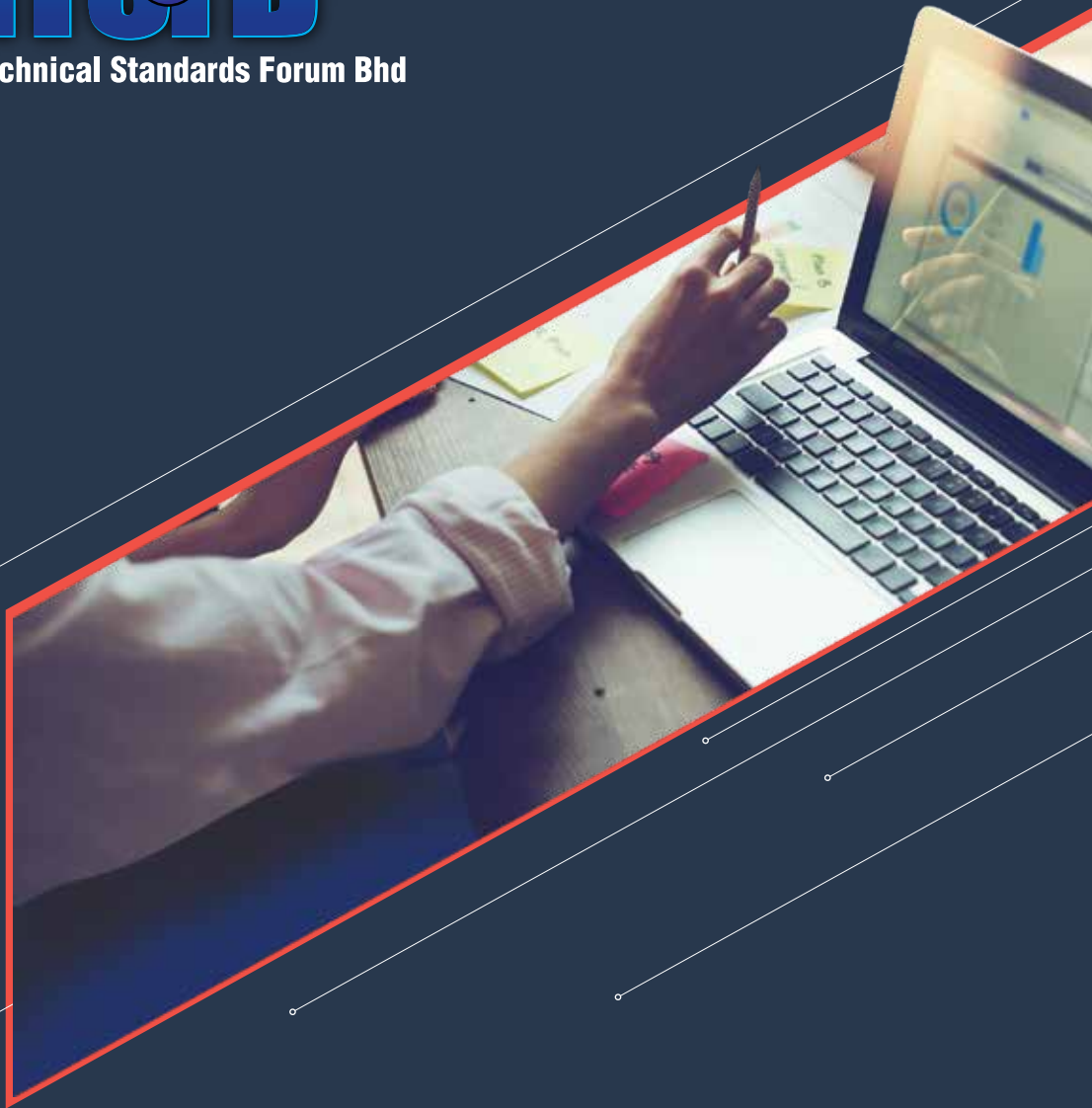




Malaysian Technical Standards Forum Bhd



BUILDING  
BREAKTHROUGHS,  
BREAKING  
BOUNDARIES

ANNUAL  
REPORT  
2018

# YEAR IN REVIEW



12

Office Bearer



24

Development of the  
Technical Codes



7

TC's Registered by MCMC  
fulfilling CMA 1998



10

Primary Working Group



6

Projects implementations  
under the Industry  
Promotion and  
Development Grant



100

Registered Members

# CORPORATE INFORMATION

## REGISTERED OFFICE

Malaysian Technical Standards Forum Bhd  
(MTSFB)  
Malaysian Communications & Multimedia Commission  
(MCMC)  
Off Persiaran Multimedia,  
Jalan Impact,  
63000 Cyberjaya, Selangor Darul Ehsan

## SECRETARY

Symphony Corporatehouse Sdn Bhd

## AUDITORS

Khairuddin Hasyudeen & Razi  
(Chartered Accountants (AF 1161))

KHR Tax Advisory Sdn. Bhd. (Co No. 663577 V)

## BANKERS

RHB Bank Berhad  
Maybank Islamic Berhad



**YEAR IN REVIEW**

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# 100 MEMBERSHIP

By the end of 2018, MTSFB welcomed 15 new official members and is now 100 strong with 15 Ordinary Members and 85 Associate Members making up the team. The Industry Promotion and Development Grant advertisement opening as well as numerous MTSFB Awareness programs have proven to be effective by bringing about this delightful achievement.

## ORDINARY MEMBERS



ASSOCIATES MEMBERS

**ASSOCIATES MEMBERS**

- RONDE & SCHWARZ**  
Rohde & Schwarz Malaysia Sdn Bhd
- Nokia Siemens Networks**  
Nokia Siemens Networks Sdn Bhd
- UPM**  
Universiti Putra Malaysia (UPM)
- celcom**  
Celcom Axiata Berhad
- MOTOROLA**  
Motorola Technology Sdn Bhd
- UTM**  
Universiti Teknologi Malaysia (UTM)
- UNIVERSITI TEKNOLOGI MARA**  
Universiti Teknologi MARA (UiTM)
- National Advanced IPv6 Centre (NAV6)**
- webe**  
webe digital sdn bhd
- SONY**  
Sony EMCS (Malaysia) Sdn Bhd
- UNIVERSITI SAINS ISLAM MALAYSIA**  
Universiti Sains Islam Malaysia (USIM)
- MDEC**  
Malaysia Digital Economy Corporation (MDEC)
- Sapura**  
Sapura Holdings Sdn Bhd
- Y P Yau Trading**  
Y. P. Yau Trading
- W solutions**  
Wamata Solutions Sdn Bhd
- riger**  
Riger Corporation (M) Sdn Bhd
- UTHM**  
Universiti Tun Hussein Onn Malaysia
- Panasonic**  
Panasonic AVC Networks Kuala Lumpur
- V.S. Industry**  
V.S. Industry Berhad
- DOLBY DIGITAL**  
Dolby Singapore Pte Ltd

ASSOCIATES MEMBERS

**ASSOCIATES MEMBERS**

- MMU**  
Multimedia University
- ALTEL**  
Altel Communications Sdn Bhd
- SAMSUNG**  
Samsung Malaysia Electronics (SME) Sdn Bhd
- SHARP**  
Sharp Electronics (M) Sdn Bhd
- Basis Bay Services MSC Sdn Bhd**
- PDC**  
PDC Tele Communication Services Sdn Bhd
- EASTOOL**  
Eastool Solution Sdn Bhd
- SOLAR**  
Solar NRJ Sdn Bhd
- NET ONE**  
Net2One Sdn Bhd
- MYTV**  
MYTV Broadcasting Sdn Bhd
- UNIVERSITI KEBANGSAAN MALAYSIA**  
Universiti Kebangsaan Malaysia
- International Islamic University Malaysia (IIUM)**
- UTeM**  
Universiti Teknikal Malaysia Melaka (UTeM)
- Seda**  
Sustainable Energy Development Authority (SEDA) Malaysia
- Politeknik Sultan Haji Ahmad Shah**
- LG**  
LG Electronics (M) Sdn Bhd
- Shan Poornam Metals**  
Shan Poornam Metals Sdn Bhd
- CISCO**  
Cisco Systems (M) Sdn Bhd
- global invacom**  
Global Invacom Sdn Bhd
- TechCapital**  
Techcapital Resources Sdn Bhd
- UNIVERSITI TENAGA NASIONAL**  
Universiti Tenaga Nasional (UNITEN)
- UUM**  
Universiti Utara Malaysia (UUM)
- Sophic**  
Sophic Automation Sdn Bhd
- UNIVERSITY OF MALAYA**  
Universiti Malaya (UM)
- WIT**  
Kolej WIT Sdn Bhd
- ABEX**  
Kumpulan Abex Sdn Bhd

ASSOCIATES MEMBERS

**SHARP**  
Sharp-Roxy Sales & Service Company (M) Sdn Bhd

**favoriot**  
Favoriot Sdn Bhd

**e.co**  
edotco Malaysia Sdn Bhd

**HERIOT WATT UNIVERSITY**  
Heriot-Watt University Malaysia

**UNIVERSITI MALAYSIA PERLIS (UniMAP)**  
Universiti Malaysia Perlis (UniMAP)

**Uni KL**  
UNIVERSITI KUALA LUMPUR

**PHOENIX MINDS CORPORATION**  
Phoenix Minds Corporation Sdn Bhd

**CONNECT COUNTY HOLDINGS BERHAD**  
Connectcounty Holdings Berhad

**USM**  
UNIVERSITI SAINS MALAYSIA

**Solnovation**  
Solnovation Analytics Sdn Bhd

**Brainc Assets Sdn Bhd**

**ITS**  
Integrated Transportation Solutions Sdn Bhd

**SOUTHAMPTON**  
UNIVERSITY OF SOUTHAMPTON Malaysia Campus

**Worldwide Core System (M) Sdn Bhd**

**Universiti Malaysia PAHANG**  
Universiti Malaysia Pahang

**BNetwork Sdn Bhd**

**Logikation Sdn Bhd**

**Provintell Technologies**  
Provintell Technologies Sdn Bhd

**Cyberview Sdn. Bhd.**  
Cyberview Sdn Bhd

**iCYCLE**  
iCYCLE Malaysia Sdn Bhd

**CoreMTX**  
Core MTX Sdn Bhd

NEW MEMBERS

**American Malaysian Chamber of Commerce**  
American Malaysian Chamber Of Commerce

**Redsun Engineering Sdn Bhd**

**Wilson Electronics, Inc.**  
Wilson Electronics Malaysia Sdn Bhd

**Duriane Professionals Sdn Bhd**

**UMT**  
Universiti Malaysia Terengganu (UMT)

**ICmic**  
IC Microsystems Sdn Bhd

**Neu Dimension**  
Your Integrated Solutions Partner  
Neu Dimension Sdn Bhd

**UNISZA**  
UNIVERSITI SULTAN ZAINAL ABIDIN

**tekmark**  
Tekmark Sdn Bhd

**SUNWAY COLLEGE**  
Sunway University College Sdn Bhd

**Washupptech Sdn Bhd**

**MISI**  
MALAYSIA INSTITUTE FOR SUPPLY CHAIN INNOVATION  
Malaysia Institute For Supply Chain Innovation

**AMANTRONIC SON BHD**  
Amantronic Sdn Bhd

**Visi Agrotech Sdn Bhd**

**HadiVenture**  
Hadi Venture Sdn Bhd

**Metrobinaya Sdn Bhd**

**MNA RESEARCH**  
MNA Research Sdn Bhd

**VANTAGE ENERGY GROUP**  
Vantage Well Services Sdn Bhd

**TECHIKARA ENGINEERING**  
Techikara Engineering Sdn Bhd



# CHAIRMAN MESSAGE

Over the years, we have successfully positioned ourselves as the leader in developing standards for the communication and multimedia industry with our 10 Working Groups that specialise in different topics. We're very lucky to have our General Manager, Puan Zaleha, who is a driving force of change in the organisation.

Since 2004, we have been actively integrating telecommunication, information technology, and media in the multimedia industry. As one of the largest component of the communications and multimedia ecosystem in Malaysia, we must be able to envisage the challenges ahead and develop standards that best support the industry needs. After all, our role is to create a balance that enables sustainable development in Malaysia.

Apart from our current Green ICT and IOT projects, we would see huge progress on smart cities initiatives such as smart pole, 5G, and basically anything to do with "smart", in near future. How exciting it would be if we could explore the network's endless possibilities when 5G arrives? With ultra-high speed and low latency, we could keep the cost consumer friendly without compromising on quality, which is what we are constantly striving to achieve.

For the past 15 years, we have been growing organically under the umbrella of MCMC that houses a team of diverse expertise, apart from our members. It would definitely be more than ideal if the expertise available in the industry is channelled to MTSFB for standards development. While we are at it, our services should come at an affordable price point to the users and the public. That's our priority. As long as we are willing to contribute our best, MTSFB will continue to gain valuable experiences and thrive in the digital world, now and in the future.

Dato' Ismail Osman  
Chairman  
MTSFB



# GENERAL MANAGER LETTER

MTSFB is a platform for industries to come together and agree on standards that support the services we provide. We are very privileged to have the opportunity to work with experts consisting of manufacturers, academicians, and telcos who play a huge part in propelling the industry towards a brighter future.

In order to keep ourselves abreast in the world of technology, we must look into managing our Working Groups in a more exciting way to stimulate growth, for example, through trainings that have been carried out to build our capacity through professional exposure. As the harmoniser, we should always think a step ahead in the field of communication and multimedia, whether it is in IoT, IPv6, GICT, 5G, or physical infrastructure.

As we all know, 5G task force, National Fiberisation and Connectivity Plan (NFCP) are the next big thing. In an effort to discover 5G and its capabilities, we need to start adopting standard SOPs in doing our day-to-day work. While we are at it, we must also strengthen our relationship with MCMC whom we share the same objectives, performance indicators, and many more values in common.

Countries like Spain, Japan, Korea, and Vietnam have shown much interest in adopting our standards. Soon, a couple of Taiwanese representatives will be visiting us to learn about how we manage our Working Groups besides joining us for knowledge sharing on IoT and GICT. Our standards might also be included as part of the syllabus and module of higher institutions, which would nurture and inspire new blood.

It is comforting to see that we are making a real impact in the industry by focusing on doing what we do best – developing standards. Truly, we are nothing short of remarkable!

**Puan Zaleha Abu Bakar**  
General Manager  
MTSFB

## 1. WHO WE ARE ?

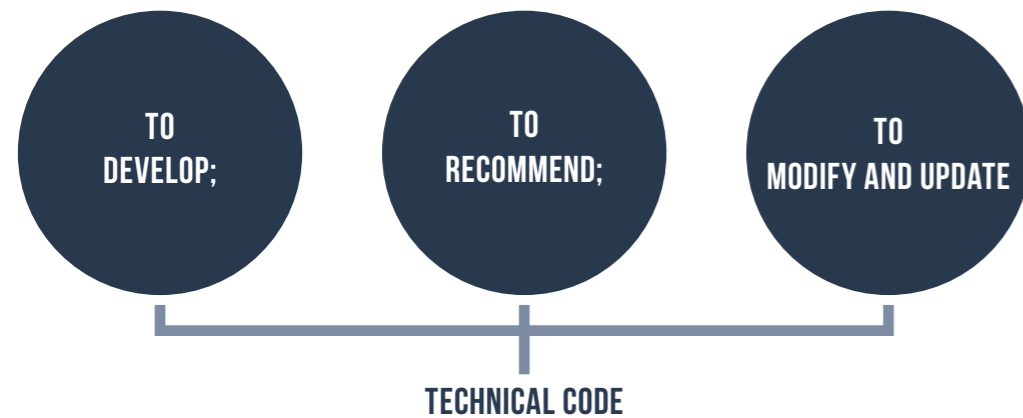
Fueled by our passion towards developing Technical Codes, we are here to make the world a better place through the communications and multimedia industry.



# ABOUT US

The Malaysian Technical Standards Forum Bhd (MTSFB) (655368-P) is a company limited by guarantee which was incorporated on 8 June 2004. On 27 October 2004, it is being designated as the Technical Standards Forum (TSF) by the Malaysian Communications and Multimedia Commission (MCMC) under the Communications and Multimedia Act (CMA 1998), Part V, Chapter 9 - Voluntary Industry Codes, Section 94 Industry Forum and Part VII, Chapter 3 - Technical Standards, Section 184 Technical Standards Forum.

## THE 3 PRIMARY ROLES OF MTSFB ARE:



## WHAT IS TECHNICAL CODE?

Technical Codes (TCs) are voluntary industry codes prepared under CMA 1998 and is part of the standard that set out specifications, procedures, and guidelines that aim to ensure products, services, and systems are safe. TCs act as a harmoniser that produces new specifications comprising of all the specifications mutually agreed by the industry players. The TCs will be sent for registration by MCMC as well as relevant Malaysian Standards for gazettal by Department of Standards Malaysia (DSM) through the Standard and Industrial Research Institute of Malaysia (SIRIM), catering to fixed and wireless network providers besides other stakeholders in the country.

In order to carry out the above roles, Working Groups (WGs) are established on focused subject matters such as Internet of Things (IoT), Green Information and Communications Technology (GICT), Fixed & Wireless Terminals and several other sectors. The WGs are represented by the members from the service providers, manufacturers, vendors, distributors, Standards Development Organisations (SDOs), academicians, service providers and other interested experts who are keen to bring the technology to new levels.

In essence, technologies, standards, and harmonisation play a huge part in building our nation and promoting global competitiveness by ensuring network interoperability, safety, and operation. The quality of communications and multimedia networks will continue to be enhanced to meet the consumer and industry expectations as well as to reflect our national aspirations.

# OUR MISSION & VISION

MTSFB shall pave its journey towards an independent leading technical forum through the following mission and vision.

