

STANDARDISING THE FUTURE OF COMMUNICATION

ANNUAL REPORT 2023

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Standardising The Future of Communication

The cover design prominently showcases vibrant shapes and lines, intertwined to symbolise the intricate connectivity of our modern, technology-driven world. The colours and geometric patterns evoke a sense of innovation, dynamism, and forward-thinking, capturing the essence of the organisation's mission to shape the future of communication standards. This striking visual metaphor underscores the paramount importance of seamless communication and technological integration in driving transformative progress and catalysing collaborative innovation.

The minimalist yet impactful design approach reflects MTSFB's dedication to providing clear, concise, and insightful analysis that will empower industry stakeholders to navigate the rapidly evolving technological landscape with confidence and clarity.

Key Messages



Chairman's Message

Dear all,

I am pleased to present to you the Malaysian Technical Standards Forum Bhd's (MTSFB) Annual Report for the year 2023. This year has been transformative for our organisation, showcasing our unwavering commitment to advancing technical standards and its adoption.

Azni Risa Ramlan

Chairman

In 2023, MTSFB made significant strides in advancing the communications and multimedia industry through the development of technical codes in various sectors, the key focuses of which included 5G, Internet of Things (IoT) and cybersecurity, among others. Despite challenges such as rapid technological changes and the need for widespread adoption, these efforts have positioned Malaysia at the forefront of digital transformation, fostering innovation and enhancing global competitiveness. Supporting national initiatives such as *Jalinan Digital Negara* (JENDELA) and MyDigital, among others, MTSFB is committed to aligning ourselves to effectively contribute to the nation's development through what we do best – developing standards. The commitment of the stakeholders involved has been instrumental in these achievements, paving the way for industry excellence through standards.

One of our most significant accomplishments this year has been the successful registration of 11 Technical Codes (TC) by the Malaysian Communications and Multimedia Commission (MCMC). With the registration, these TCs are all set to provide a robust set of guidelines that supports regulatory standards, promotes best practices, and ensures the safety, reliability, and interoperability of technologies across the communication and multimedia industry in Malaysia. To further support the industry through TCs, another 13 TCs were submitted this year to MCMC, covering various topics in the areas of communications equipment and infrastructure; security, trust and privacy; numbering and electronic addressing; and IoT and broadcasting. By setting high standards and promoting best practices, these TCs are expected to help position Malaysia as a hub for technological excellence and innovation on the global stage while ensuring that our industries remain competitive.



Apart from our core business in the development of TCs, another key milestone for MTSFB in 2023 is the emphasis on creating value from the TCs and the focus on its adoption. This has been demonstrated largely through our extensive engagement with stakeholders via working group meetings and workshops, awareness programmes, forums and technology talks, as well as by reaching out to selected key collaborative partners such as Deloitte, the Malaysia Digital Economy Corporation (MDEC), Universiti Teknikal Malaysia Melaka (UTeM), Institute of Engineers Malaysia (IEM), Institute of Electrical and Electronics Engineers (IEEE) Malaysia and many more. These collaborative efforts have been instrumental in fostering a dynamic and inclusive dialogue, allowing us to address emerging challenges, share expertise, recruit more subject matter experts into our organisation for the betterment of TC development and develop innovative solutions that are tailored to the needs of the industry. In addition, our drive towards value creation has not only facilitated the exchange of valuable insights and best practices but has also strengthened our relationships with industry professionals, academics, and policymakers. It was also recognised by one of our partners, IEEE Malaysia, when MTSFB was honoured with the Best Industry Collaborator Award for the second consecutive year in 2023.

To further add value to the TCs that were developed, MTSFB continued to extend its reach via its participation and collaboration with international standards development organisations (SDOs), such as the International Telecommunication Union (ITU) and Asia Pacific Telecommunity (APT), in bringing our TCs as contribution papers towards global standards, as well as forging stronger bonds with key partners such as Fifth Generation Mobile Communication Promotion Forum (5GMF) Japan, Telecommunication Technology Committee (TTC) Japan and Taiwan Association of Information and Communication Standards (TAICS). These collaborations enable us to stay informed about global best practices, adopt advanced technologies, and integrate international standards into our local context. This, in turn, enhances the competitiveness of the Malaysian communication and multimedia industry on the global stage and ensures that we are aligned with the latest technological developments and trends.

