide – Gr. III	
			Mr SamanKeerthi	Senior Deputy Director (Finance)	

2.	Promotions/ Internal Recruitments	14	Mr K Jayawardena	Principal Research Engineer	06/02/2013
			Mrs P D C Janashanthi	Senior Electronics Engineer	
			Mr B A Jayasinha	Senior Software Engineer	
			Mr R A S S Gunasekera	Senior Research Scientist	09/04/2013
			Mr N I Medagangoda	Research Scientist (AR 2)	
			Mr S A ASiriwardhana	Engineering Assistant	21/05/2013
			Mr G D N de Silva		
			Mr E B D P Jayadewa		
			Mrs A Weerawarnasuriya	Training Officer	09/07/2013
			Mrs H C Weerasekera	Confidential Secretary	
			Mr P K Piyal Anuruddha	Engineering Assistant	08/07/2013
			Mrs M L A N Pushparani	Accounts Officer	23/07/2013
			Mr K Jayakody	Administrative Officer	21/05/2013
			Mr P L Shantha Kumara	Plumber/Electrician	
3.	Resignations	06	Ms. P M Nadeeka	Research Engineer – (AR I – Gr. II)	21/02/2013
			Mr W D D P Welivitiya	Research Engineer – (AR I – Gr. II)	30/04/2013
			Mr R L G.Kodikara	Research Engineer – (AR I – Gr. II)	21/04/2013
			Mr M B Ekanayake	Deputy Director (Admin)	31/05/2013
			Mrs. J A S N Jayasooriya	Research Engineer – (AR I – Gr. II)	03/07/2013
			Mr I P Senanayake	Research Engineer – (AR I – Gr. II)	30/09/2013
4.	Retirement (60 years completed.)	01	Mr M M P Perera	Lab Attendant – Special Grade	20/11/2013