## VISION

To become the leading standardisation organisation and a focal body for communications and multimedia industry standards fulfilling Malaysian market needs

## MISSION

To provide a platform where the interested parties come together and collaborate on the production of standards for the communications and multimedia industry



“

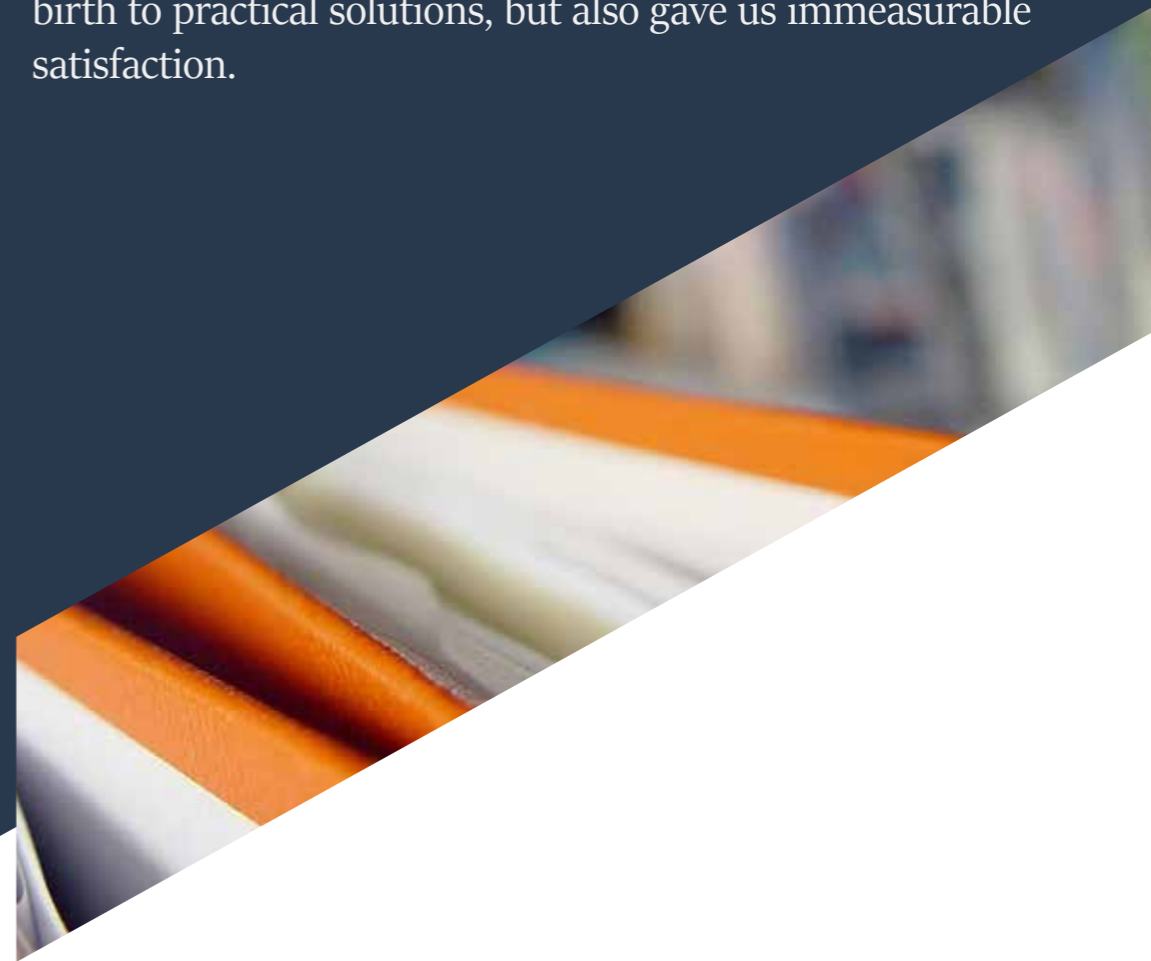
**MTSFB PROVIDES CLOSE COLLABORATION  
BETWEEN OUR COMPANY AND MCMC'S  
DIRECTION.**

”

2.

## HOW WE DELIVERED ON OUR PRIORITIES

Dedication has led us to great ideas that not only gave birth to practical solutions, but also gave us immeasurable satisfaction.



# STANDARD DEVELOPMENT

10 Working Groups was completed during the Reference Panel Retreat held on 28 & 29 August 2018, to ensure the effectiveness and efficiency of the operations of the Working Groups.

## THE 10 NEW WORKING GROUPS COVER THE FOLLOWING SUBJECTS



**WG1**  
**INTERNET OF THINGS (IOT) AND SMART SUSTAINABLE CITIES**

- Internet of Things Sub Working Group
- Smart Cities Sub Working Group

**SCOPE**

- Development of IoT related technical report, guidelines, recommendations and standards;
- Work on Smart Sustainable Cities and 4th Industrial Revolution Technical documents that are specific to IoT.
- Advice regulatory, legal and governmental bodies on IoT.
- Involve in the IoT conferences and standards meetings, ie ITU SG 20.
- Seminar on IoT standards and new emerging applications.
- Provide and create interoperability and conformance testing standards for IoT products.

**WG2**  
**IMT & FUTURE NETWORKS**

- International Mobile Telecommunication Sub Working Group
- 5G Sub Working Group

**SCOPE**

- To identify and develop roadmap, guidelines, recommendations and standards to accelerate the adoption of 5G technology (IMT-2020).
- To identify and facilitate the development 5G use cases relevant to Malaysia.
- To organise periodic seminars on 5G to increase the competency of the local industry and awareness of 5G.
- To participate and contribute to regional and/or international IMT-2020 activities at ITU and APT.

**WG3**  
**NUMBERING & ELECTRONIC ADDRESSING**

- Internet Protocol version 6 ( IPv6 ) Sub Working Group

**SCOPE**

- IPv6 shall be a subset of numbering & electronic addressing.
- Development of Standard/Guideline/Technical Documents related to numbering & electronic addressing from the aspects of development, adoption, operational, use cases etc.
- To organize & participate in events to increase competency on numbering & electronic addressing to adapt to future needs.

**WG4**  
**NETWORK AND BROADCAST INFRASTRUCTURE AND FACILITIES**

- Broadcasting Network Facility Sub Working Group
- Fixed Network Facility Sub Working Group
- Power Line Communications Sub Working Group
- Occupational Safety & Health Sub Working Group

**SCOPE**

To actively involved in develop and promote the technical standards and infrastructure requirements related to Network and Broadcast Facilities and Infrastructure.

**WG5**  
**RADIO NETWORK FACILITIES (RNF)**

- RNF (External) Sub Working Group
- RNF (Internal) Sub Working Group

**SCOPE**

To specify the general requirements for external telecommunications infrastructure including design requirements for construction structural, mechanical, electrical aspects including aesthetic and safety aspects in consideration to public and community.

**WG6**  
**SECURITY, TRUST & PRIVACY**

- Information & Network Security Sub Working Group
- Application Security Sub Working Group
- IoT Security Sub Working Group
- Trust & Privacy Sub Working Group

**SCOPE**

STP WG is the lead working group on information network security (INS), IoT Security, application security, device security and trust & privacy.

**WG8**  
**FIXED AND WIRELESS TERMINAL**

- Fixed Terminal Sub Working Group
- Wireless Terminal Sub Working Group

**SCOPE**

- Formulate and develop the standards needed to support the delivery of services within or across fixed networks and wireless networks.
- To review existing standards and to provide a platform to assemble information from various aspects including the public expectation and industry updates including regulatory policies.
- To address/identify issues relating to the technical constraints for latest technologies and propose recommendations for improvement.
- To enhance the coverage of the standards to cater for future development.
- To organise periodic seminars, awareness talks and engagement to increase the competency of the local industry and public awareness.
- To participate and contribute to MCMC, regional and international activities at ITU and APT levels.

**WG7**  
**DIGITAL FINANCIAL SERVICES**

- Mobile Payment Sub Working Group

**SCOPE**

Digital financial services is to work on digital payment services in relations to communications and multimedia industry.

**WG9**  
**GREEN ICT, ENVIRONMENT & CLIMATE CHANGE**

- e-waste Sub Working Group
- Hydrogen Sub Working Group
- Wireless Industry Emission Sub Working Group

**SCOPE**

To actively promote the GICT, Environment and Climate change concept in relation to telecommunication industry and to set up a minimum related technical codes and/or guidelines that can be used across industries.

**WG10**  
**BROADCAST TECHNOLOGY**

- Multimedia Broadcast Receiver Sub Working Group
- Digital Terrestrial Television Sub Working Group
- Internet Protocol Television Sub Working Group
- Digital Radio Broadcast Sub Working Group
- Satellite Broadcast Terminal Sub Working Group

**SCOPE**

Providing technical reference for development in these areas which is Headend Equipment in Broadcast Hubs (compression, MUX, network), Broadcast Receiver & Devices (specifications, certification) and Broadcast Product & Services (OTT, HbbTV etc.)

# 24 DEVELOPMENT OF TECHNICAL CODES

In 2018, MTSFB has developed a total of 24 Technical Codes through its twelve (12) Office Bearers, whereby:

- 7 TECHNICAL CODES ARE REGISTERED BY MCMC
- 3 TECHNICAL CODES ARE WAITING FOR REGISTRATION
- 14 TECHNICAL CODES ARE BEING DEVELOPED

These Technical Codes are developed according to a set of timelines which the Working Groups have to comply which varies from 9-15 months. As for the new development, the maximum timeline is 15 months for meeting deliberation. It is expected that each Technical Code development will require an average of 10 meetings in order to complete its deliberation prior to release for public comment.

In order to expedite the whole process and decrease the number of meetings which reflect on the operation financial, MTSFB has implemented a workshop approach for the process development of Technical Codes. The workshop ensured full commitment and concentration by the Working Group members and a conducive environment for sound deliberations and interactions in developing the technical codes to be completed. The workshop has concluded with all the concerns of the industry players in relation to the technical codes addressed in a satisfactory manner and the Technical Code are in the category of a professional and workable documents to be implemented.

The Public Comment (PC) exercise and Public Engagement (PE) sessions are implemented as one of the key milestones in the process of the standards development activities. Standards in all economic sectors, particularly Information Technology, Communications and Multimedia Standards is regarded as a strategic tool in relation to economic development, new technology development, and user protection which are used as an agenda item for discussion in relation to economic performance and competitiveness of each country under scrutiny. The public was invited to submit comments or opinions on the following Technical Codes under development by the respective Working Groups in a given PC exercise. The PE sessions enhanced the communications channels to improve our reach and exposure with the respective bodies, agencies and the public at large.

**MCMC MTSFB TC 6012:2018**  
**DIGITAL TERRESTRIAL TELEVISION (DTT)**  
**– CONTENT CONTRIBUTION, ENCODING AND MULTIPLEXING PERFORMANCE**


**SCOPE**  
 Covers the performance figures and measurement methods to ensure the minimum performance of content contribution, encoding and multiplexing subsystems of the Free To Air (FTA) and subscription based television service (Pay TV) delivered over a DTTB.

**WORKING GROUP AND COMMITTEE: DIGITAL TERRESTRIAL TELEVISION**

♦ Al Hijrah Media Corp.	♦ Panasonic AVC Networks Kuala Lumpur Malaysia Sdn. Bhd.
♦ Dolby Laboratories Inc.	♦ Radio Televisyen Malaysia
♦ Ericsson (Malaysia) Sdn. Bhd.	♦ Rohde & Schwarz Malaysia Sdn. Bhd.
♦ Fraunhofer IIS	♦ Sony EMCS (Malaysia) Sdn. Bhd.
♦ LS Telcom	♦ Tektronix Instruments Malaysia Sdn. Bhd.
♦ Media Prima Berhad	
♦ MYTV Broadcasting Sdn. Bhd.	

**ACTIVITIES TO DEVELOP THE TCS**

WG Discussion : June - September 2017  
 WG Workshop : No workshop  
 Public Comment : 9 - 23 Oct 2017  
 Public Engagement : 15 Feb 2018



**MCMC MTSFB TC 6013:2018**  
**INTERNET OF THINGS (IOT) – SECURITY MANAGEMENT**


**SCOPE**  
 Provides an overview of the IoT security management framework with requirements guideline for services provider in the IoT ecosystem. It provides security principles, security objectives and requirements for IoT services provider as an extension to the requirement as stipulated in the document 'MCMC/MTSFB TC G009:2016 – Requirement for Information and Network Security'.

**WORKING GROUP AND COMMITTEE: SECURITY, TRUST & PRIVACY**

♦ Al Hijrah Media Corp.	♦ Provintell Technologies Sdn. Bhd.
♦ Altel Communications Sdn. Bhd.	♦ Telekom Applied Business Sdn. Bhd.
♦ Celcom Axiata Berhad	♦ Telekom Malaysia Bhd.
♦ Digi Telecommunication Sdn. Bhd.	♦ TIME dotCom Berhad
♦ Kolej WIT Sdn. Bhd.	♦ Universiti Kuala Lumpur
♦ Maxis Communications Sdn. Bhd.	♦ Universiti Tenaga Nasional
♦ Multimedia University	♦ Webe Digital Sdn Bhd
	♦ Xiamen University Malaysia

**ACTIVITIES TO DEVELOP THE TCS**

WG Discussion : Feb - Nov 2017  
 WG Workshop : 18 - 20 Sept 2017  
 Public Comment : 7 Dec 2017 - 6 Jan 2018  
 Public Engagement : 18 Jan 2018



**MCMC MTSFB TC 6014:2018**  
**BUSINESS CONTINUITY MANAGEMENT – REQUIREMENTS**


**SCOPE**  
 Defines the requirements that support the implementation of the BCMS in the context of the Communications and Multimedia Industry (CMI) in Malaysia. The requirement set out in this Technical Code are generic and intended to be applicable to any size of CMI organisations.

**WORKING GROUP AND COMMITTEE: SECURITY, TRUST & PRIVACY**

♦ Celcom Axiata Berhad	♦ Telekom Malaysia Bhd.
♦ Kementerian Sains, Teknologi dan Inovasi	♦ TIME dotCom Berhad
♦ Pejabat Ketua Pegawai Keselamatan Kerajaan Malaysia	♦ Universiti Kuala Lumpur Nasional
♦ Provintell Technologies Sdn. Bhd.	♦ Webe Digital Sdn. Bhd.
♦ Telekom Applied Business Sdn. Bhd.	

**ACTIVITIES TO DEVELOP THE TCS**

WG Discussion : July - Nov 2017  
 WG Workshop : 18 - 20 Sept 2017  
 Public Comment : 7 Dec 2017 - 6 Jan 2018  
 Public Engagement : 18 Jan 2018



**MCMC MTSFB TC 6015:2018**  
**INFORMATION AND NETWORK SECURITY – INCIDENT MANAGEMENT**


**SCOPE**  
 Provides a specification on information security incident management for organisations within CMI. This is to minimise the impact of security incidents to the organisations through a proper incident management process.

**WORKING GROUP AND COMMITTEE: SECURITY, TRUST & PRIVACY**

♦ Al Hijrah Media Corp.	♦ MYTV Broadcasting Sdn. Bhd.
♦ Basis Bay Malaysia	♦ Provintell Technologies Sdn. Bhd.
♦ Celcom Axiata Berhad	♦ Telekom Applied Business Sdn. Bhd.
♦ Malaysia Digital Economy Corporation Sdn. Bhd.	♦ Telekom Malaysia Berhad
♦ Maxis Communications Berhad	♦ TIME dotCom Berhad
♦ MEASAT Broadcast Network Sdn. Bhd.	♦ Universiti Kuala Lumpur
	♦ Universiti Tenaga Nasional
	♦ Webe Digital Sdn. Bhd.

**ACTIVITIES TO DEVELOP THE TCS**

WG Discussion : July - Nov 2017  
 WG Workshop : 18 - 20 Sept 2017  
 Public Comment : 7 Dec 2017 - 6 Jan 2018  
 Public Engagement : 18 Jan 2018



**7 TCs REGISTERED BY MCMC ON 15 OCTOBER 2018**

**MCMC MTSFB TC 6016:2018**  
**INFORMATION AND NETWORK SECURITY – SECURITY POSTURE ASSESSMENT (SPA)**

**SCOPE**  
 Provides practical implementation on the establishment and management of the SPA programme by:

- Supporting the Communication and Multimedia Industry (CMI) organisations to conduct effective, value for money security testing and assessment as part of the technical security assurance framework. It is designed to enable the CMI organisations to prepare for the security testing, conduct actual testing in a consistent, competent manner and follow up tests effectively.
- Providing an overview of the key concepts the CMI organisations need to understand in order to conduct a well managed SPA programme, the evaluation criteria and the process to employ an external security assessor in supporting the SPA programme. Applicable to CMI's organisations of all sizes, budgets, and industries.

**WORKING GROUP AND COMMITTEE: SECURITY, TRUST & PRIVACY**

♦ Celcom Axiata Berhad	♦ Telekom Applied Business Sdn. Bhd.
♦ Kementerian Sains, Teknologi dan Inovasi	♦ Telekom Malaysia Berhad
♦ Provintell Technologies Sdn. Bhd.	♦ TIME dotCom Berhad
	♦ Universiti Kuala Lumpur
	♦ Webe Digital Sdn. Bhd.

**ACTIVITIES TO DEVELOP THE TCS**

WG Discussion : Jul - Nov 2017  
 WG Workshop : 18 - 20 Sept 2017  
 Public Comment : 7 Dec 2017 - 6 Jan 2018  
 Public Engagement : 18 Jan 2018



**MCMC MTSFB TC 6017:2018**  
**INFORMATION AND NETWORK SECURITY – CLOUD SERVICE PROVIDER SELECTION**

**SCOPE**  
 Specifies requirements for selecting the cloud service provider for communications and multimedia organisations. It outlines the key criteria for the organisation to be able to choose the best cloud provider based on the organisation's current environment or objectives. This includes storage location, security measures or assurance and business continuity measures.

**WORKING GROUP AND COMMITTEE: SECURITY, TRUST & PRIVACY**

♦ Al Hijrah Media Corp.	♦ Provintell Technologies Sdn. Bhd.
♦ Basis Bay Malaysia	♦ Telekom Applied Business Sdn. Bhd.
♦ Celcom Axiata Berhad	♦ Telekom Malaysia Berhad
♦ Malaysia Digital Economy Corporation Sdn. Bhd.	♦ TIME dotCom Berhad
♦ Maxis Communications Berhad	♦ Universiti Kuala Lumpur
♦ MEASAT Broadcast Network System	♦ Universiti Tenaga Nasional
♦ MYTV Broadcasting Sdn. Bhd.	♦ Webe Digital Sdn. Bhd.

**ACTIVITIES TO DEVELOP THE TCS**

WG Discussion : July - Nov 2017  
 WG Workshop : 18 - 20 Sept 2017  
 Public Comment : 7 Dec 2017 - 6 Jan 2018  
 Public Engagement : 18 Jan 2018



**MCMC MTSFB TC 6018:2018**  
**INFORMATION AND NETWORK SECURITY – CODE OF PRACTICE FOR BROADCASTING**

**SCOPE**  
 This Technical Code is intended for broadcasting organisations of the Communication and Multimedia Industry (CMI) to define guidelines supporting the implementation of information security management. This Technical Code will allow broadcasting organisations to meet baseline information security management requirements of confidentiality, integrity, availability and any other relevant security criteria.