In substantiating the adoption of TCs, MTSFB has started assessing the utilisation of TCs to measure the adoption rate of the TCs, industry compliance levels, and feedback from stakeholders in various sectors. A study on TC utilisation has been conducted this year as a baseline for understanding the current state of TC adoption as well as the preferences and requirements of the users. This information is crucial for ensuring that our efforts align with our goals and that we continue to deliver meaningful contributions to technological advancement with better standards in Malaysia.

On behalf of the Board of Directors, I would like to extend my heartfelt appreciation to everyone who has been a part of MTSFB's journey this year, especially our esteemed members, collaborators, counterparts in MCMC, as well as our Office Bearers. Your dedication, hard work and commitment have been instrumental in achieving our goals and driving our mission forward. Together, we are shaping a future where Malaysia stands as a beacon of technological excellence. Let us continue to strive for greater heights and make 2024 another remarkable year for MTSFB and our nation.

As we look ahead to the future, MTSFB will continue to first and foremost prioritise the development of technical codes and their adoption in areas critical to our nation's technological progression. With that, we remain dedicated to keeping pace with technological advancements and fostering an environment of continuous improvement and innovation. Our goal is to ensure that Malaysia remains at the forefront of technological excellence and innovation, driving economic growth and enhancing the quality of life for all Malaysians.

Thank you.

Azni Risa Ramlan

Chairman

CEO's Address



Dear all,

It is my privilege to address you as the CEO of MTSFB. As I reflect on the past year, I am immensely proud of our organisation's accomplishments and inspired by the opportunities ahead.

Since assuming leadership, we have conducted a strategic business review and established key strategies focusing on TC development excellence, embodying a fresh approach to value creation, targeted stakeholder engagement, emphasising collaborative partnerships and strategic alignment with industry needs and driving operational excellence through internal capacity effectiveness. This has led to structural adjustments within the organisation, including a focus on value creation and strengthening the standards function, which is essential for the successful implementation of our strategies. This new era is characterised by a commitment to enhancing internal governance and strategic initiatives that propel us forward.

Normarinee Mohd Nor

Chief Executive Officer

We aim for Standard Excellence by validating our standards against industry trends and fostering widespread adoption. Prior to TC development, we conduct comprehensive studies that engage diverse stakeholders and experts to validate problem statements and TC needs. Our drafting committees include representatives from industry, academia, authorities, users, manufacturers, and regulators, ensuring a balanced and inclusive approach to standards development. Building on this foundation, we have focused on elevating TC development through rigorous stakeholder engagement, ensuring that our standards meet industry demands and incorporate emerging technologies. Throughout the year, 80 Working Group meetings, 7 TC development workshops and 21 targeted engagement sessions were conducted, resulting in the submission of 13 TCs, exceeding the initial target of 11 TCs for the year.



MTSFB is committed to agility in TC development as we anticipate future technological advancements. By forecasting technology trends and updating our standardisation roadmap regularly, we ensure that our TCs remain relevant and adaptive. In relation to this, MTSFB aims to shape Malaysia's technological landscape by advancing TCs that facilitate innovation, digital inclusion, and sustainable growth. We aspire for our standards to drive Malaysia's competitiveness in global ICT markets and accelerate the deployment of secure digital services that benefit all citizens. Therefore, we have actively participated in regional and international standardisation works. At the regional level, 3 papers on Security, Green ICT and IoT were presented in ASTAP. On the other hand, at the international level, 3 papers were presented in ITU-T Study Group 17 and 1 paper in Study Group 5. Our involvement in these standards development organisations (SDOs) has benefited us, not only in enhancing our presence on the global scene in representing the country, but also in the exposure to standards development initiatives globally, which can be adopted as input for our TC development.

As the pace of technological disruption accelerates and industries undergo rapid transformation, we recognise the need to evolve MTSFB's role to drive even greater value for our stakeholders. It is now part of our mission to expand beyond standards development and become a catalyst for value creation, industry transformation and innovation. We provide insights and adoption programmes that bolster MTSFB's influence and collaboration with stakeholders. To achieve this, a Technical Code Utilisation Study was launched for the first time since our inception to ensure that MTSFB is instrumental in shaping the adoption of TCs nationwide.