**WORKING GROUP AND COMMITTEE: SECURITY, TRUST & PRIVACY**

♦ Al Hijrah Media Corporation
♦ Altel Communications Sdn Bhd
♦ MEASAT Broadcast Network Sdn Bhd (Astro)
♦ MYTV Broadcasting Sdn Bhd
♦ Telekom Applied Business Sdn Bhd
♦ Telekom Malaysia Berhad
♦ Universiti Kuala Lumpur

**ACTIVITIES TO DEVELOP THE TCS**

WG Discussion : July - Nov 2017  
 WG Workshop : 18 - 20 Sept 2017  
 Public Comment : 7 Dec 2017 - 6 Jan 2018  
 Public Engagement : 18 Jan 2018



**MTSFB1702R1**

**DIGITAL TERRESTRIAL TELEVISION (DTT) BROADCAST SERVICE RECEIVER – COMMON TEST SUITE (FIRST REVISION)**

**SCOPE**

This Technical Code describes the test methods for the digital terrestrial television broadcast receivers in complying with the SKMM MTSFB TC T004: 2013 – Specification for Digital Terrestrial Television Broadcast Service Receivers, SKMM MTSFB TC G001: 2013 – Compression Table of Service Information (SI) Descriptions for Digital Terrestrial Television Broadcast Service and SKMM MTSFB TC G002: 2013 – Middleware Profile for Digital Terrestrial Television Broadcast Service. The receivers may include Integrated Digital Televisions (IDTVs), Set Top Boxes (STBs) and other types of stand-alone receivers for the reception of digital terrestrial television broadcast service in Malaysia.

**WORKING GROUP**

Broadcast Technology

**ACTIVITIES TO DEVELOP THE TCs**

WG Discussion : Feb 2017 - April 2018  
 WG Workshop : No workshop  
 Public Comment : 21 May – 20 June 2018  
 Public Engagement : 10 July 2018

**MTSFB1716R1**

**PRIVATE AUTOMATIC BRANCH EXCHANGE (PABX) SYSTEM FOR CONNECTION TO PUBLIC SWITCHED TELEPHONE NETWORK (PSTN) AND INTERNET PROTOCOL (IP) NETWORK (FIRST REVISION)**

**SCOPE**

This Technical Code describes the requirement of Private Automatic Branch Exchange (PABX) system connected to Public Switched Telephone Network (PSTN).

**WORKING GROUP**

Fixed and Wireless Terminal

**ACTIVITIES TO DEVELOP THE TCs**

WG Discussion : Sept 2017 - Apr 2018  
 WG Workshop : No Workshop  
 Public Comment : 21 May – 20 June 2018  
 Public Engagement : 10 July 2018

**MTSFB1801R0**

**E-WASTE MANAGEMENT IN RELATION TO COMMUNICATION AND MULTIMEDIA**

**SCOPE**

This Technical Code specifies requirements for Scheduled Waste management of all Base Station. This is including but not limited to handling, packaging, labelling and storage of Scheduled Waste from the time the waste is generated by the user or the owner of the Base Station.

**WORKING GROUP**

Green ICT, Environment & Climate Change

**ACTIVITIES TO DEVELOP THE TCs**

WG Discussion : March - Aug 2018  
 WG Workshop : No workshop  
 Public Comment : 18 Sept – 17 Oct 2018  
 Public Engagement : 11 Oct 2018

**3 TCs WAITING FOR REGISTRATION BY MCMC**

**14 TCs UNDER DEVELOPMENT**

- INTERNET OF THINGS (IOT) : USE CASES
- INFORMATION SECURITY MANAGEMENT
- INTERNET OF THINGS (IOT) : DEFINITIONS AND TERMINOLOGIES REQUIREMENTS
- OVER THE TOP (OTT)
- INFORMATION SECURITY MANAGEMENT : REQUIREMENTS
- INFORMATION AND NETWORK SECURITY : CYBER INSURANCE
- INFORMATION AND NETWORK SECURITY : MONITORING AND MEASUREMENT OF INFORMATION SECURITY OBJECTIVES
- INTERNET PROTOCOL VERSION 6 (IPV6) COMPLIANT EQUIPMENT
- BASIC CIVIL WORKS FOR COMMUNICATIONS INFRASTRUCTURE
- ULTRA-WIDEBAND (UWB) : DEVICES
- SPECIFICATION FOR SHORT RANGE DEVICES (SRD)
- HYDROGEN ENERGY STORAGE

Internet of Things (IoT) and Smart Sustainable Cities

Broadcast Technology

Security, Trust & Privacy

Numbering & Electronic Addressing

Network and Broadcast Infrastructure and Facilities

Fixed and Wireless Terminal

Green ICT, Environment & Climate Change

2 Technical Codes had been approved for cancellation and the justification was recorded in the following table:

Project	Justification
GSM Mobile Terminals	Recommended by MCMC to cancel due to the technology evolved. However, the industry may use the existing document, SKMM WTS GSM-MT Rev.1.01:2007 Technical Specification for GSM Mobile Terminals as available in MCMC Website.
Hybrid Broadcast Broadband Television (HbbTV) – Malaysia Test case	Working Group decided there is no need for a common test case to be established at the moment. Currently, only Radio Television Malaysia (RTM) and Media Prima Berhad (MPB) the only broadcasters broadcasting HbbTV in their DTT transmission, using the same vendor for the creation and ployout of HbbTV applications on DTT platform.

# INDUSTRY PROMOTION AND DEVELOPMENT GRANT

The Industry Promotion and Development Grant “The Grant” was initiated by MCMC in 2012. MTSFB has been given mandate by MCMC to take full responsibility to manage the project grant. MTSFB Project Grant was conceived for the purpose of enhancing knowledge, Research & Development (R&D) and establishing competitiveness in technology innovation by creating a Proof-of-Concept (PoC) project that contributes to the Communication and Multimedia industry.

**THE GRANT IS LIMITED TO SUPPORT PROOF OF CONCEPT (POC) PROJECT THAT RELATED TO THE INTERNET OF THINGS (IOT) AND GREEN INFORMATION AND COMMUNICATION TECHNOLOGY (GICT).**

## 2 TYPES OF POC PROJECT:

- ▶ **IoT & New Technologies**  
IoT and new technologies innovation and growth in the local industry towards smart digital nation
- ▶ **Green ICT (GICT)**  
Green ICT (GICT) within the field of communication network and infrastructure.

## THE OBJECTIVE

- To spur the technology, standardisations development and adoption of Information and Communication Technology (ICT) within the field of communication network, infrastructure and applications.
- To discover new strategic mechanisms that will reduce cost, increase value, and contribute to better, healthier and conducive user experience.
- To encourage members of MTSFB/the industry to develop innovation projects that can benefit the communication and multimedia industry.
- To contribute to the development of new standards as use cases in developing recommendations to the regional as well as international platform to be equipotential with developed countries.
- To provide solutions to common problems confronted by the industry in aWn effort to enhance the services offered to the consumers.
- To contribute to exercising the national policy objectives and the achievement and transformation of Vision 2020.

## INNOVATION OF POC PROJECT

ROLES	ACTIVITIES
▶ Promote	▶ Grant administrative works
▶ Implement	▶ Establishment of the committees
▶ Coordinate	▶ Project award
▶ Monitor	▶ Site visit
	▶ Coordination of applicants
	▶ Project Grant briefing
	▶ Project monitoring
	▶ Project reporting & closure

In 2018, it is envisaged that the project grant be implemented with collaborators. The collaboration with industry partners will further strengthen the capacity for effectiveness and sustainability of regulatory and policy formulation.

## 2 GRANT OPENING TO THE MEMBERS AND NEWCOMERS

MTSFB has opened the application for IoT and GICT Projects and the application period is one month. At the end of the application period, MTSFB has received 57 IoT Project proposals and 64 GICT Project proposals.

Before/During the grant opening, MTSFB will hold a Grant Briefing to the potential applicants. The purpose of the Grant Briefing is to make sure the applicant fully understands the application process based on Guideline prepared by MTSFB which will result in submitting complete documents during the submission. For the Grant Briefing, it has been organised for the first time which is in October 2018.

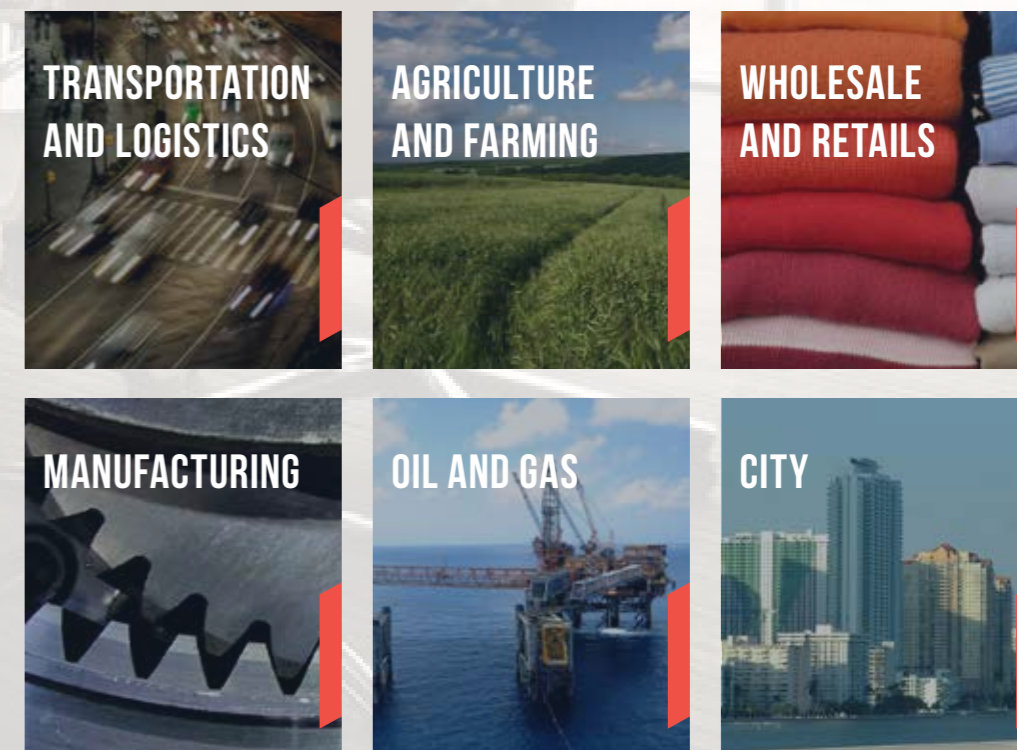
**IOT PROJECT APPLICATION PERIOD: 25 SEPTEMBER 2018 – 24 OCTOBER 2018**

### OBJECTIVES:

- ▶ Adoption of ICT and new technologies
- ▶ Development of innovative projects use cases and prototyping
- ▶ Be the solution provider that enhances services for the consumers

### THEMES:

Solving problems and creating new values in the focus area of:



## GICT PROJECT APPLICATION PERIOD: 1 OCTOBER 2018 – 31 OCTOBER 2018

### OBJECTIVES:

- ▶ To identify projects that champion eco-friendly solutions
- ▶ To improve the environment.

### THEMES:

Solving problems and creating new values in the focus area of:

**HUMAN/PEOPLE**

- ▶ No Poverty
- ▶ Good health and well being
- ▶ Quality education
- ▶ Reduce Inequality

**ENVIRONMENT**

- ▶ Clean water and sanitation
- ▶ Life below water
- ▶ Life on land

**ENERGY AND INFRASTRUCTURE**

- ▶ Affordable and clean energy
- ▶ Industry, innovation & infrastructure
- ▶ Sustainable cities and community

## 5 PROJECTS AWARDED

Letter of Award Signing session was held on 4 January 2018 at Cyberjaya.

### The 5 awarded Projects:



**Smart Factory (Industrial IoT)**



**E-Padi**



**Elderly Care IoT Platform and Solution**



**Smart Drive Through**



**Development of Energy Efficient, Long Range Communication System**

## 6 PROJECTS IMPLEMENTATION

In 2018, MTSFB has managed a total of 6 project implementation as below :

# 1

## IOT IN KETUTU FISH FARMING

SOPHIC AUTOMATION SDN BHD

Site: Tampin, Negeri Sembilan

**COLLABORATOR:**  
 - PROFIL BIOFARM SDN BHD TAMPIN, NEGERI SEMBILAN - SCHOOL OF COMPUTER SCIENCE, USM

Real time continuous water quality monitoring system (RTWQ) made up of multi probes sensors that measure water quality parameters at predefined intervals and store the information on digital data loggers without the need for any operator intervention or M2M communication.

### PROJECT OBJECTIVE

To enhance the existing real time continuous water quality monitoring system (RTWQ) for Profil Biofarm which includes:

- ▶ Purchasing additional multi probes with water quality parameters measurements which include Ammonium, Ammonia, Chloride and Nitrate as add on to the existing set up.
- ▶ Purchasing additional multi probes that comprise of parameters i.e. pH, Dissolved Oxygen (DO), Temperature, Salinity, Conductivity, Total Dissolved Solids (TDS), Ammonium, Ammonia, Chloride, Nitrate, BOD, COD and Total Suspended Solids (TSS) to meet the Malaysia Water Quality Index (WQI).
- ▶ Enhancing the software features with regards to water quality alarm system module.

To study the Interrelationships among Water Quality Parameters in BAS.

- ▶ The compiled data from the monitoring system will be utilised as predictive analytics in the following areas:
  - To monitor critical parameters affecting the pond water quality. This would allow for quantitative analysis of long term trends, seasonal variation and cyclical phenomena.
  - Variety of models and algorithms are expected to be developed with regards to quality monitoring and pond management.
- ▶ The above investigations are expected to benefit Profil Biofarm on the following:
  - To identify ideal water quality index
  - To shorten the breeding gestation period
  - To determine and evaluate BAS bio filtration capacity and size of ponds optimisation
  - To duplicate BAS for other freshwater species.

**Journals Publication**

The findings of the above studies will be published to build credibility on the BAS and RTWQ systems.

# 2

## SMART FACTORY (INDUSTRIAL IOT)

**SOLNOVATION ANALYTICS SDN BHD**

Site: MARDEC Rubber Processing Sdn Bhd, Mentakab, Pahang



**COLLABORATOR:**  
- MARDEC BERHAD

A prototype platform on existing factory to measure, feedback and improve on their energy efficiency through placement of sensors across the factory and monitoring through an in-house dashboard.

### PROJECT OBJECTIVE

To do a proof of concept at the Mentakab facility of MARDEC( Malaysia Rubber Development Corporation and to automate their production and energy data.

This solution would help in providing an energy and production data strategy.

Demonstrate the application of IOT to automate energy performance assessment and reporting.

Use Energy and Production Performance Indicator (EnPI) driven dashboards to drive Energy Productivity improvement initiatives.

Establishing Energy Performance Benchmarks in the rubber industry.

# 3

## E-PADI - AN IOT BASED PADDY PRODUCTIVITY MONITORING AND ADVISORY SYSTEM

**UNIVERSITI MALAYSIA PERLIS (UNIMAP)**

Site : MASDAR Agro, Kuala Nerang, Kedah



**COLLABORATOR:**  
- MASDAR AGRO & JABATAN PERTANIAN PADANG TERAP

A platform to measure PH, water level, temperature and humidity of paddy field through deployment of sensors for better paddy yield. Monitoring & notifications through mobile app utilising LORA for communication.

### PROJECT OBJECTIVE

To design and develop an IoT-based paddy monitoring and advisory system (e-PADI).

To analyse crucial paddy environment parameters as to enhance paddy productivity.

To replace the conventional lab-based/human-based paddy monitoring system.

To test and implement the system in a paddy field to enhance paddy productivity.



# 4

## ELDERLY CARE IOT PLATFORM & SOLUTION

**FAVORIOT SDN BHD**

Site : MKM Ticketing Travel & Tour, Shah Alam, Selangor



**COLLABORATOR:**  
- MKM TICKETING TRAVEL & TOURS

This project is an IoT ecosystem for elderly care consisting of wearable and other connected health devices, platform, application and analytics. The solution helps in relaying crucial information to their next of kin. The information will also be used to provide prediction on their health so that precautionary measures can be taken.

### PROJECT OBJECTIVE

To constantly monitor the vital health parameters of elderly people using wearable devices

To provide long-term affordable elderly care solution

To monitor the location of elderly people and record their movement to avoid them being missing

To alleviate the fear and anxiety of children for not being able to monitor their parents or elderly people, by providing an end-to-end solution

To provide a timely reminder for the elderly people to take medicines

# 5

## SMART DRIVE THROUGH TAKEAWAY UTILISING WIRELESSLY POWERED PASSIVE TAG AUTOMATIC IDENTIFICATION FOR VEHICLE SECURITY & DEVICES WITH ENERGY HARVESTING CAPABILITY

**UNIVERSITI PUTRA MALAYSIA (UPM)**

Site : Me'nate Steak Hub, Setapak, Kuala Lumpur



**COLLABORATOR:**  
- ME'NATE STEAK HUB

Development of new wireless device & protocol for vehicle tagging that has wireless charging capability. Solution utilizes for Smart-drive through takeaway system.

### PROJECT OBJECTIVE

To design and develop a new passive semiconductor circuit based tag with energy harvesting capability for vehicle identification.

To design and develop a new reader for reading and wirelessly powered the passive tag from a distance of few meters.

To evaluate the performances in term of effective identification range, error rate and interference effect to the other nearby wireless standards with varying vehicle's windscreen tinted film opacity.

6

DEVELOPMENT OF ENERGY EFFICIENT,  
LONG RANGE COMMUNICATION SYSTEM  
FOR ENVIRONMENTAL MONITORING USING  
LOW POWER WIDE AREA NETWORKS FOR  
INTERNET OF THINGS

UNIVERSITI PUTRA MALAYSIA (UPM)

Site : Makmal Berpusat Universiti Malaysia, Terengganu



COLLABORATOR:

- MAKMAL BERPUSAT UNIVERSITI MALAYSIA TERENGGANU (UMT)

A prototype platform on existing factory to measure, feedback and improve on their energy efficiency through placement of sensors across the factory and monitoring through an in-house dashboard.

PROJECT OBJECTIVE

To develop an energy-efficient, long-range communication system for environmental

Monitoring system using LPWAN technology.

To evaluate the performance of the network system in terms of communication range, packet loss ratio and energy consumptions.

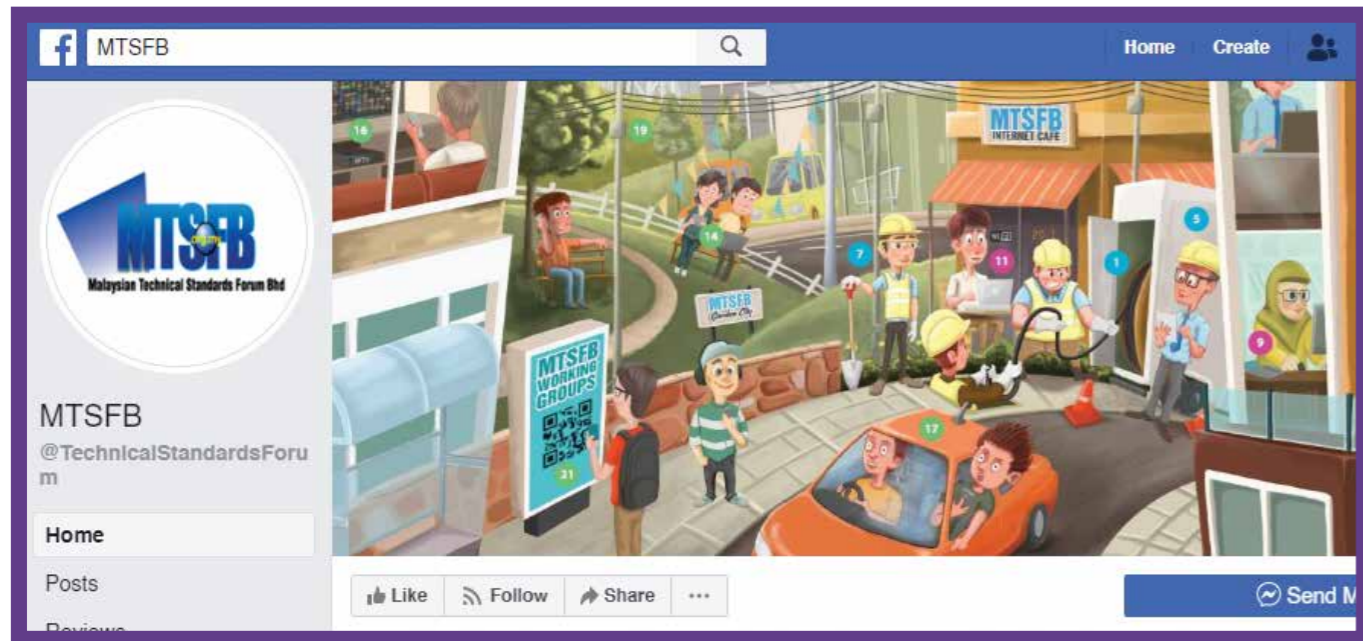
To verify the proposed environmental monitoring system.

# 3. | OUR PRESENCE

Team work makes the dream work – as we grow in size, we continue to grow in potential, which is proven through our various involvements and contributions.

# PRESENCE IN SOCIAL MEDIA

MTSFB joined the Facebook community in March 2018 to update on all MTSFB-related activities, such as project site visits, awareness programmes, live streaming on IoT Sharing Session – Vehicle Communication in Japan, corporate visits, public engagement sessions, and community projects, to name a few.



217 FOLLOWERS;

4,806 ENGAGEMENTS

14,000 PEOPLE REACHED; AND

6 CONTENTS UPDATE PER MONTH;

# CONTRIBUTION IN INTERNATIONAL MEETING AND STANDARDISATION

## CONTRIBUTION IN ASTAP-30

The 30th APT Standardization Program Forum (ASTAP-30) was hosted by the Asia-Pacific Telecommunity (APT) from 21 to 25 May 2018 in Bangkok, Thailand with the objective to promote, coordinate and harmonize telecommunication standardization activities across the Asia-Pacific region through regional cooperation.

ASTAP-30 was attended by 121 participants representing Members, Affiliate Members, APT Secretariat and other organisations. MTSFB was represented by our IoT WG Chairman, **Dr. Gopinath Rao Sinniah** in the Expert Group on Internet of Things (EG IoT), Working Group on Service and Application (WG SA) & Expert Group on Bridging the Standardisation Gap (EG BSG), WG on Policy and Strategic Coordination (WG PSC).

**Delegates representing Malaysia (MTSFB) in this meeting were:**



**DR. GOPINATH RAO SINNIAH**  
Chairman of Internet of Things (IoT) WG

ASTAP-30 started with “Industry Workshop on “Internet of Things” which was held on 21 May 2018.

OBJECTIVE OF THE  
IoT INDUSTRY  
WORKSHOP

To share IoT related programs and supporting activities undertaken by APT member states as-to-date

To present core IoT categories covering the following topics:

- + IoT Applications and Services - Typical use cases of IoT Services, Automotive (including connected car)
- + New Emerging IoT Technologies - AI, Block chain and DLT, Cloud-based event data technology, etc.
- + IoT for Agriculture and Aquaculture - Specific topics on Smart Agriculture

To include the technical facts of the IoT projects in this program which would have two sections to cater for the application and the technology aspects

To offer a knowledge-based sharing opportunity between APT, members state representatives and relevant experts.

To identify and better understand the challenges experienced by countries in APT that have undertaken specific IoT projects

To establish a mechanism for continuous circulation of information on the development and progress related to IoT projects to support standardisation activities in developing countries.

Representatives from APT members including People’s Republic of China, Japan, Republic of Korea, and Malaysia introduced specific IoT services and its applications as well as IoT technology aspects at the Workshop.

Presentations on IoT Applications and Services outlined the key success factor for future IoT business, Human Resources, Disruptive IoT, User Requirements, development of IoT Applications and commercial deployment and also showed how APT members are able to participate in the standards IoT activities and express their common interest and requirements.

Presentations on New and Emerging IoT Technologies provided latest information on the topic, key challenges in IoT Ecosystem, Blockchain technology, virtual currencies such as Bitcoin, vulnerabilities and IoT Security. In addition, typical use cases and ongoing research on IoT security of ISOC and Smart City applications in Japan were introduced. It is also suggested that the security issues of these two topics should be shared among APT members.

Presentation on IoT and Agriculture and Energy focused on digital transformation of agriculture, emerging technology trend, IoT Business Strategy and Solutions, and related use cases promotion for agriculture. It was recognised that the agriculture environments in the region needs to be improved by collecting and applying various use cases for ICT-based agriculture from APT member countries.

The Workshop concluded that information of various use cases on IoT, common requirements and its business models of IoT, various SDOs’ activities on IoT such as oneM2M, Open Connectivity Foundation (OCF) as well as activities of ITU-T SG20 (IoT and Smart Cities) should be shared among APT member countries. It was also agreed that the EG-IOT and EG-IS should consider developing relevant work plan for new APT reports on relevant IoT topics.



The 30th APT Standardization Program Forum (ASTAP-30)

21 - 25 May 2018, Bangkok, Thailand

Contribution by MTSFB

During ASTAP-26 Meeting, **Dr Gopinath Rao Sinniah has been appointed as the lead for the ad hoc group on the development of “APT Report on Smart Sustainable City Use Cases and Information & Communication Technologies in APT region” under the Expert Group on the Internet of Things Application/ Services (EG IoT) Working Group.** He has also been appointed as a **Rapporteur for APT Smart City Document and will continue to provide use cases and documentation for Smart City and PoC implementation in APT Focus Area.** We are also planning to submit a contribution paper on IoT use cases in Malaysia.

ONGOING PROJECT –  
DISCUSSION ON THE “APT REPORT ON SMART SUSTAINABLE CITY USE CASE AND INFORMATION & COMMUNICATION TECHNOLOGIES IN APT REGION”

Input documents related to APT report on smart sustainable city use cases and information & communication technologies in APT region were briefly reviewed in the first session led by the editor, Dr. Gopinath Rao. It was agreed that all proposals were accepted to include in the report with minor modifications. As a result, the draft is revised. In the final review of the revised draft of this report, we recognised that some format issues need to be cleared. Hence, it is modified by the editor. The final draft can be seen in ASTAP-30/TMP-05-Rev2. **EG IOT confirmed that this work is completed in this meeting and decided to send the revised draft to WG SA to request for approval.**

## NEW PROPOSAL – IOT USE CASES AND APPLICATION (ASTAP-30/INF-09, MTSFB, MALAYSIA)

Purpose of this contribution: This contribution is in response to ASTAP-29 request for contribution on IOT applications and services under IoT Expert Group. It provides information about Internet of Things (IoT) use cases in Malaysia, with the following scopes:

- + To provide an IoT ecosystem and the industry players in Malaysia.
- + To provide all the relevant IoT use cases or applications and its pertinent requirements.

### Introduction

This document provides information of Malaysian IoT players and the use cases of aquaculture, elderly care solution and smart home. The purpose is to provide relevant information that would be useful for those who want to implement similar solutions. Even new standards and guidelines can be created based on these use cases. This will be part of a new propose document for IoT use cases and application in APT region.

### Outcome

The draft report was presented and several comments during the meeting and the proponent agreed to prepare the revised proposal to consider the following comments in the next meeting:

The scope of the provided information is too broad and the work for IoT applications should be divided into specific areas.

One possible way to make the progress is to propose the new work item with separate contents on specific areas (agriculture/aquaculture, elderly care solution, smart home)

Since the proposal only includes Malaysian use cases, it should consider including all APT member countries. With this, the title of report also needs to be changed accordingly.

In terms of technical aspect, it needs to consider the IoT middleware aspects to share the information on how to adopt the related standards from various SDOs into their use cases in APT member countries.

There was another suggestion that the work items should be created in this meeting if possible. The new work item proposals shall be made in the next meeting as time is needed to prepare them.

### EG IoT Work Plan and Relation to MTSFB IoT WG

The current work plan is shown in Table below

No	EG	Title	Deliverable / Status	Duration		MTSFB IoT WG	
				Start	End	Title of TC/WG	Current Status
1	IoT	<b>Smart Cities Use Cases and Technologies in APT Region</b> Editor - Dr. Gopinath Rao Sinniah/MTSFB (Malaysia)	Report / Completed	ASTAP-26	ASTAP-30	IoT Use Cases and its Requirements (IoT WG)	Final Editing for Approval for Submission to MCMC
2	IoT	<b>Other IoT Applications and Services</b> Editor - (TBD)	Report / In Progress	ASTAP-30	2019		

## CONTRIBUTION IN ITU-T STUDY GROUP 17

ITU-T Study Group 17 was hosted by the International Telecommunication Union (ITU) from 28th of August until 7th of September 2018 in Geneva, Switzerland. It is one of the study groups under the ITU Telecommunication Standardisation Sector (ITU-T). ITU-T is a platform for governments and the private sector to coordinate development of the telecommunication networks and services that connect the world which complements ITU's Radiocommunication Sector (ITU-R), Development Sector (ITU-D) and General Secretariat in fulfilling ITU's strategic goals.

ITU-T Study Group 17 (SG17) coordinates security-related work across all ITU-T Study Groups. In cooperation with other standards development organisations (SDOs) and various ICT industry consortia, SG17 deals with a broad range of standardisation issues. Its main roles are to build confidence and security in the use of information and communication technologies (ICT).

In total, there were 188 delegates from 39 Member States, 21 Sector Members, 4 Associates Members and 2 from Academia Members. 8 invited experts also attended this meeting. 9 partial fellowships were also granted to Afghanistan, Bangladesh, Benin, Burundi, Central Africa, Comoros, Gambia, Senegal and Sudan. This year, there was 1 new associate from IDQ, Switzerland; 2 new academia from Florida Atlantic University, USA and IRT SystemX, France; and 4 New Member States participation from Angola, El Salvador, Gambia and Qatar.

Delegates representing Malaysia (MTSFB) in this meeting were:



**PROF. DR. SHAHRULNIZA BIN MUSA**

Vice Chairman of Security, Trust and Privacy WG

**EN. THAIB BIN MUSTAFA**

Chairman of Security, Trust and Privacy WG

### ITU Workshop on Advanced Cybersecurity Attacks and Ransomware

The ITU-T SG17 meeting started by a one-day workshop on Advanced Cybersecurity Attacks and Ransomware was held on 28 August 2018. Advanced cybersecurity attacks and ransomware are evolving in the cybercrime threat landscape. Advanced cybersecurity attacks refer to all the sophisticated forms of attacks, in particular targeted attacks as well as ransomware which is more than just cybercrime. Targeted attacks (also referred to as Advanced Persistent Threats (APTs) are attacks directed at a specific target as opposed to wide scale indiscriminate campaigns. Their motivations are mostly around intelligence gathering, disruption, sabotage or financial gain. Ransomware is a type of malware, short for malicious software, that threatens to publish the victim's data or perpetually block access to it unless a ransom is paid to attackers. Ransomware is one of the top challenges in cybersecurity for the past few years. There are over 50 different ransoms, and each one has their own multiple variants. The ransomware attacker typically just wants money, unlike other malware which mainly steals your information or gains unauthorized access.

#### The objectives of this workshop were:

to facilitate a better understanding of advanced cybersecurity attacks and ransomware landscape by sharing on-going activities among relevant groups and industries that aim to prevent such attacks, analysing how such attacks are conducted and assessing risks of such attacks caused to social, cultural, and economic systems;

to promote holistic solutions including technical, organisational and administrative countermeasures;

to discuss how international standards could assist organisations to take necessary actions; and to focus on what ITU-T SG17 should undertake to contribute to countering such attacks.



### Contribution by MTSFB

**Mr. Thaib Mustafa has been appointed as an Associate Rapporteur for Telecommunication information security management under Q3/17 (WP1/17) by SG17 and the main role is to review, manage and coordinate the drafting of work items under Q3/17 (WP1/17).**

MTSFB to continue the discussion from the last SG17 plenary meeting on SG17 approved draft new ITU-T work items. The last SG17 plenary meeting gave consent (AAP) to six draft new ITU-T Recommendations, twelve draft revised ITU-T Recommendations and four draft Technical Corrigenda for Last Call according to Recommendation ITU-T A.8.

**MTSFB also to present the Malaysian Case Study on the "Code of practice for Information security controls based on ITU-T X.1051 for Malaysian telecommunications organizations" and to review the following 26 new work items for action in the next SG17 meeting.**

Q (1)	ACRONYM	TITLE	NEW/REV	AAP/TAP/AGREEMENT	EDITOR(S)	LOCATION OF TEXT	EQUIVALENT E.G. ISO/IEC	TIMING (2)
3/17	X.1054-rev	Governance of information security	Rev	TAP	<b>Thaib Mustafa, Anfona Traore, Jinghua Min</b>	TD737		2020
3/17	X.sup-myuc	Code of practice for information security control base on ITU-T X.1051 for Malaysian telecommunications organizations information and network security management	New	Agreement	<b>Thaib Mustafa, Rafeah Omar</b>	TD726 Rev.1		2018 - 09



SG17 meeting has provided MTSFB with the latest security landscape and SG17 priorities on related security standardisation activities. This SG17 meeting offered an excellent platform for new knowledge, experience, best practices in the area of Security, Trust and Privacy that can be considered for MTSFB technical code development for MCMC.

In conclusion, the following are the **key points** highlighted for further deliberation.

To continue on MTSFB contribution paper on Malaysia's Technical Code (MCMC MTSFB TC G009:2016) - Requirements for Information and Network Security to SG17, which was accepted and agreed for Malaysia to propose a draft new Supplement to ITU-T X-series Recommendations ITU-T X.1051 | ISO/IEC 27011 Malaysian Use Case (X.sup-myuc). This Supplement has been deliberated in the past 2 meetings as draft documents and the texts have been edited to meet ITU-T voluntary requirements. TSB editors also have edited the document and Q3/17 has accepted to proceed with further discussion for agreement in the next meeting.

To contribute in Q3/17 X.sup-csc, "Critical security controls for telecommunications organisations information and network security management in support of ITU-T X.1051. This new work item has been approved in the SG17 plenary meeting as in Annex B. Malaysia (MTSFB), Telekom Malaysia and Symantec Corporation are the supporting members that are committing to contributing actively to the work item. (Refer Annex A)

To contribute in Q3/17 X.framcdc, "Framework for the creation and operation of a Cyber Defense Center". This new work item has been accepted by SG17 plenary meeting is to provide a framework and share best practices to build, operate or expand a Cyber Defense Center in a flexible and adaptive way to meet the security needs and business strategy of the organisation in protecting the organisation's digital assets. This is also a potential future Technical Code development for MTSFB and ASTAP.

To support WTSA Res 94 cloud based event data technologies. SG17 has a contribution from Korea, Hyundai Motors, ETRI, Soonchunhyang University on EDR (Event Data Recorder - a core of the event data technologies) in the automotive industry. In Q13/17 meeting, the contributions C415 and C413 were discussed and accepted as a new work item X.edrsec on "Security guidelines for cloud-based event data recorders in automotive environment". This draft Recommendation provides security guidelines for cloud-based EDR (event data recorder) in automotive environment. This draft Recommendation provides vulnerability analysis, security requirements and use cases for cloud-based EDR system in automotive environment.



# 4.

# OTHER EFFORTS IN SUPPORT TO ACHIEVE OUR OBJECTIVES

Hard work never goes to waste. Little by little, we find our way to become better and stronger for the benefit of the society.

# APPRECIATION NIGHT

On 8 August 2018, MTSFB is honoured to have the Deputy Secretary-General (Policy) of the Ministry of Communications and Multimedia Malaysia (KKKM), Encik Shakib Ahmad Shakir grace the MTSFB Appreciation Night in representation of the Minister, YB Tuan Singh Gobind Deo. The event was held at Dewan Sri Melati, Kompleks Perbadanan Putrajaya.

This delightful occasion has seen the launch of MTSFB's corporate video, followed by highlights such as presentation of Awards and Certificates of Appreciations to all MTSFB Working Group Members in an effort to recognise the voluntary contributions by the MTSFB members and their organisation in developing the TCs in which two Working Groups were awarded as the most outstanding for year 2016 and 2017. The event also raised awareness on the MTSFB operational functions.



## HIGHLIGHTS OF THE EVENT

### Officiation of the MTSFB Appreciation Night 2018

The event was officiated by the Deputy Secretary-General (Policy) of the Ministry of Communications and Multimedia Malaysia, Encik Shakib Ahmad Shakir, accompanied by the Chief Officer of Communications and Digital Ecosystem Sector of the MCMC, Dato' Mohd Ali Hanafiah Mohd Yunus and MTSFB Chairman, Dato' Ismail Osman.