The 2023 Technical Code Utilisation Survey underscored the critical need for heightened awareness, engagement, and promotion of MTSFB and its TCs. With 76% TC adoption from the member organisations of MTSFB, the baseline for TC adoption by members has been created, and further action plans have been developed to drive a higher rate. In addition, a 46% TC adoption rate by external organisations indicated the need for more aggressive awareness of the TCs.

MTSFB values collaboration and engagement, fostering strong relationships with our Board of Directors, members, and stakeholders. Through regular meetings, targeted industry engagements, and technology-sharing sessions, we cultivate a culture of knowledge sharing, collaboration and mutual support. These interactions are complemented by personalised account management initiatives that enhance collaboration and responsiveness to members' needs. Leveraging these initiatives, our approach to creating technical code awareness and technology sharing has reached a wider audience and created interest in participating as experts in our activities.

As a result of these efforts, we are pleased to welcome 27 new subject matter experts from 22 organisations contributing to the TC development and 6 new member organisations, all joining us as Ordinary Members. In addition, 2023 recorded a 48% increase in membership fee collection compared to the previous years.

This year, we have embarked on an organisational transformation journey towards a performance-driven culture, efficiency and governance excellence. As technologies evolve and regulatory standards advance, we reassert our dedication to robust governance, compliance and ethical business practices. These principles are the foundation of our commitment to responsible conduct, while fostering a greater synergy between the team and the industry.

Moving forward, MTSFB is well-positioned to shape the future of standardisation for the communications and multimedia industry, supported by a professional and dedicated team, and knowledgeable industry experts who will effectively contribute to our long-term growth and agenda.

In closing, I extend my heartfelt gratitude to MCMC, MTSFB Board of Directors, Reference Panel, Working Groups, our members, stakeholders, partners and our dedicated team for their unwavering support. Together, we will continue to drive excellence in technical standards, foster innovation, and steer Malaysia towards a brighter technological future. I am excited about the opportunities that lie ahead and look forward to collaborating with each of you to achieve our shared vision.

Thank you.

Normarinee Mohd Noor
Chief Executive Officer

About
MTSFB



About MTSFB

The **Malaysian Technical Standards Forum Bhd (MTSFB)** stands as the leading standardisation body for Malaysia's Communications and Multimedia Industry. Initially established on 8 June 2004 as a company limited by guarantee, it was later accorded the status of the Technical Standards Forum by the Malaysian Communications and Multimedia Commission (MCMC) on 27 October 2004, pursuant to Section 94 (Chapter 9 of Part V) and Section 185 (Chapter 3 of Part VII) of the Communications and Multimedia Act 1998 (CMA 1998).

Our Core Business:

Facilitate the development, adoption, and implementation of technical standards or known as technical codes



Develop and maintain TCs on the requirements of network interoperability, safety and other technical aspects of network facilities



Central platform to collaborate and contribute to the standardisation process and technology sharing

Core Business



Facilitate value creation through TCs adoption and outcome of IPDG studies as input to TC development



Expanding outreach and expertise through recruitment of members and partners



Vision

MTSFB envisions to become the leading standardisation organisation and the focal body for communications and multimedia industry standards that fulfil the Malaysian market needs.



Mission

MTSFB's mission is to provide a platform for interested parties to come together and collaborate on the production of standards for the communications and multimedia industry.

Board of Directors

As stewards of industry excellence, MTSFB's Board of Directors provides visionary leadership and oversight, driving standardisation initiatives that foster innovation, collaboration, and industry advancement.



Azni Risa Ramlan

Chairman

Currently, the Vice President of Business Innovation and Technology at Telekom Malaysia Berhad, Azni Risa Ramlan, was appointed to the Board on 26 May 2017.

Azni Risa graduated with a Master of Business Administration from Universiti Teknologi Malaysia.



Norazizan Mohamad

Director

Playing the role of the Head of Department, Network Digital Engineering & Industry at Maxis Broadband Sdn Bhd, Norazizan Mohamad was appointed to the Board on 10 March 2014.

Norazizan graduated with a Bachelor of Science in Electrical Engineering from Bradley University, Peoria, Illinois, USA.



Fami Abdul Hamid

Director

Now serving as the Principal Regulatory at Digi Telecommunication Sdn Bhd, Fami Abdul Hamid was appointed to the Board on 8 November 2016.

Fami graduated with a Bachelor of Science (Hons) in Computer Science (Software Engineering from UITM).



Mohd Mazlan Abd Razak

Director

Mohd Mazlan Abd Razak graduated with a Master of Business Administration (Strategic Management) and has been serving at TIME dotCom Berhad since 2020 as Head, Regulatory Affairs.

Mohd Mazlan was appointed to the Board on 15 December 2021.



Nivendran Veerappan

Director

Nivendran Veerappan was appointed to the Board on 20 November 2019.

Presently the Vice President, Head of Broadcast Technology at Astro, Nivendran graduated with a Bachelor of Engineering (Hons) in Electrical & Electronics from Universiti Tenaga Nasional (UNITEN).

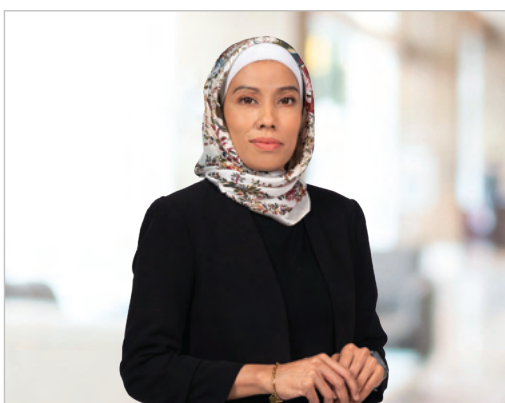


Eric Liew Sze Yarn

Director

At present, the Head of Regulatory at U Mobile Sdn Bhd, Eric Liew Sze Yarn, was appointed to the Board on 1 March 2016.

Eric Liew graduated with a Bachelor of Science in Business Accounting & Finance from San Francisco State University in 1993.



Amirah Abdul Majid

Director

Amirah Abdul Majid graduated with an Honours Degree in Accounting from Multimedia University.

Having been with REDtone Engineering & Network Services Sdn Bhd since 2010, she is presently the Senior Manager, Regulatory Affairs. Amirah was appointed to the Board on 15 December 2021.



Fauziah Fadzil

Director

A graduate with a Master's in Radio Communications and High Frequency Engineering (1993) from University of Leeds, United Kingdom, Fauziah Fadzil was appointed to the Board on 15 December 2021.

Fauziah has been serving as the Senior General Manager, Product Certification & Inspection Department at SIRIM QAS International Sdn Bhd since 2020.



Mohd Izni Zuhdi Mohamad Rawi

Alternate Director

Mohd Izni Zuhdi Mohamed Rawi graduated with a Master in Engineering Science (Hons) from University of Oxford.

He has been serving Telekom Malaysia Berhad since 2000 and currently holds the position of General Manager, Network Architecture & Technology Planning. He was appointed as the Alternate Director to Azni Risa Ramlan on 10 February 2022.



Low Chia Seng

Alternate Director

Low Chia Seng graduated with a Bachelor of Science (Hons) in Computing and Information Systems and has been serving as Head of Network Planning at TIME dotCom Berhad since 2016.

Low was appointed to the Board on 15 December 2021.



Mohamad Isa Mohd Razhali

Alternate Director

Mohamad Isa Mohd Razhali graduated with a Bachelor (Hons) in Electrical Engineering Telecommunication) from Universiti Teknologi Malaysia.

Since 2014, he has been serving at ASTRO as Assistant Vice President, Technical Regulatory. Mohamad Isa was appointed to the Board on 20 November 2019.



Mohd Fuad Romeli

Alternate Director

Mohd Fuad Romeli has been serving U Mobile Sdn Bhd as Assistant General Manager, Regulatory since May 2014.

He graduated with a Master in Science (Corporate & Communication) from Universiti Putra Malaysia in 2003. Appointed to the Board on 30 June 2016, he is also registered with the Board of Engineers Malaysia (BEM) since 19 September 2001, and has been a Graduate Member of the Institution of Engineers, Malaysia (IEM) since 15 July 2002 (Membership No: 22443).