## LAUNCHING OF MTSFB CORPORATE VIDEO

Encik Shakib also launched the MTSFB Corporate Video. The 5 minutes corporate video was presented and witnessed by the guests



## PRESENTATION OF AWARDS

Encik Shakib also launched the MTSFB Corporate Video. The 5 minutes corporate video was presented and witnessed by the guests

### The Bright Excellent Members Award



#### The Bright Excellent Members Award 2016

Mr. Rakuram Gandhi  
(Maxis Broadband Sdn Bhd)

#### The Bright Excellent Members Award 2017

Mr. Mohamad Isa Mohd Razhali  
(ASTRO)

### The Splendid Contributor Organisation Award

#### The Splendid Contributor Organisation Award 2016 & 2017

Telekom Malaysia Berhad





**The Great Aura Leader Award**



**The Great Aura Leader Award 2016**  
Dr Gopinath Rao Sinniah  
(Favoriot Sdn Bhd)



**The Great Aura Leader Award 2017**  
Mr Mazlan Mahdi  
(MYTV Broadcasting Sdn Bhd)

**The Fast and Furious Technical Code Award**



**The Fast and Furious Technical Code Award 2016**  
Requirements for Information and Network Security  
INS Working Group



**The Fast and Furious Technical Code Award 2017**  
Radiocommunications Network Facilities – Smart Pole  
RNF Ext Working Group

**The Inspire Technical Code Award**



**The Inspire Technical Code Award 2016**  
Technical Standard and Infrastructure Requirements for Broadcast Network Facility  
BNF Working Group



**The Inspire Technical Code Award 2017**  
Digital Terrestrial Television (DTT) - Hybrid broadcast broadband television middleware profile  
MMT Working Group

**The Glory of Convergence Award**  
(The most Prestige Award)



**Security, Trust and Privacy (STP) Working Group**

## PRESENTATION OF CERTIFICATES OF APPRECIATION

Mr. NA Ratnam, the Reference Panel Chairman, has received the certificates of appreciation on behalf of the MTSFB working group members who have contributed in Year 2016 and 2017.

Certificates of appreciation to the MTSFB Corporate members – Ordinary and Associate as well as to the sponsors.

## SPONSORSHIP

This is the first time we explore on sponsorship and we have successful secured 24 sponsors.

### PLATINUM SPONSORS



### OTHER SPONSORS



### SUPPORTED BY



# AWARENESS ON TECHNICAL CODE

To spread the availability of the Technical Codes, guidelines, best practices and latest technologies that can help elevate the quality of work that is produced by the communications and multimedia industry, MTSFB has been actively promoting the adoption of the TCs through Awareness Programmes that are held in Sabah and all the 4 regions in Peninsular Malaysia. It is an eye-opening opportunity for MTSFB members and industries from various fields to mingle and share their expertise besides providing space for the exhibitors to market their products.



#### 14 March 2018

Vistana City Centre, Kuantan, Pahang

**Total Participants: 69**

Pigeonhole Live platform was presented to the participants, followed by a quiz session by Kahoot! and a lucky draw session that have managed to keep more than half of the participants anticipating till the end of the event.

Overall, the secretariat has done a good job organising the event which has successfully met the objective and the target group.

#### 19 April 2018

Bayview Hotel, Georgetown, Penang

**Total Participants: 73**

Due to effectiveness of Pigeonhole Live platform and the Kahoot! quiz session during the previous event, the same activities were implemented for this event. In comparison to the previous event, the secretariat recorded a higher 56% participation from the government agencies and industries together with an increase of feedbacks.

The event was pulled off seamlessly by the secretariat and has achieved the objective and the target group just as planned.

#### 25 October 2018

Promenade Hotel Kota Kinabalu, Sabah

**Total Participants: 64**

The introduction of QR Code plate for every Technical Code that was presented during the event and on the WhatsApp platform stirred an active interaction between the speakers and participants. Among the topics discussed, the audience is more attracted to Smart Cities and Information Network Security due to the many questions raised regarding these two topics.

Eight (8) potential organisations can be invited as new Members of MTSFB to participate in the development of Technical Codes.

# OUTREACH

## THE INTERNATIONAL GREENTECH & ECO PRODUCTS EXHIBITION & CONFERENCE (IGEM) 2018

The Malaysian Technical Standards Forum Bhd (MTSFB) had participated as an exhibitor at The International Greentech & Eco Products Exhibition & Conference (IGEM) 2018, which was held from 17 October until 20 October 2018, at the Kuala Lumpur Convention Centre.

The event was officiated by the Minister of Energy, Science, Technology, Environment and Climate Change, YB Yeo Bee Yin.

MTSFB's participation is aimed is to create brand awareness as well as to promote:

THE GICT WORKING GROUP AND ACTIVITIES, AS WELL AS RECRUITMENT DRIVE.

PUBLISHED TECHNICAL CODES.

ON-GOING PROJECTS AS WELL AS THE AVAILABILITY OF THE INDUSTRY DEVELOPMENT AND PROMOTION GRANTS FOR IOT & GICT

MCMC'S CURRENT INITIATIVES ON MOBILE E-WASTE: OLD PHONE NEW LIFE AND CHECK YOUR LABEL (CYL)

RECRUITMENT/MEMBERSHIP DRIVE

## SUBJECT MATTER EXPERT SHARE THE INFORMATION ABOUT IOT ACTIVITIES AT IEEE DISTINGUISHED LECTURE TOUR

MTSFB in collaboration with MCMC Academy and IEEE organised the technology talk held on 29 Jan 2018 in Cyberjaya.

A total of 76 participants consisted of Industry players and academia attended this technology talk. The objective of this technology talk is to create awareness on the challenges, activities and application use of the Internet of Things.

Professor Arumugam Nallanathan, Fellow of the IEEE attended the talk together with Professor Wireless Communications, and Queen Mary University London who shared on Massive Internet of Things: Opportunities and Challenges.

### SPEAKER 1

Detail speaker : Mahadevan Rajam, Director Marketing and Communications, Solnovation Analytics Sdn Bhd

Presentation title : Smart Factory (Industrial IoT)

### SPEAKER 2

Detail speaker : Mr Lee Chee Ho , CEO of Sophic Automation Sdn Bhd

Presentation title : IoT in Ketutu Fish Farming

### SPEAKER 3

Detail speaker : Dr Gopinath Rao Sinniah, Co -Founder | Chief Technical Officer, Favoriot Sdn Bhd

Presentation title : Elderly Care IoT Platform and Solution

## SUBJECT MATTER EXPERT SHARE AT THE INTERNATIONAL CONFERENCE ON NON-IONISING RADIATION (ICNIR) 2018

International Conference on Non-Ionising Radiation is to keep abreast with the latest development and information in the field of NIR activities in R&D, education and training, standards and regulations and safety management.

The conference attended by telecommunications companies, broadcasting, academia and suppliers from organizations using non-ionizing radiation in malaysia as well as public.

Prof. Tharek Abdul Rahman present the paper on EMF Exposure Related to 5G Equipment which was held from 14 until 15 November 2018, at the Kuala Lumpur.

## COLLABORATION TO ORGANISE THE ROUNDTABLE MEETING ON TV WHITE SPACE: POTENTIAL, POLICY, TECHNICAL SPECIFICATIONS AND CASE STUDY AT PUSTAKA NEGERI SARAWAK

Prof. Dr. Mahamod Ismail from Universiti Kebangsaan Malaysia is another expert that we have in MTSFB. This round table meeting is to explore TVWS as an alternative for connectivity between libraries. The meeting provides a platform to discuss options to expand library and services to members of the public who are remotely located, such as rural implementation as a pilot project.

Chairman of Pustaka Negeri Sarawak Tan Sri Datuk Amar (Dr) Haji Hamid Bongo, CEO of Pustaka Negeri Sarawak, Dr Rashidah Bolhassan and our General Manager, Pn Zaleha Abu Bakar are also in the roundtable discussion. This meeting was held on 5 September 2018, at Pustaka Negeri Sarawak.

# 2018 ROADMAP

## STANDARD DEVELOPMENT

**7** TCS REGISTERED  
BY MCMC ON  
15 OCTOBER 2018

**6** INDUSTRY PROMOTION AND DEVELOPMENT  
GRANT

TAMPIN, NEGERI SEMBILAN	IOT IN KETUTU FISH FARMING
MENTAKAB, PAHANG	SMART FACTORY
KUALA NERANG, KEDAH	E-PADI
SHAH ALAM, SELANGOR	ELDERLY CARE IOT PLATFORM & SOLUTION
SETAPAK, KUALA LUMPUR	SMART DRIVE THROUGH
TERENGGANU	DEVELOPMENT OF ENERGY EFFICIENT

## 2 CONTRIBUTION IN INTERNATIONAL MEETING AND STANDARDISATION

BANGKOK, THAILAND	ASTAP-30
GENEVA, SWITZERLAND	SG-17 MEETING

## OTHERS

PUTRAJAYA	APPRECIATION NIGHT
KLCC, CYBERJAYA, KUALA LUMPUR, SARAWAK	IGEM 2018
KUALA LUMPUR	ASIA IOT BUSINESS PLATFORM
KUCHING, SARAWAK	ROUNDTABLE MEETING ON TV WHITE SPACE
PENANG	MESYUARAT JAWATANKUASA TEKNIKAL BANDAR PINTAR
ALL REGIONS IN MALAYSIA	TECHNICAL CODE AWARENESS PROGRAMME
SHAH ALAM, SELANGOR	MEETING FOR MBSA PROJECT - SMARTPOLE
CYBERJAYA, SELANGOR	IEEE DISTINGUISHED LECTURE TOUR ON IOT
PENANG	PRESENTATION ON SMART CITY
KUALA LUMPUR	INTERNATIONAL CONFERENCE ON NON-IONISING RADIATION 2018

“  
OUR COMPANY PROCESS AND COMPLIANCE  
ARE MORE ALIGNED WITH THE GUIDELINES  
AND TECHNICAL CODES STIPULATED BY  
MCMC WITH THE HELP OF MTSFB.  
”

## 5. EMBEDDING RESPONSIBILITY

Planning for the future requires making decisions that not only solve current issues, but are also able to propel us forward for as long as we are still standing.



# HUMAN CAPITAL DEVELOPMENT

## COMPETENCY DEVELOPMENT

In consonance with changes that were undertaken in the organisational structure, MTSFB embarked on restructuring the functions that support the operation and management of MTSFB. In this effort MTSFB is now organised into 3 main Units and its roles and responsibilities as in the Table below.

MTSFB went on to restructure the functions that support the operation and management of the company as some adjustments have been made to its organisational structure. The table below shows the roles and responsibilities of the 3 main units that currently govern MTSFB.

## STANDARDISATION

- ★ Developing Technical Codes for CMI
- ★ Identifying international bodies for references
- ★ Creating awareness on Technical Codes



## BUSINESS MANAGEMENT & SUPPORT FUNCTION



- ★ Human Resource, Finance & Administration
- ★ Compliance to the terms of conditions of RoC

## GRANT MANAGEMENT



- ★ Management & operation of grant
- ★ Project implementation & monitoring
- ★ Platform to provide innovation e.g PoCs or pilot projects

Table below shows the posts and positions in MTSFB in 2018.

GENERAL MANAGER	1
SENIOR MANAGER	1
MANAGER	2
SENIOR MANAGER	1
ENGINEER	4
EXECUTIVE	2
TOTAL	11

**CAPACITY BUILDING**

When it comes to operational sustainability, MTSFB is determined to make the most out of human and financial resources by developing effective and well-managed organisations through capacity building programme.

Designed to support the communication and multimedia industry, the programme focuses on delivering effective strategies, emerging tools, as well as specific skills and necessary tactics to develop the capacity on individual, organisational, and institutional levels. MTSFB believes in the power of empowerment that encourages better performance internally, which will then benefit the community we serve.

The key objectives of the capacity building programmes and list of capacity building completed in 2018 are as listed below:



**KEY OBJECTIVES**

**DESCRIPTION**

**TRAINING ATTENDED**

**EFFECTIVE MANAGEMENT OF WORKING GROUPS**

Trainings are held to ensure that the Working Groups are managed effectively in order to deliver quality project deliverables on time. It is also mandatory for the person-in-charge to acquire skills to handle the registered and on-going projects appropriately as they pour in.

- ✓ SoP Development & Document Control System
- ✓ Filing and Record Management
- ✓ How to Design and Develop Implement & Manage Effective Events
- ✓ How To Write Effective Releases, Rebuttals and Features

**ORGANISATIONAL ASSESSMENT BY ALL STAFF**

Based on the assessment information in the reviews and responses, MTSFB needs to organise appropriate trainings and self-improvement programmes that are crucial for the growth of MTSFB as a whole. Training assessments will identify the trainings required by each Office Bearer to further raise our work standards.

- ✓ Mini Workshop on Development of Technical Code
- ✓ Project Management Skill

**COMMUNICATION WITH STAKEHOLDERS**

Communication and collaboration cannot happen without strong interpersonal skills. MTSFB shall put emphasis on guiding its employees to be more personable, which will help them in building bridges with people and opportunities.

- ✓ Interpersonal Skill
- ✓ MTSFB Retreat & Teambuilding
- ✓ Come + Together Session

**TECHNOLOGY SCANNING AND FULFILLING INDUSTRY NEEDS**

A knowledge platform that encourages the sharing of on-trend and emerging technologies is extremely useful for both internal (MTSFB) and external (Working Group members) parties to gather information regarding work and discover new perspectives.

- ✓ Disruptive Technology Transformation Opportunities & Challenges
- ✓ Seminar Industry 4.0



“

**MTSFB IS ALWAYS UP-TO-DATE ON THE NEW DEVELOPMENTS THAT ARE HAPPENING IN THE INDUSTRY.**

”

## 6. HOW WE ARE GOVERNED

Planning for the future requires making decisions that not only solve current issues, but are also able to propel us forward for as long as we are still standing.





# CORPORATE ADMINISTRATIVE

It is worth the mention that every member has made the most out of the meetings that are held to study the tasks that has been mandated to the BoD, which has been met with successful outcomes. A meeting agenda, together with a complete set of documents for cogitations are distributed in advanced to all members of the BoD to facilitate discussions and prompt critical thinking during the meetings. Throughout 2018, a total of six (6) BoD meetings were held, which translates into a frequency of once every two months.

Kudos to all members of the BoD for pulling off an amazing year!

## BOARD OF DIRECTORS



**Mr. Poh Kee Seng** was appointed as a Member of the BoD. He is a Vice President Broadcast Platform, Product & Technology Division at Measat Broadcast Network System Sdn Bhd.



“ World is advancing forward, MTSFB and its members should be flexible and adapting the changes



**En. Abdulhadi Wahid** was appointed as a Member of the BoD. He is a Head, Regulatory Affairs at TIME dotCom Berhad.



**En. Abdul Aziz Long** was appointed as a Member of the BoD. He is a Senior General Manager at SIRIM Berhad.



“ Develop industry standards that will lead to healthy competition among industry players and beneficial to general public.



**En. Mohd Fuad Romeli** was appointed as a Member of the BoD. He is Assistant General Manager, Regulatory at U Mobile Sdn Bhd.



**Dato' Ismail Osman** was appointed as a Chairman of the BoD. He is a Senior Executive Director at REDtone Marketing Sdn Bhd.



“ To be abreast with technology development



**Pn. Azni Risa Ramlan** was appointed as a Member of the BoD. She is a Vice President Technology & Innovation, IT and Network Technology at Telekom Malaysia Bhd.



**En. Fami Abdul Hamid** was appointed as a Member of the BoD. He is a Principal Regulatory at Digi Telecommunications Sdn Bhd.



“ To lead the industry in standardization in advancing our Telco into a digital space and information edge.



**En. Norazizan Mohamad** was appointed as a Member of the BoD. He is a Head of Department Network Industry at Maxis Broadband Sdn Bhd.



“ Let's collaborate in technical standards arena to drive nation's progress.

# REFERENCE PANEL

The MTSFB Reference Panels (the RP) is advising on preparation of MTSFB work programmes and specifications. Reference Panels are accountable to the Board at all times and operate under the direction of the Board with the support of and in consultation with the MTSFB Executive.

In order to facilitate discussions and in aiding Members of the BoD in deliberating and making the right decisions during meetings, a meeting agenda together with a complete set of papers for cogitations are circulated in advance to all Members of the RP. Throughout 2018, a total of five (5) Reference Panels Meetings and one (1) retreat were held.



Ratnam NA (MBNS/Astro)  
Reference Panel (RP) Chairman

	<p><b>VICE CHAIRMAN</b></p> <p>Dr Wahidah Hashim from Universiti Tenaga Nasional (UNITEN)</p>
	<p><b>WG 1</b></p> <p><b>IOT INCLUDING APPLICATIONS FOR SC&amp;C</b></p> <p>Dr Gopinath Rao from Favoriot Sdn Bhd.</p>
	<p><b>WG 2</b></p> <p><b>IMT AND FUTURE NETWORK</b></p> <p>Prof. Dr. Tharek Abd Rahman from Universiti Teknologi Mara.</p>

	<p><b>WG 3</b></p> <p><b>NUMBERING AND ELECTRONIC ADDRESSING</b></p> <p>Pn Azura Mat Salim from Telekom Malaysia Berhad.</p>
	<p><b>WG 4</b></p> <p><b>NETWORK AND BROADCAST INFRASTRUCTURE AND FACILITIES</b></p> <p>En Yusairi Abu Hassan from Telekom Malaysia Berhad.</p>
	<p><b>WG 5</b></p> <p><b>RADIO NETWORK FACILITIES</b></p> <p>Ms Laavenia Ramasegar from Digi Telecommunications Sdn Bhd.</p>
	<p><b>WG 6</b></p> <p><b>SECURITY, TRUST &amp; PRIVACY</b></p> <p>Mr. Thaib Mustafa from Telekom Applied Business Sdn Bhd.</p>

	<p><b>WG 7</b></p> <p><b>DIGITAL FINANCE SERVICES</b></p> <p>Mr Tham Siew Wah from REDtone Marketing Sdn Bhd.</p>
	<p><b>WG 8</b></p> <p><b>WIRELESS AND FIXED TERMINAL</b></p> <p>En Ahmad Faizan Pardi from SIRIM QAS International Sdn Bhd.</p>
	<p><b>WG 9</b></p> <p><b>GREEN ICT, ENVIRONMENT &amp; CLIMATE CHANGE</b></p> <p>Mr Joseph Koh I Shen from Solar NRJ Sdn Bhd.</p>
	<p><b>WG 10</b></p> <p><b>BROADCASTING SERVICES</b></p> <p>Dr Ahmad Zaki Mohd Salleh from Media Prima Berhad.</p>

# MTSFB LEADERSHIP



**Zaleha Abu Bakar**  
General Manager



**Norazlina Dato' Ghazali**  
Senior Manager,  
Standardisation



**Yuzie Aznita Mat Yasin**  
Manager, Grant  
Management



**Humairah Ahmad Nasir**  
Manager, Business  
Management and  
support Functions

# THE TEAM



**Norkhadhra Nawawi,**  
Engineer



**Nor Iratul Munirah Mazani,**  
Engineer



**Mohamad Norzamir Mat Taib,**  
Engineer



**Zulkarnaen Mohd Japali,**  
Executive



**Muhaimin Mat Salleh,**  
Senior Engineer



**Mohammad Hafiz Halal,**  
Engineer



**Nur Shahidah Senin,**  
Executive



**Ahmad Taufik Nik Nor Azlan,**  
Engineer




“

THE TECHNICAL CODES DEVELOPED ARE  
GOOD REFERENCES FOR THE ISSUES  
CURRENTLY FACED IN THE INDUSTRY.