Ong Cheok Seong

Alternate Director

Ong Cheok Seong graduated with a Bachelor of Engineering in Electrical, Electronic & System Engineering (Hons) and has been with REDtone Engineering & Network Services Sdn Bhd since 1999, where he now serves as the General Manager, Network & Technology.

Ong was appointed to the Board on 15 December 2021.



Siti Rizaidah Mokhtar

Alternate Director

Siti Rizaidah Mokhtar is the Team Lead, Industry Development at CelcomDigi and was appointed to the Board on 22 December 2023.

Siti Rizaidah graduated with a Bachelor's in Administrative Science (Honours) from Universiti Teknologi MARA.

New Board Member:

We are pleased to announce the appointment of Puan Siti Rizaidah Mokhtar as the newest member of the MTSFB Board of Directors. Puan Siti Rizaidah Mokhtar will serve as an Alternate Director to Encik Fami Abdul Hamid of Celcomdigi, ensuring seamless representation and continuity of strategic insights within the Board.

Siti Rizaidah is currently the Team Lead, Industry Development at CelcomDigi and was appointed to the Board on 22 December 2023.



Leadership & Office Bearers

At the helm of MTSFB's operations, the office bearers embody a commitment to professionalism. With a focus on collaboration and consensus-building, they foster a culture of accountability, transparency, and continuous improvement to achieve strategic priorities.



Normarinee Mohd Nor

Chief Executive Officer

Head of Departments



Norazlina Dato' Ghazali

Head of Standards



Syarfina Junaida Bolhan

Head of Value Creation



Zainal Afnan Dato' Zainul Awaluddin

Head of Business Support



Team

**Khairul Ekhwan
Kamarudin**

Engineer

**Fatin Diana
Yunus**

Senior Executive

**Alisa
Rafiqah
Adenan**

Engineer

**Nor Atiqah
Ali Norpiah**

Senior Executive

**Humairah
Ahmad Nasir**

Manager

**Zainal Afnan Dato'
Zainul Awaluddin**

Head of Business Support



**Mohamad Norzamir
Mat Taib**

Senior Engineer

**Nurul Amirah
Zarifah
Norazaruddin**

Engineer

**Muhaimin
Mat Salleh**

Senior Engineer

Norazlina Dato' Ghazali

Head of Standards

Syarfina Junaida Bolhan

Head of Value Creation

**Normarinee
Mohd Nor**

CEO

Reference Panel

MTSFB's Reference Panel (RP) serves as an esteemed advisory board comprising seasoned professionals and thought leaders. Tasked to advise the Working Groups on the development of MTSFB's work programmes, the RP members leverage their expertise across diverse subject matters to drive innovation and foster the growth of new technologies.



MTSFB's Working Groups

Comprising cross-functional teams of professionals, MTSFB's Working Groups (WGs) play a crucial role in shaping Malaysia's technical landscape. These dynamic groups work to address emerging challenges, explore new opportunities, and develop forward-thinking solutions.



WG 1

Internet of Things and Smart Sustainable Cities (IoT)

Chair: Dr Gopinath Rao A/L Sinniah, Favoriot Sdn Bhd

Vice Chair: Mohd Amin Mohd Din, Maxis Broadband Sdn Bhd

Secretary: Dr Alex Teng Kah Hou, UCSI Education Sdn Bhd



WG 2

International Mobile Telecommunications & Future Networks (IFN)

Chair: Rakuram Gandhi, Maxis Broadband Sdn Bhd

Vice Chair: Anwar Faizd Osman, TM Technology Services Sdn Bhd

Secretary: Dr Bruce Leow Chee Yen, Universiti Teknologi Malaysia



WG 3

Numbering & Electronic Addressing (NEA)

Chair: Ts Adil Hidayat Rosli, My6 Initiative Berhad

Vice Chair: Lee Wei Han, Maxis Broadband Sdn Bhd

Secretary: Ts Mohd Faizal Abd Raup, TM Technology Services Sdn Bhd



WG 4

Fixed Networks Facilities (FNF)

Chair: Ts Sufian Sulaiman, TM Technology Services Sdn Bhd

Vice Chair: Zulkefli Zabri, Maxis Broadband Sdn Bhd

Secretary: Ir Dr Anas Abdul Latiff, Universiti Teknikal Malaysia Melaka



WG 5

Radiocommunications Network Facilities (RNF)

Chair: Eami Yusry Mohd Yusof, Maxis Broadband Sdn Bhd

Vice Chair: Ratnam N. A., Tele System Electronics (M) Sdn Bhd

Secretary: Nurul Ain Mohd Najib, TM Technology Services Sdn Bhd



WG 6

Security, Trust & Privacy (STP)

Chair: Thaib Mustafa, Smart Tech Asia Pacific Sdn Bhd

Vice Chair: Prof Dr Shahrulniza Musa, Universiti Kuala Lumpur

Secretary: Norkhadhra Nawawi, FNS (M) Sdn Bhd



WG 8

Communications Terminal (CT)

Chair: Wan Zarina Wan Abdullah, SIRIM Berhad

Vice Chair: West Pang Chee Wai, Maxis Broadband Sdn Bhd

Secretary: Ir Dr Khaizuran Abdullah, International Islamic University Malaysia



WG 9

Green ICT, Environment & Climate Change (GICT)

Chair: Muhammad Suhaimi Ithnin, edotco Malaysia Sdn Bhd

Vice Chair: Dr Nurul Akidah Baharuddin, Universiti Kebangsaan Malaysia

Secretary: Mohd Azizi Abdul Aziz, edotco Malaysia Sdn Bhd



WG 10

Broadcast Technology (BT)

Chair: Dr Ahmad Zaki Mohd Salleh, Media Prima Berhad

Vice Chair: Azman Fitton, MYTV Broadcasting Sdn Bhd

Secretary: Asri Abd Rahman, Media Prima Berhad

Registered Members

At the forefront of technological advancement, MTSFB’s registered members form a vibrant community of experts and contributors. Their collective efforts lead to the establishment of robust standards and guidelines that propel the industry forward, ensuring compatibility, interoperability, and sustainability.

Ordinary Members



Registered Members

Associate Members

Technology Experts



Associate Members

Institutes of Higher Learning (IHL)



Telco



Registered Members

New Registered Members



Digiforen (M) Sdn Bhd

An information security laboratory doing product security function evaluation based on ISO/IEC 15408 and providing a Multi-Function Cyber Range programme.

Working Group involvement:

WG7: Security, Trust and Privacy

Key person:

Ong Yew Seng – Draft lead for Business Continuity Management Technical Code

Date joined:

13 Jan 2023



Keysight Technologies Malaysia Sdn Bhd

The company manufactures electronics test and measurement equipment and software.

Working Group involvement:

WG2: International Mobile Telecommunication and Future Networks (IFN)

Key person:

Muthu Kumaran, Tech Talk invitational speaker for “Enroute to 5G Advanced and 6G: Challenges and New Paradigms”

Date joined:

6 July 2023



EdgePoint Towers Sdn Bhd

An ASEAN-based telecommunications infrastructure company that aims to be the leading 5G-ready provider in the region and is focused on building and leasing shareable, fibre-integrated, and modern telecom structures as well as providing solutions such as small cells and in-building systems.

Working Group involvement:

WG5: Radiocommunications Network Facilities (RNF)

Key person:

Nor Izhar Mohd Zain, Chair of RNF External SWG

Date joined:

28 March 2023

Other involvement:

Hadee Mustapa, Vice Chair, Communications Infrastructure Asset Management (CIAM) Sub Working Group



Terengganu Telecommunications Sdn Bhd

A one-stop agency (OSA) for the state of Terengganu, appointed by Menteri Besar Incorporated (MBI) to monitor and coordinate the development of telecommunication infrastructures in Terengganu in line with State Local Authorities (PBT).

Working Group involvement:

WG4: Fixed Network Facilities (FNF)
WG8: Communications Terminal (CT)

Key person:

Yousri Taibin

Date joined:

5 July 2023

New Registered Members



Persatuan IPv6 Malaysia

Working Group involvement:

WG3: Numbering and Electronic Addressing (NEA)

Key person:

Prof Saravanan Subramaniam

Date joined:

20 July 2023



Cybersecurity Malaysia

A national cybersecurity specialist agency providing cyber security information, best practices, training and awareness programmes.