”

# 7. COLLABORATE WITH US!

Whether it is getting to know the communication and multimedia industry or making your vision a reality, we are always ready to provide professional advice.



# SUCCESS STORIES

What a great year 2018 has been, as it is filled with lots of sharing on our knowledge, experience, and findings to the benefit of the CMI communities. We are tremendously proud to have organised 7 collaborated events that include workshops, conference, and roundtable meetings as shown in the Table below.

## MESYUARAT BAGI PROJEK MBSA - CADANGAN PENGANTIAN TIANG - TIANG LAMPU JALAN SEDIAADA KEPADA PRASARANA BERINTIGRASI TELEKOMUNIKASI (SMART POLE)

EXPERTS/SPEAKERS/PANELIST/TOPIC
Mr. David Lim Teck Huat
AWARENESS/TECHNOLOGY TALK/COLLABORATION
Majlis Bandaraya Shah Alam
DATE & VENUE
11 January Shah Alam

## ASIA IOT BUSINESS PLATFORM, KUALA LUMPUR

EXPERTS/SPEAKERS/PANELIST/TOPIC
Dr. Gopinath Rao Sinniah (IoT)
AWARENESS/TECHNOLOGY TALK/COLLABORATION
Asia IOT Business Platform
DATE & VENUE
23 & 24 April Kuala Lumpur

## IEEE DISTINGUISHED LECTURE TOUR ON IOT

EXPERTS/SPEAKERS/PANELIST/TOPIC
Mr. Mahadevan Rajam on Smart Factory      Mr. Lee Chee Hoo on Ketutu Fish Farming
Dr. Gopinath Rao Sinniah on Elderly Care (IoT Use Cases)
AWARENESS/TECHNOLOGY TALK/COLLABORATION
IEEE Malaysia ComSoc/ VTS Joint Chapter/ MCMC
DATE & VENUE
29 January Cyberjaya

## ROUNDTABLE MEETING ON TV WHITE SPACE: POTENTIAL, POLICY, TECHNICAL SPECIFICATIONS AND CASE STUDY

EXPERTS/SPEAKERS/PANELIST/TOPIC
Prof. Dr. Mahamod Ismail (TV White Space)
AWARENESS/TECHNOLOGY TALK/COLLABORATION
Pustaka Negeri Sarawak
DATE & VENUE
5 August Kuching

## PRESENTATION ON SMART CITY

EXPERTS/SPEAKERS/PANELIST/TOPIC
Dr. Gopinath Rao Sinniah (Smart City)
AWARENESS/TECHNOLOGY TALK/COLLABORATION
PDC Telecommunication Services Sdn Bhd
DATE & VENUE
13 September Penang

## MESYUARAT JAWATANKUASA TEKNIKAL BANDAR PINTAR BIL 2/2018

EXPERTS/SPEAKERS/PANELIST/TOPIC
Eamy Yusri Mohd Yusof (Infrastructure – Smart Pole)
AWARENESS/TECHNOLOGY TALK/COLLABORATION
Pejabat SUK Pulau Pinang
DATE & VENUE
21 November Penang

## INTERNATIONAL CONFERENCE ON NON-IONISING RADIATION 2018

EXPERTS/SPEAKERS/PANELIST/TOPIC
Prof. Tharek Abd Rahman (5G)
AWARENESS/TECHNOLOGY TALK/COLLABORATION
Agensi Nuklear Malaysia
DATE & VENUE
14 & 15 November Kuala Lumpur

# COLLABORATE WITH US!

If you are intrigue with what we do, do your part to make our country a better place. Scan the QR code for more information.

For more info visit our website at

[www.mtsfb.org.my](http://www.mtsfb.org.my)

And 'like' our facebook page

[facebook.com/mtsfb](https://facebook.com/mtsfb)





**GREAT TEAM OF EXPERTS WORKING  
TOGETHER TO DELIVER PROFESSIONAL  
SOLUTIONS.**



## 8. | OUR NUMBER



# STATEMENT OF FINANCIAL

## DIRECTORS' REPORT FOR THE FINANCIAL YEAR ENDED 31 DECEMBER 2018

The directors hereby submit their report together with the audited financial statements of the Company for the financial year ended 31 December 2018.

### PRINCIPAL ACTIVITIES

The Company is principally engaged in promoting the development of standards and safety of network facilities, establishing and maintaining standards, technical codes, network interoperability and operational issues affecting the Malaysian communications and multimedia industry and to develop, recommend, modify, update and seek registration of technical codes from time to time.

There have been no significant changes in the nature of the principal activities during the year.

RESULTS	RM
Operating surplus after taxation	209,240
Accumulated surplus brought forward	433,472
<b>Accumulated surplus carried forward</b>	<b>642,712</b>

### DIVIDENDS

In accordance with the Memorandum of Association, no dividends are payable to the members of the Company.

### RESERVES AND PROVISIONS

There were no material transfers to or from reserves and provisions during the financial year.

### DIRECTORS OF THE COMPANY

The names of the directors of the Company in office since the date of the last report and at the date of this report are:

Dato' Ismail bin Osman

Abdulhadi bin Wahid

Poh Kee Seng

Norazizan bin Mohamad

Liew Sze Yarn

Fami bin Abdul Hamid

Abdul Aziz bin Long

Azni Risa binti Ramlan

Amirah binti Abd Majid  
(Alternate director to Dato' Ismail Bin Osman)

Mohd Hanizam bin Mohammed  
(Alternate director to Abdulhadi bin Wahid)

Mohammad Isa bin Mohd Razhali  
(Alternate director to Poh Kee Seng)

Mohd Fuad bin Romeli  
(Alternate director to Liew Sze Yarn)

Norhafizah binti Ghani  
(Alternate Director to Azni Risa binti Ramlan)

### DIRECTORS' INTEREST

The Company is a company limited by guarantee and thus has no shares in which the directors could have an interest. The Company has not issued any debentures.

In the event of the Company being wound up, each member of the Company undertakes to contribute a maximum of RM100 to the assets of the Company.

## DIRECTORS' BENEFITS

Since the end of the previous financial year, no director has received or become entitled to receive a benefit (other than a benefit included in the aggregate amount of emoluments received or due and receivable by the directors shown in the financial statements or fixed salary of a full-time employee of the Company) by reason of a contract made by the Company or a related corporation with any director or with a firm of which he is a member, or with a company in which he has a substantial financial interest.

## OTHER STATUTORY INFORMATION

Before the financial statements of the Company were made out, the directors took reasonable steps:

- (i) to ascertain that proper action had been taken in relation to the writing off of bad debts and the making of provision for bad and doubtful debts and satisfied themselves that no known bad debts had been written off and that no provision had been made for bad and doubtful debts; and
- (ii) to ensure that any current assets which were unlikely to realise their value as shown in the accounting records in the ordinary course of business had been written down to an amount which they might be expected so to realise.

At the date of this report, the directors are not aware of any circumstances which would render:

- (i) the amount written off for bad debts or the amount of the provision for bad and doubtful debts inadequate to any substantial extent; and
- (ii) the values attributed to the current assets in the financial statements of the Company misleading.

At the date of this report, the directors are not aware of any circumstances which have arisen which would render adherence to the existing method of valuation of assets or liabilities of the Company misleading or inappropriate.

At the date of this report, the directors are not aware of any circumstances not otherwise dealt with in this report or financial statements of the Company which would render any amount stated in the financial statements misleading.

As at the date of this report, there does not exist:

- (i) any charge on the assets of the Company which has arisen since the end of the financial year which secures the liabilities of any other person; or
- (ii) any contingent liability of the Company which has arisen since the end of the financial year.

In the opinion of the directors:

- (i) no contingent or other liability has become enforceable or is likely to become enforceable within the period of twelve months after the end of the financial year which will or may affect the ability of the Company to meet their obligations when they fall due; and
- (ii) no item, transaction or event of a material and unusual nature has arisen in the interval between the end of the financial year and the date of this report which is likely to affect substantially the results of the operations of the Company for the financial year in which this report is made.

## INDEMNIFYING DIRECTORS, OFFICERS OR AUDITORS

No indemnities have been given or insurance premiums paid, during or since the end of the year, for any person who is or has been director, officer or auditor of the Company.

## AUDITORS

The auditors, Messrs. Khairuddin Hasyudeen & Razi, retire and have expressed their willingness to accept re-appointment.

The remuneration of the auditors is disclosed in Note 14 to the financial statements.

Signed on behalf of the Board in accordance with a resolution of the directors,



**DATO' ISMAIL BIN OSMAN**  
Director



**AZNI RISA BINTI RAMLAN**  
Director

Kuala Lumpur  
Dated : 03 May 2019



**STATEMENT BY DIRECTORS  
PURSUANT TO SECTION 251(2) OF THE COMPANIES ACT, 2016**

We, **DATO' ISMAIL BIN OSMAN** and **AZNI RISA BINTI RAMLAN**, MALAYSIAN TECHNICAL STANDARDS FORUM BHD's directors, do hereby state that, in the opinion of the directors, the accompanying financial statements set out on pages 10 to 32 are drawn up in accordance with Malaysian Financial Reporting Standards, International Financial Reporting Standards and the provisions of the Companies Act, 2016 in Malaysia so as to give a true and fair view of the state of affairs of the Company as at 31 December 2017 and of the results and the cash flows of the Company for the financial year ended on that date.

Signed on behalf of the Board in accordance with a resolution of the directors,



**DATO' ISMAIL BIN OSMAN**  
Director



**AZNI RISA BINTI RAMLAN**  
Director

Kuala Lumpur  
Dated : 03 May 2019

I, **ZALEHA BINTI ABU BAKAR**, the officer primarily responsible for the accounting records and financial management of MALAYSIAN TECHNICAL STANDARDS FORUM BHD., do solemnly and sincerely declare that the financial statements set out on pages 10 to 41 are to the best of my knowledge and belief, correct and make this solemn declaration conscientiously believing the same to be true, and by virtue of the provisions of the Statutory Declaration Act, 1960.

Subscribed and solemnly declared by )  
**ZALEHA BINTI ABU BAKAR** )  
at Kuala Lumpur in the )  
Federal Territory on )



**ZALEHA BINTI ABU BAKAR**

Before me,

## INDEPENDENT AUDITORS' REPORT

### TO THE MEMBERS OF MALAYSIAN TECHNICAL STANDARDS FORUM BHD.

#### REPORT ON THE AUDIT OF THE FINANCIAL STATEMENTS

##### OPINION

We have audited the financial statements of MALAYSIAN TECHNICAL STANDARDS FORUM BHD., which comprise the statement of financial position as at 31 December 2018, and the statement of profit or loss and other comprehensive income, statement of changes in membership fund and statement of cash flows for the year then ended, and a summary of significant accounting policies and other explanatory notes, as set out on pages 10 to 41.

In our opinion, the accompanying financial statements give a true and fair view of the financial position of the Company as of 31 December 2018 and of its financial performance and cash flows for the year then ended in accordance with Malaysian Financial Reporting Standards, International Financial Reporting Standards and the requirements of the Companies Act, 2016 in Malaysia.

##### BASIS FOR OPINION

We conducted our audit in accordance with approved standards on auditing in Malaysia and International Standards on Auditing. Our responsibilities under those standards are further described in the Auditors' Responsibilities for the Audit of the Financial Statements section of our report. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

##### INDEPENDENCE AND OTHER ETHICAL RESPONSIBILITIES

We are independent of the Company in accordance with the By-Laws (on Professional Ethics, Conduct and Practice) of the Malaysian Institute of Accountants ("By-Laws") and the International Ethics Standards Board for Accountants' Code of Ethics for Professional Accountants ("IESBA Code"), and we have fulfilled our other ethical responsibilities in accordance with the By-Laws and the IESBA Code.

##### INFORMATION OTHER THAN THE FINANCIAL STATEMENTS AND AUDITORS' REPORT THEREON

The directors of the Company are responsible for the other information. The other information comprises the Directors' Report but does not include the financial statements of the Company and our auditors' report thereon.

Our opinion on the financial statements of the Company does not cover the Directors' Report and we do not express any form of assurance conclusion thereon.

In connection with our audit of the financial statements of the Company, our responsibility is to read the Directors' Report and, in doing so, consider whether the Directors' Report is materially inconsistent with the financial statements of the Company or our knowledge obtained in the audit or otherwise appears to be materially misstated.

If, based on the work we have performed, we conclude that there is a material misstatement of the Directors' Report, we are required to report that fact. We have nothing to report in this regard.

## RESPONSIBILITIES OF THE DIRECTORS FOR THE FINANCIAL STATEMENTS

The directors of the Company are responsible for the preparation of financial statements that give a true and fair view in accordance with Malaysian Financial Reporting Standards, International Financial Reporting Standards and the requirements of the Companies Act, 2016 in Malaysia. The directors are also responsible for such internal control as the directors determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements of the Company, the directors are responsible for assessing the Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the directors either intend to liquidate the Company or to cease operations, or have no realistic alternative but to do so.

## AUDITORS' RESPONSIBILITIES FOR THE AUDIT OF THE FINANCIAL STATEMENTS

Our objectives are to obtain reasonable assurance about whether the financial statements of the Company as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with approved standards on auditing in Malaysia and International Standards on Auditing will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.


As part of an audit in accordance with approved standards on auditing in Malaysia and International Standards on Auditing, we exercise professional judgement and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the financial statements of the Company, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit 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 Company's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the directors
- Conclude on the appropriateness of the directors' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Company's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditors' report to the related disclosures in the financial statements of the Company or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditors' report. However, future events or conditions may cause the Company to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements of the Company, including the disclosures, and whether the financial statements of the Company represent the underlying transactions and events in a manner that achieves fair presentation

We communicate with the directors regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

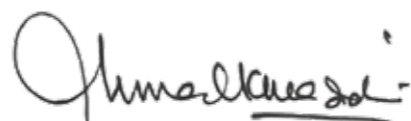
## OTHER MATTERS

This report is made solely to the members of the Company, as a body, in accordance with Section 266 of the Companies Act, 2016 in Malaysia and for no other purpose. We do not assume responsibility to any other person for the content of this report.



**KHAIRUDDIN HASYUDEEN & RAZI**  
AF 1161  
Chartered Accountants

Kuala Lumpur  
Dated: 30 May 2019



**Ahmad Khairuddin Salleh**  
01574/03/2021 J  
Partner of the Firm

## STATEMENT OF FINANCIAL POSITION AS AT 31 DECEMBER 2018

ASSETS	NOTE	2018 RM	2017 RM
<b>Non-Current Asset</b>			
Property, plant and equipment	5	31,442	37,728
		<b>31,442</b>	37,728
<b>Current Assets</b>			
Amount due from members	6	72,959	64,752
Other receivables, deposits and prepayments	7	976,713	735,568
Cash and cash equivalents	8	1,937,696	731,837
		<b>2,987,368</b>	1,532,157
		<b>3,018,810</b>	1,569,885
<b>TOTAL ASSETS</b>			
<b>EQUITY</b>			
Membership fund	9	152,000	138,000
Accumulated surplus		642,712	433,472
		<b>794,712</b>	571,472
<b>Total equity</b>			
<b>LIABILITIES</b>			
<b>Current Liabilities</b>			
Other payables and accruals	10	215,329	78,387
Deferred revenue	11	2,008,769	920,026
		<b>2,224,098</b>	998,413
<b>Total liabilities</b>			
		<b>3,018,810</b>	1,569,885
<b>TOTAL EQUITY AND LIABILITIES</b>			

## STATEMENT OF PROFIT OR LOSS AND OTHER COMPREHENSIVE INCOME FOR THE FINANCIAL YEAR ENDED 31 DECEMBER 2018

	NOTE	2018 RM	2017 RM
Revenue	12	370,096	347,937
Other operating income	13	2,101,425	2,000,259
Operating expenses		(2,260,881)	(2,128,194)
Operating surplus before taxation	14	210,640	220,002
Taxation	15	(1,400)	1,961
<b>Net operating surplus after taxation</b>		<b>209,240</b>	<b>221,963</b>

## STATEMENT OF FINANCIAL POSITION AS AT 31 DECEMBER 2018

	Membership fund RM	Accumulated surplus RM	Total RM
Balance as at 31 December 2016	119,000	211,509	330,509
Subscription from members	19,000	-	19,000
Surplus of income over expenditure for financial year	-	221,963	221,963
Balance as at 31 December 2017	138,000	433,472	571,472
Subscription from members	14,000	-	14,000
Surplus of income over expenditure for financial year	-	209,240	209,240
<b>Balance as at 31 December 2018</b>	<b>152,000</b>	<b>642,712</b>	<b>794,712</b>

## STATEMENT OF CASH FLOWS FOR THE FINANCIAL YEAR ENDED 31 DECEMBER 2018

	2018 RM	2017 RM
<b>CASH FLOWS FROM OPERATING ACTIVITIES</b>		
Operating surplus before taxation	210,640	2 20,002
Adjustments for :		
Bad debts written off	-	4,008
Deposits written off	2,400	-
Depreciation	22,076	19,034
Interest income	-	(2,038)
Operating surplus before working capital changes	235,116	241,006
Increase in amount due from members and other receivables	(248,902)	(205,765)
Increase in trade and other payables	1,225,685	276,486
Cash generated from operations	1,211,899	311,727
Income taxes paid	( 4,250)	( 4,439)
Interest income	-	2,038
<b>Net cash generated from operating activities</b>	<b>1,207,649</b>	<b>309,326</b>
<b>CASH FLOW FROM INVESTING ACTIVITY</b>		
Purchase of property, plant and equipment	(15,790)	( 9,175)
<b>Net cash used in investing activity</b>	<b>(15,790)</b>	<b>( 9,175)</b>
<b>CASH FLOW FROM FINANCING ACTIVITY</b>		
Proceeds from members' initial contribution	14,000	19,000
<b>Net cash provided by financing activity</b>	<b>14,000</b>	<b>19,000</b>
<b>Net increase in cash and cash equivalents</b>	<b>1,205,859</b>	<b>319,151</b>
<b>Cash and cash equivalents brought forward</b>	<b>731,837</b>	<b>412,686</b>
<b>Net increase in cash and cash equivalents</b>	<b>1,937,696</b>	<b>731,837</b>

## NOTES TO THE FINANCIAL STATEMENTS - 31 DECEMBER 2018

## 1. GENERAL

- (a) The Company is principally engaged in promoting the development of standards and safety of network facilities, establishing and maintaining standards, technical codes, network interoperability and operational issues affecting the Malaysian communications and multimedia industry and to develop, recommend, modify, update and seek registration of technical codes from time to time. There have been no significant changes in the nature of the principal activities during the year.
- (b) The principal place of business is located at Malaysian Communications & Multimedia Commission, Off Persiaran Multimedia, Jalan Impact, 63000 Cyberjaya, Selangor Darul Ehsan.
- (c) The registered office is located at Level 8, Symphony House, Pusat Dagangan Dana 1, Jalan PJU 1A/46, 47301 Petaling Jaya, Selangor Darul Ehsan.

## 2. BASIS OF PREPARATION OF THE FINANCIAL STATEMENTS

## (a) Statement of compliance

The financial statements of the Company have been prepared in accordance with Malaysian Financial Reporting Standards (MFRSs), International Financial Reporting Standards (IFRSs) and the Companies Act, 2016 in Malaysia.

The following are accounting standards, interpretations and amendments of the MFRSs that have been issued by the Malaysian Accounting Standards Board (MASB) which are not yet effective and have not been adopted by the Company:

*MFRSs, Interpretations and amendments effective for annual periods beginning on or after 1 January 2019:*

- MFRS 16 Leases
- IC Interpretation 23, Uncertainty over Income Tax Treatments
- Amendments to MFRS 112 Income Taxes (Annual Improvements to MFRS Standards 2015-2017 Cycle)
- Amendments to MFRS 123 Borrowing Costs (Annual Improvements to MFRS Standards 2015-2017 Cycle)

*MFRSs, Interpretations and amendments effective for annual periods beginning on or after 1 January 2020:*

- Amendments to MFRS 101 Presentation of Financial Statements – Definition of Material
- Amendments to MFRS 108 Accounting Policies, Changes in Accounting Estimates and Errors – Definition of Material

The Company is in the process of assessing the financial impacts of adopting the abovementioned accounting standards, interpretations and amendments.

There have been no significant changes in the nature of the principal activities during the year.

The following are accounting standards, amendments and interpretations to the MFRS Framework that have been issued by MASB which are not yet effective and are not applicable to the Company's operations:

*MFRSs, Interpretations and amendments effective for annual periods beginning on or after 1 January 2019:*

- Amendments to MFRS 3 Business Combination (Annual Improvements to MFRS Standards 2015-2017 Cycle)

*MFRSs, Interpretations and amendments effective for annual periods beginning on or after 1 January 2020:*

- Amendments to MFRS 3 Business Combination – Definition of a Business

*MFRSs, Interpretations and amendments effective for annual periods beginning on or after 1 January 2021:*

- MFRS 17 Insurance Contracts

*MFRSs, Interpretations and amendments effective for annual periods beginning on or after a date yet to be confirmed:*

- Amendments to MFRS 10 Consolidated Financial Statements and MFRS 128 Investment in Associates and Joint Ventures – Sale or Contribution of Assets between an Investor and its Associate or Joint Venture

The initial application of the accounting standards, interpretations and amendments are not expected to have any material financial impacts to the current period and prior period financial statements of the Company.

#### **(b) Basis of measurement**

The financial statements have been prepared on the historical cost basis other than as disclosed in Note 4.

#### **(c) Functional and presentation currency**

The financial statements are presented in Ringgit Malaysia (RM), which is the Company's functional currency.

#### **(d) Use of estimates and judgements**

The financial statements have been prepared on the historical cost basis other than as disclosed in Note 4.

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

Estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognised in the period in which the estimates are revised and in any future periods affected.

There are no significant areas of estimation uncertainty and critical judgements in applying accounting policies that have significant effect on the amounts recognised in the financial statements other than those disclosed in the following note:

- Note 6 - Impairment of amount due from members

### **3. DATE OF AUTHORISATION OF ISSUE**

The financial statements were authorised for issued by the Board of Directors on 30 May 2019.

### **4. SIGNIFICANT ACCOUNTING POLICIES**

The accounting policies set out below have been applied consistently to the periods presented in the financial statements, and have been consistently by the Company, unless otherwise stated.

#### **(a) Financial instruments**

Unless specifically disclosed below, the Company generally applied the following accounting policies retrospectively. Nevertheless, as permitted by MFRS 9 Financial Instruments, the Company has elected not to restate the comparatives.

##### **(i) Recognition and initial measurement**

A financial asset or a financial liability is recognised in the statement of financial position when, and only when, the Company becomes a party to the contractual provisions of the instrument.

**Current financial year**

A financial asset (unless it is a trade receivable without significant financing component) or a financial liability is initially measured at fair value plus or minus, for an item not at fair value through profit or loss, transaction costs that are directly attributable to its acquisition or issuance. A trade receivable without a significant financing component is initially measured at the transaction price.

An embedded derivative is recognised separately from the host contract where the host contract is not a financial asset, and accounted for separately if, and only if, the derivative is not closely related to the economic characteristics and risks of the host contract and the host contract is not measured at fair value through profit or loss. The host contract, in the event an embedded derivative is recognised separately, is accounted for in accordance with policy applicable to the nature of the host contract.

**Previous financial year**

Financial instrument was recognised initially, at its fair value plus or minus, in the case of a financial instrument not at fair value through profit or loss, transaction costs that were directly attributable to the acquisition or issue of the financial instrument.

An embedded derivative was recognised separately from the host contract and accounted for as a derivative if, and only if, it was not closely related to the economic characteristics and risks of the host contract and the host contract was not recognised as fair value through profit or loss. The host contract, in the event an embedded derivative was recognised separately, was accounted for in accordance with policy applicable to the nature of the host contract.

**(ii) Financial instrument categories and subsequent measurement****Financial assets****Current financial year**

Categories of financial assets are determined on initial recognition and are not reclassified subsequent to their initial recognition unless the Company changes its business model for managing financial assets in which case all affected financial assets are reclassified on the first day of the first reporting period following the change of the business model.

**(a) Amortised cost**

Amortised cost category comprises financial assets that are held within a business model whose objective is to hold assets to collect contractual cash flows and its contractual terms give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

The financial assets are not designated as fair value through profit or loss. Subsequent to initial recognition, these financial assets are measured at amortised cost using the effective interest method.

The amortised cost is reduced by impairment losses. Interest income, foreign exchange gains and losses and impairment are recognised in profit or loss. Any gain or loss on derecognition is recognised in profit or loss.

Interest income is recognised by applying effective interest rate to the gross carrying amount except for credit impaired financial assets (see Note 4(d)(i)) where the effective interest rate is applied to the amortised cost.

**(b) Fair value through other comprehensive income****(i) Debt investments**

Fair value through other comprehensive income category comprises debt investment where it is held within a business model whose objective is achieved by both collecting contractual cash flows and selling the debt investment, and its contractual terms give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding. The debt investment is not designated as at fair value through profit or loss. Interest income calculated using the effective interest method, foreign exchange gains and losses and impairment are recognised in profit or loss. Other net gains and losses are recognised in other comprehensive income. On derecognition, gains and losses accumulated in other comprehensive income are reclassified to profit or loss.

Interest income is recognised by applying effective interest rate to the gross carrying amount except for credit impaired financial assets (see Note 4(d)(i)) where the effective interest rate is applied to the amortised cost.

**(ii) Equity investments**

This category comprises investment in equity that is not held for trading, and the Company irrevocably elect to present subsequent changes in the investment's fair value in other comprehensive income. This election is made on an investment-by-investment basis. Dividends are recognised as income in profit or loss unless the dividend clearly represents a recovery of part of the cost of investment. Other net gains and losses are recognised in other comprehensive income. On derecognition, gains and losses accumulated in other comprehensive income are not reclassified to profit or loss.

Interest income is recognised by applying effective interest rate to the gross carrying amount except for credit impaired financial assets (see Note 4(d)(i)) where the effective interest rate is applied to the amortised cost.

**(c) Fair value through profit or loss**

All financial assets not measured at amortised cost or fair value through other comprehensive income as described above are measured at fair value through profit or loss. This includes derivative financial assets (except for a derivative that is a designated and effective hedging instrument).

On initial recognition, the Company may irrevocably designate a financial asset that otherwise meets the requirements to be measured at amortised cost or at fair value through other comprehensive income as at fair value through profit or loss if doing so eliminates or significantly reduces an accounting mismatch that would otherwise arise.

Financial assets categorised as fair value through profit or loss are subsequently measured at their fair value. Net gains or losses, including any interest or dividend income, are recognised in the profit or loss.

All financial assets, except for those measured at fair value through profit or loss and equity investments measured at fair value through other comprehensive income, are subject to impairment assessment (see Note 4(d)(i)).

**Previous financial year**

In the previous financial year, financial assets of the Company were classified and measured under MFRS 139 Financial Instruments: Recognition and Measurement as follows:

**(a) Financial assets at fair value through profit or loss**

Fair value through profit or loss category comprised financial assets that were held for trading including derivatives (except for a derivative that was a financial guarantee contract or a designated and effective hedging instrument), contingent consideration in a business combination or financial assets that were specifically designated into this category upon initial recognition.

Derivatives that were linked to and must be settled by delivery of unquoted equity instruments whose fair values could not be reliably measured were measured at cost.

Other financial assets categorised as fair value through profit or loss were subsequently measured at their fair values with the gain or loss recognised in profit or loss.

**(b) Held-to-maturity**

Held-to-maturity investments category comprised debt instruments that were quoted in an active market and the Company had the positive intention and ability to hold them to maturity.

Financial assets categorised as held-to-maturity investments were subsequently measured at amortised cost using the effective interest method.

**(c) Loans and receivables**

Loans and receivables category comprised debt instruments that were not quoted in an active market, trade and other receivables and cash and cash equivalents.

Financial assets categorised as loans and receivables were subsequently measured at amortised cost using the effective interest method.



**(d) Available-for-sale financial assets**

Available-for-sale category comprised investments in equity and debt instruments that were not held for trading.

Investments in equity instruments that did not have a quoted market price in an active market and whose fair value could not be reliably measured were measured at cost. Other financial assets categorised as available-for-sale were subsequently measured at their fair values with the gain or loss recognised in other comprehensive income, except for impairment losses, foreign exchange gains and losses arising from monetary items and gains and losses of hedged items attributable to hedge risks of fair value hedges which were recognised in profit or loss. On derecognition, the cumulative gain or loss recognised in other comprehensive income was reclassified from equity into profit or loss. Interest calculated for a debt instrument using the effective interest method was recognised in profit or loss.

All financial assets, except for those measured at fair value through profit or loss were subject to impairment assessment (see Note 4(d)(i)).

**Financial liabilities****Current financial year**

The categories of financial liabilities at initial recognition are as follows:

**(a) Fair value through profit or loss**

Fair value through profit or loss category comprises financial liabilities that are derivatives (except for a derivative that is a financial guarantee contract or a designated and effective hedging instrument), contingent consideration in a business combination and financial liabilities that are specifically designated into this category upon initial recognition.

On initial recognition, the Company may irrevocably designate a financial liability that otherwise meets the requirements to be measured at amortised cost as at fair value through profit or loss:

- (i) if doing so eliminates or significantly reduces an accounting mismatch that would otherwise arise;

- (ii) a group of financial liabilities or assets and financial liabilities is managed and its performance is evaluated on a fair value basis, in accordance with a documented risk management or investment strategy, and information about the group is provided internally on that basis to the Company's key management personnel; or

- (iii) if a contract contains one or more embedded derivatives and the host is not a financial asset in the scope of MFRS 9, where the embedded derivative significantly modifies the cash flows and separation is not prohibited.

Financial liabilities categorised as fair value through profit or loss are subsequently measured at their fair value with gains or losses, including any interest expense are recognised in the profit or loss.

For financial liabilities where it is designated as fair value through profit or loss upon initial recognition, the Company recognises the amount of change in fair value of the financial liability that is attributable to change in credit risk in the other comprehensive income and remaining amount of the change in fair value in the profit or loss, unless the treatment of the effects of changes in the liability's credit risk would create or enlarge an accounting mismatch.

**(b) Amortised cost**

Other financial liabilities not categorised as fair value through profit or loss are subsequently measured at amortised cost using the effective interest method. Interest expense and foreign exchange gains and losses are recognised in the profit or loss. Any gains or losses on derecognition are also recognised in the profit or loss.

**Previous financial year**

In the previous financial year, financial liabilities of the Company were subsequently measured at amortised cost other than those categorised as fair value through profit or loss.

Fair value through profit or loss category comprised financial liabilities that were derivatives or financial liabilities that were specifically designated into this category upon initial recognition.

Derivatives that were linked to and must be settled by delivery of unquoted equity instruments that did not have a quoted price in an active market for identical instruments whose fair value otherwise could not be reliably measured were measured at cost.

Financial liabilities categorised as fair value through profit or loss were subsequently measured at their fair values with the gain or loss recognised in profit or loss.

**(iii) Derecognition**

A financial asset or part of it is derecognised when, and only when, the contractual rights to the cash flows from the financial asset expire or transferred, or control of the asset is not retained or substantially all of the risks and rewards of ownership of the financial asset are transferred to another party. On derecognition of a financial asset, the difference between the carrying amount of the financial asset and the sum of consideration received (including any new asset obtained less any new liability assumed) is recognised in profit or loss.

A financial liability or a part of it is derecognised when, and only when, the obligation specified in the contract is discharged, cancelled or expires. A financial liability is also derecognised when its terms are modified and the cash flows of the modified liability are substantially different, in which case, a new financial liability based on modified terms is recognised at fair value. On derecognition of a financial liability, the difference between the carrying amount of the financial liability extinguished or transferred to another party and the consideration paid, including any non-cash assets transferred or liabilities assumed, is recognised in profit or loss.

**(iv) Offsetting**

Financial assets and financial liabilities are offset and the net amount presented in the statement of financial position when, and only when, the Company currently has a legally enforceable right to set off the amounts and it intends either to settle them on a net basis or to realise the asset and liability simultaneously.

**(b) Property, plant and equipment****(i) Recognition and measurement**

Items of property, plant and equipment are measured at cost less any accumulated depreciation and any accumulated impairment losses.

Cost includes expenditures that are directly attributable to the acquisition of the asset and any other costs directly attributable to bringing the asset to working condition for its intended use, and the costs of dismantling and removing the items and restoring the site on which they are located. The cost of self-constructed assets also includes the cost of materials and direct labour. For qualifying assets, borrowing costs are capitalised in accordance with the accounting policy on borrowing costs.

Cost also may include transfers from equity of any gain or loss on qualifying cash flow hedges of foreign currency purchases of property, plant and equipment. Purchased software that is integral to the functionality of the related equipment is capitalised as part of that equipment.

When significant parts of an item of property, plant and equipment have different useful lives, they are accounted for as separate items (major components) of property, plant and equipment.

The gain or loss on disposal of an item of property, plant and equipment is determined by comparing the proceeds from disposal with the carrying amount of property, plant and equipment and is recognised net within "other income" and "other expenses" respectively in profit or loss.

**(ii) Subsequent costs**

The cost of replacing a component of an item or property, plant and equipment is recognised in the carrying amount of the item if it is probable that the future economic benefits embodied within the component will flow to the Company, and its cost can be measured reliably.

The carrying amount of the replaced component is derecognised to profit or loss. The costs of the day-to-day servicing of property, plant and equipment are recognised in profit or loss as incurred.

**(iii) Depreciation**

Depreciation is based on the cost of an asset, or other amount substituted for cost, less its residual value. Significant components of individual assets are assessed, and if a component has a useful life that is different from the remainder of that asset, then that component is depreciated separately.

Depreciation is recognised in profit or loss on a straight line basis over the estimated useful lives of each component of an item of property, plant and equipment at the following rates:

Computers	33.33%
Furniture and fittings	20%
Office equipment	20%

Depreciation methods, useful lives and residual value are reviewed and adjusted as appropriate at end of the reporting period.

**(c) Cash and cash equivalents**

Cash and cash equivalents consist of cash in hand and bank balances.

**(d) Impairment****Financial assets****(i) Financial assets**

All financial assets (except for financial assets categorised as fair value through profit or loss, investment in subsidiaries and investment in associates) are assessed at each reporting date whether there is any objective evidence of impairment as a result of one or more events having an impact on the estimated future cash flows of the asset.

Losses expected as a result of future events, no matter how likely, are not recognised. For an equity instrument, a significant or prolonged decline in the fair value below its cost is an objective evidence of impairment.

An impairment loss in respect of loans and receivables and held-to-maturity investments is recognised in profit or loss and is measured as the difference between the asset's carrying amount and the present value of estimated future cash flows discounted at the asset's original effective interest rate. The carrying amount of the asset is reduced through the use of an allowance account.

An impairment loss in respect of available-for-sale financial assets is recognised in the profit or loss and is measured as the difference between the asset's acquisition cost (net of any principal repayment and amortisation) and the asset's current fair value, less any impairment loss previously recognised. Where a decline in the fair value of an available-for-sale financial asset has been recognised in other comprehensive income, the cumulative loss in other comprehensive income is reclassified from equity and recognised to profit or loss.

An impairment loss in respect of unquoted equity instrument that is carried at cost is recognised in profit or loss and is measured as the difference between the asset's carrying amount and the present value of estimated future cash flows discounted at the current market rate of return for a similar financial asset.

Impairment losses recognised in profit or loss for an investment in an equity instrument is not reversed through the profit or loss.

If, in a subsequent period, the fair value of a debt instrument increases and the increase can be objectively related to an event occurring after the impairment loss was recognised in profit or loss, the impairment loss is reversed, to the extent that the asset's carrying amount does not exceed what the carrying amount would have been had the impairment not been recognised at the date the impairment was reversed. The amount of the reversal is recognised in the profit or loss.

**(ii) Other assets**

The carrying amounts on other assets (except for inventories, assets arising from construction contracts and deferred tax assets) are reviewed at each reporting date to determine whether there is any indication of impairment. If any such indication exists, then the asset's recoverable amount is estimated.

For the purpose of impairment testing, assets are grouped together into the smallest group of assets that generates cash inflows from continuing use that are largely independent of the cash inflows of other assets or groups of asset (the "cash-generating unit"). The goodwill acquired in a business combination, for the purpose of impairment testing, is allocated to cash-generating units that are expected to benefit from the synergies of the combination.

The recoverable amount of an asset or cash-generating unit is the greater of its value in use and its fair value less costs to sell. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset.

An impairment loss is recognised if the carrying amount of an asset or its cash-generating unit exceeds its recoverable amount. Impairment losses are recognised in the profit or loss. Impairment losses recognised in respect of cash-generating units are allocated first to reduce the carrying amount of any goodwill allocated to the units and then to reduce the carrying amount of the other assets in the unit (groups of units) on a pro rata basis.

Impairment losses recognised in prior periods are assessed at the end of each reporting period for any indications that the loss has decreased or no longer exists. An impairment loss is reversed if there has been a change in the estimates used to determine the recoverable amount since the last impairment loss was recognised.

An impairment loss is reversed only to the extent that the asset's carrying amount does not exceed the carrying amount that would have been determined, net of depreciation or amortisation, if no impairment loss had been recognised. Reversals of impairment losses are credited to profit or loss in the year in which the reversals are recognised.

**(e) Employee benefits****(i) Short term employee benefits**

Short-term employee benefit obligations in respect of salaries, annual bonuses, paid annual leave and sick leave are measured on an undiscounted basis and are expensed as the related service is provided.

A liability is recognised for the amount expected to be paid under short-term cash bonus or profit-sharing plans if the Company has a present legal or constructive obligation to pay this amount as a result of past service provided by the employee and the obligation can be estimated reliably.

The Company's contributions to statutory pension funds are charged to profit or loss in the year to which they relate. Once the contributions have been paid, the Company has no further payment obligations.

**(ii) Defined benefits plans**

The Company's net obligation in respect of defined benefit retirement plans is calculated separately for each plan by estimating the amount of future benefit that employees have earned in return for their service in the current and prior periods; that benefit is discounted to determine its present value.

Any unrecognised past service costs and the fair value of any plan assets are deducted. The discount rate is the yield at the end of the reporting period on high quality corporate bonds that have maturity dates approximating the terms of the Company's obligations and that are denominated in the same currency in which the benefits are expected to be paid. The calculation is performed annually by a qualified actuary using the projected unit credit method.

When the calculation results in a benefit to the Company, the recognised asset is limited to the net total of any unrecognised past service costs and the present value of economic benefits available in the form of any future refunds from the plan or reductions in future contributions to the plan. In order to calculate the present value of economic benefits, consideration is given to any minimum funding requirements that apply to any plan in the Company. An economic benefit is available to the Company if it is realisable during the life of the plan, or any other settlement of the plan liabilities.

When the benefits of a plan are improved, the portion of the increased benefit relating to past service by employees is recognised in profit or loss on a straight-line basis over the average period until the benefits become vested. To the extent that the benefits vest immediately, the expense is recognised immediately in profit or loss.

**(f) Provisions****(i) Short term employee benefits**

A provision is recognised if, as a result of a past event, the Company has a present legal or constructive obligation that can be estimated reliably, and it is probable that an outflow of economic benefits will be required to settle the obligation. Provisions are determined by discounting the expected future cash flows at a pre-tax rate that reflects current market assessment of a time value of money and the risks specific to the liability. The unwinding of the discount is recognised as finance cost.

**(g) Revenue**

Revenue is recognised to the extent that it is probable that the economic benefits will flow to the Company and the revenue can be reliably measured. The following specific recognition criteria must also be met before revenue is recognised:

**(i) Subscription fees**

A fixed quantum of subscription fees is recognised as initial subscription fees in the year the subscription is accepted.

The annual subscription fees received and receivable by the Company is recognised on an accrual basis.

**(ii) Interest income**

Interest income is recognised as it accrues using the effective interest method in profit or loss except for interest income arising from temporary investment of borrowings taken specifically for the purpose of obtaining a qualifying asset which is accounted for in accordance with the accounting policy on borrowing costs.

**(h) Government grants**

Government grants are recognised initially as deferred income at fair value when there is reasonable assurance that they will be received and the Company will comply with the conditions associated with the grant and are then recognised in profit or loss as other income on a systematic basis over the useful life of the asset. Grants that compensate the Company for expenses incurred are recognised in profit or loss as other income on a systematic basis in the same periods in which the expenses are recognised.

**(i) Income tax****(i) Short term employee benefits**

Income tax expense comprises current and deferred tax. Income tax expense is recognised in profit or loss except to the extent that it relates to a business combination or items recognised directly in equity or other comprehensive income.

Current tax is the expected tax payable or receivable on the taxable income or loss for the year, using tax rates enacted or substantively enacted by the end of the reporting period, and any adjustment to tax payable in respect of previous years.

Deferred tax is recognised using the liability method, providing for temporary differences between the carrying amounts of assets and liabilities in the statement of financial position and their tax bases.

Deferred tax is not recognised for the following temporary differences: the initial recognition of goodwill, the initial recognition of assets or liabilities in a transaction that is not a business combination and that affects neither accounting nor taxable profit nor loss.

Deferred tax is measured at the tax rates that are expected to apply to the temporary differences when they reverse, based on the laws that have been enacted or substantively enacted by the end of the reporting period.

Deferred tax assets and liabilities are offset if there is a legally enforceable right to offset current tax liabilities and assets, and they relate to income taxes levied by the same tax authority on the same taxable entity, or on different tax entities, but they intend to settle current tax liabilities and assets on a net basis on their tax assets and liabilities will be realised simultaneously.

A deferred tax asset is recognised to the extent that it is probable that future taxable profits will be available against which the temporary differences can be utilised. Deferred tax assets are reviewed at the end of each reporting period and are reduced to the extent that it is no longer probable that the related tax benefit will be realised.

Unutilised reinvestment allowance and investment tax allowance, being tax incentives that is not a tax base of an asset, is recognised as a deferred tax asset to the extent that it is probable that future taxable profits will be available against the unutilised tax incentive can be utilised.

**(j) Income tax****(i) Fair value measurement**

Fair value of an asset or a liability, except for share-based payment and lease transactions, is determined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The measurement assumes that the transaction to sell the asset or transfer the liability takes place either in the principal market or in the absence of a principal market, in the most advantageous market.

For non-financial asset, the fair value measurement takes into account a market participant's ability to generate economic benefits by using the asset in its highest and best use or by selling it to another market participant that would use the asset in its highest and best use.

When measuring the fair value of an asset or a liability, the Company uses observable market data as far as possible. Fair value are categorised into different levels in a fair value hierarchy based on the input used in the valuation technique as follows:

- Level 1: quoted prices (unadjusted) in active markets for identical assets or liabilities that the Company can access at the measurement date.
- Level 2: inputs other than quoted prices included in Level 1 that are observable for the asset or liability, either directly or indirectly.
- Level 3: unobservable for the asset or liability, either directly or indirectly.

The Company recognises transfers between levels of the fair value hierarchy as of the date of the event or change in circumstances that caused the transfers.

**5. PROPERTY, PLANT AND EQUIPMENT**

	COST			
	1.1.2018 RM	Additions RM	Disposals RM	31.12.2018 RM
Computers	106,232	15,590	-	121,822
Furniture and fittings	8,423	-	-	8,423
Office equipment	10,339	-	-	10,339
	124,994	15,590	-	140,584

	ACCUMULATED DEPRECIATION			
	1.1.2018 RM	Additions RM	Disposals RM	31.12.2018 RM
Computers	69,970	21,121	-	91,091
Furniture and fittings	8,410	-	-	8,410
Office equipment	8,886	955	-	9,841
	<b>87,266</b>	<b>22,076</b>	<b>-</b>	<b>109,342</b>

	CARRYING VALUE		Depreciation
	2018 RM	2017 RM	2017 RM
Computers	30,931	36,262	17,662
Furniture and fittings	13	13	-
Office equipment	498	1,453	1,372
	<b>31,442</b>	<b>37,728</b>	<b>19,034</b>

The cost of property, plant and equipment which has been fully depreciated but still in use are as follows:

	2018 RM	2017 RM
Computers	46,069	46,069
Furniture and fittings	8,423	8,423
Office equipment	3,478	3,478
	<b>57,970</b>	<b>57,970</b>

## 6. AMOUNT DUE FROM MEMBERS

	2018 RM	2017 RM
Amount due from members	72,959	84,123
Less: Impairment losses	-	(19,371)
	<b>72,959</b>	<b>64,752</b>

## 7. OTHER RECEIVABLES, DEPOSITS AND PREPAYMENTS

	2018 RM	2017 RM
Other receivables, deposits and prepayments	5,083	33,183
Government grants (MCMC)	965,730	699,335
Amount due from the Inland Revenue Board	5,900	3,050
	<b>976,713</b>	<b>735,568</b>

## 8. CASH AND CASH EQUIVALENTS

	2018 RM	2017 RM
Cash in hand and at bank	1,937,696	731,837

## 9. MEMBERSHIP FUND

	2018 RM	2017 RM
At 1 January	138,000	119,000
Subscription from members	14,000	19,000
At 31 December	152,000	138,000

The Company is incorporated as a company limited by guarantee without share capital. In the event of the Company being wound up, each member of the Company undertakes to contribute a maximum of RM100 to the assets of the Company.

The membership fund represents the initial contribution from the members.

The movement of the members are as follows:

	2018 Members	2017 Members
At 1 January	87	65
Add: New members	18	25
Less: Discontinued memberships	(3)	(3)
At 31 December	102	87

## 10. OTHER PAYABLES AND ACCRUALS

	2018 RM	2017 RM
Other payables	190,464	49,917
Amount due to members	24,865	28,470
	215,329	78,387

## 11. DEFERRED REVENUE

	2018 RM	2017 RM
Malaysian Communications Multimedia Commission (MCMC)		
- Green ICT (GICT)	783,129	295,486
- Internet of Things (IOT)	1,225,640	624,540
	2,008,769	920,026

## 12. REVENUE

	2018 RM	2017 RM
Subscription fees	370,096	347,937

## 13. OTHER OPERATING INCOME

	2018 Members	2017 Members
Government grants	2,010,984	1,991,396
Sponsorship	85,860	-
Hibah	-	2,038
Others	4,581	6,825
	2,101,425	2,000,259

**14. OPERATING SURPLUS BEFORE TAXATION**

Operating surplus before taxation is arrived at after charging the following items:

	2018 RM	2017 RM
Auditors' remuneration	10,000	8,000
Bad debts written off	-	4,008
Deposit written off	2,400	-
Depreciation	22,076	19,034
Rental of equipment	4,674	4,898

**15. TAXATIONS**

	2018 RM	2017 RM
Current income tax expense	1,400	1,200
Over provision of taxation in prior years	-	(3,161)
	1,400	(1,961)

A reconciliation of income tax expenses applicable to operating surplus before tax at the statutory of the Company are as follows:

	2018 RM	2017 RM
Operating surplus before taxation	210,640	220,002
Tax at the current income tax rate of 24%	50,554	52,800
Tax effect in respect of:	2,400	-
Utilisation of deferred tax assets during the year	(49,154)	(51,600)
Over provision of taxation in prior years	-	(3,161)
Tax expense	1,400	(1,961)

**16. STAFF COSTS**

	2018 RM	2017 RM
Salaries, bonus and allowances	917,845	7 04,516
EPF contribution	112,459	84,988
SOCSSO contribution	9,556	16,329
Other employee benefits	35,106	50,026
	1,074,966	855,859

The numbers of employees in the Company at the end of the financial year were 11 (2017:12)



## 17. FINANCIAL INSTRUMENTS

## (a) Categories of financial instruments

The table below provides an analysis of financial instruments as at 31 December 2018 categorised as amortised cost ("AC"):

	Carrying amount RM	AC RM
2018		
<u>Financial assets</u>		
Amount due from members	72,959	72,959
Other receivables, deposit and prepayments	970,813	970,813
Cash and cash equivalents	1,937,696	1,937,696
	<u>2,981,468</u>	<u>2,981,468</u>
<u>Financial liability</u>		
Other payables and accruals	<u>(215,329)</u>	<u>(215,329)</u>

The table below provides an analysis of financial instruments as at 31 December 2017 categorised as follows:

- (i) Loans and receivables ("L&R"); and
- (ii) Financial liabilities measured at amortised costs ("FL")

	Carrying amount RM	AC RM
2017		
<u>Financial assets</u>		
Amount due from members	64,752	64,752
Other receivables, deposit and prepayments	732,518	732,518
Cash and cash equivalents	731,837	731,837
	<u>1,529,107</u>	<u>1,529,107</u>
<u>Financial liability</u>		
Other payables and accruals	<u>(78,387)</u>	<u>(78,387)</u>

## (b) Financial risk management

The Company has exposure to the following risks from its use of financial instruments:

- Credit risk
- Liquidity risk

## (c) Credit risk

Credit risk is the risk of a financial loss if a member or counterparty to a financial instrument fails to meet its contractual obligations. The Company's exposure to credit risk arises principally from its receivables from members and cash and cash equivalents. There are no significant changes as compared to the prior periods.

## (i) Amount due from members

*Risk management objectives, policies and processes for managing the risk*

Management has a credit policy in place and the exposure to credit risk is monitored on an ongoing basis. Normally credit evaluations are performed on members requiring credit over a certain amount.

At each reporting date, the Company assesses whether any of the amount due from members are credit impaired.

The gross carrying amounts of credit impaired amount due from members are written off (either partially or full) when there is no realistic prospect of recovery. This is generally the case when the Company determines that the member does not have assets or sources of income that could generate sufficient cash flows to repay the amounts subject to the write-off. Nevertheless, amount due from members that are written off could still be subject to enforcement activities.

There are no significant changes as compared to the prior periods.

**Exposure to credit risk, credit quality and collateral**

As at the end of the reporting period, the maximum exposure to credit risk arising from amount due from members is represented by the carrying amounts in the statement of financial position.

**Recognition and measurement of impairment loss**

In managing credit risk of amount due from members, the Company manages its debtors and takes appropriate actions (including but not limited to legal actions) to recover long overdue balances. Generally, members will pay within 60 days. The Company's debt recovery process is as follows:

- a) Above 120 days past due after credit term, the Company will start to initiate a structured debt recovery process which is monitored by the management; and
- b) If no repayment received from the structured debt recovery process, the Company will commence a legal proceeding against the member.

The Company uses an allowance matrix to measure ECLs of amount due from members. Consistent with the debt recovery process, invoices which are past due 120 days will be considered as credit impaired.

Loss rates are calculated using a 'roll rate' method based on the probability of a receivable progressing through successive stages of delinquency to 120 days past due.

Loss rates are based on actual credit loss experience over the past three years. The Company also considers differences between

- (a) economic conditions during the period over which the historic data has been collected;
- (b) current conditions; and
- (c) the Company's view of economic conditions over the expected lives of the receivables.

Nevertheless, the Company believes that these factors are immaterial for the purpose of impairment calculation for the year.

The following table provides information about the exposure to credit risk and ECLs for amount due from members as at 31 December 2018 which are grouped together as they are expected to have similar risk nature.

	Gross carrying amount RM	Loss allowance RM	Net balance RM
Current (not past due)	-	-	-
1-30 days past due	-	-	-
31-60 days past due	-	-	-
61-90 days past due	-	-	-
91-120 days past due	-	-	-
	-	-	-
Credit impaired			
More than 120 days	72,959	-	72,959
	72,959	-	72,959

Amount due from members that were past due but not impaired relate to members that have a good payment record with the Company. Based on past experience and no adverse information to date, the directors of the Company are of the opinion that no provision for impairment is necessary in respect of those balances as there has not been a significant change in the credit quality and the balances are still considered fully recoverable.

The movements in the allowance for impairment in respect of amount due from members during the year are shown below.

	Lifetime ECL RM	Credit impaired RM	Total RM
Balance at 1 January	-	19,371	19,371
Amounts written off	-	(19,371)	(19,371)
Balance at 31 December	-	-	-

Comparative information under MFRS 139 Financial Instruments; Recognition and Measurement

The aging of amount due from members as at 31 December 2017 was as follows:

	Gross RM	Individual impairment RM	Net RM
2017			
Not past due	-	-	-
Past due 1-30 days	-	-	-
Past due 31-120 days	-	-	-
Past due more than 120 days	84,123	(19,371)	64,752
	<u>84,123</u>	<u>19,371)</u>	<u>64,752</u>

The movements in the allowance for impairment losses of amount due from members during the financial year were:

	2017 RM
At 1 January/31 December	<u>19,371</u>

#### (ii) Cash and cash equivalents

The cash and cash equivalents are held with banks and financial institutions. As at the end of the reporting period, the maximum exposure to credit risk is represented by their carrying amounts in the statement of financial position.

These banks and financial institutions have low credit risks. In addition, some of the bank balances are insured by government agencies. Consequently, the Company is of the view that the loss allowance is not material and hence, it is not provided for.

#### (iii) Other receivables

Credit risks on other receivables are mainly arising from advances and deposits paid. As at the end of the reporting period, the maximum exposure to credit risk is represented by their carrying amounts in the statement of financial position.

#### (d) Liquidity risk

Liquidity risk is the risk that the Company will not be able to meet its financial obligations as they fall due. The Company's exposure to liquidity risk arises principally from its various payables.

The Company maintains a level of cash and cash equivalents deemed adequate by the management to ensure, as far as possible, that it will have sufficient liquidity to meet its liabilities when they fall due.

It is not expected that the cash flows included in the maturity analysis occur significantly earlier, or at significantly different amounts.

#### Maturity analysis

The table below summarises the maturity profile of the Company's financial liabilities as at the end of the reporting period based on undiscounted contractual payments:

	Carrying amount RM	Contractual interest rate	Contractual cash flows RM	Under 1 year RM
2018				
<b>Non-derivative financial liability</b>				
<b>Other payables and accruals</b>	<u>215,329</u>	-	<u>215,329</u>	<u>215,329</u>
2017				
Non-derivative financial liability		-	-	-
Other payables and accruals	<u>78,387</u>	-	<u>78,387</u>	<u>78,387</u>

#### (e) Fair value of financial instruments

The carrying amounts of cash and cash equivalents, short term receivables and payables approximate their fair values due to the relatively short term nature of these financial instruments.

### 18. RESERVES MANAGEMENT

The Company's financial management objective is to maintain adequate reserves to safeguard the Company's ability to continue as a going concern, so as to maintain members, payables and market confidence and to sustain future development of the business. The directors monitor and are determined to maintain an optimal debt-to-equity ratio that complies with debt covenants and regulatory requirements.

The debt-to-equity ratio of the Company is not presented as the Company has no debts at the end of the reporting period.

## NOTES



Malaysian Technical Standards Forum Bhd

**Malaysian Technical Standards Forum Bhd (MTSFB)**  
**Malaysian Communications & Multimedia Commission (MCMC)**



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