Working Group involvement:

WG7: Security, Trust and Privacy

Key person:

Ts Lee Hwee Hsiung, Head of Department, Cyber Security Professional Development – draft lead for TC: Information and Network Security – Capability Development and Capacity Building and Editor for SG17 contribution paper on Framework for Security Human Capability Development

Date joined:

10 December 2023



UO Structique Sdn Bhd

A leading provider of comprehensive communications infrastructure solutions catering to the diverse requirements of cellular, fixed, and broadband networks.

Working Group involvement:

WG4: Fixed Network Facilities (FNF) and WG5: Radiocommunications Network Facilities (RNF)

Key person:

Ir. Ts. Asri Rafie

Date joined:

5 November 2023

2023
Highlights



2023 Highlights

2023 Performance Summary

Facilitate the development, adoption, and implementation of technical standards or known as technical codes

13

TCs submitted to MCMC, exceeding 2023 target of 11 TCs

6

Technical Report based on 5G Broadcast Study and IPDG projects

1st

TC Utilisation Study (TCUS) Report established in 19 years for a baseline of the TC Utilisation

7

TCs development workshop organised

11

TCs registered by MCMC

6

Contribution papers to international standards development organisations

6

Framework and Governance Manual established or improved towards good company governance, integrity and performance driven

21

Targeted engagement sessions with 6 sessions with Government/State/Authority agencies, 4 associations, 1 existing member and 10 other new organisations

8

Tech Talks organised in collaboration with Deloitte, 5GMF, TTC, IEEE, MCMC and UTEM

1st

Targeted stakeholder database developed

5

MOUs signed up with standard development organisation, universities and industry

1

Appreciation dinner held for TC Contributors, RP and WG Leaders

5

TCAP awareness sessions organised

1st

Working group leadership appointment through voting system



1

Industry award and recognition as IEEE's outstanding partner

90%

Increase in MTSFB page LinkedIn followers

46%

TC adoption by external organisations from targeted sample companies

2

States buy-in for TCs adoption, i.e. Penang and Melaka

76%

TC adoption by MTSFB member organisations

48%

Increase in collection fees, the highest annual collection in MTSFB since inception

3

TCs are being referred to in the Hydrogen Economy and Technology Roadmap by MOSTI

6

New subscribed members

27

New subject matter experts (SMEs) from 22 organisations contributed to TC development and Technical Report

Technical Code Development

Over the past year, MTSFB has made significant strides in developing and submitting TCs to establish standards and guidelines across various domains. A total of 13 TCs were submitted to MCMC for registration and 11 TCs were successfully registered by MCMC in 2023.

The TCs submitted encompass a wide range of focus areas, each serving a specific purpose and addressing the needs of targeted stakeholders.

Technical Code Development Process

In the TC development process, MTSFB follows a rigorous and systematic process that ensures the involvement of relevant stakeholders and the production of high-quality standards.

The timeline below illustrates the key stages in the TC development process, from the initial planning and proposal stage to the registration of the Technical Code:

TC Development Timeline



Planning of TC to be developed

NEW PROPOSAL (NP)

1. PROPOSER

Name	Assoc. Prof. Dr. Mustafiz Anwar Daud
Working group	MTSFB - V2X & Future Networks
Telephone number	60 10 214 9855
Email	mtsf@mtsfb.my

2. DETAILS

Title: **Vehicle-to-Vehicle (V2V) proposal**

Vehicle-to-Everything (V2X) System Architecture and Specifications

Scope: **Vehicle-to-Vehicle (V2V) communication**

This TC specifies the underlying system architecture and technologies for the Vehicle-to-Everything (V2X) system and can include work among other areas of:

- Vehicle-to-Vehicle (V2V) communication
- Vehicle-to-Infrastructure (V2I) communication
- Vehicle-to-Pedestrian (V2P) communication
- Vehicle-to-Network (V2N) communication
- Characteristics and service requirements of selected use cases

Type of Technical Code: **02 - Standard** (Please specify no. of existing technical code(s))

Topic Name	Key stakeholder involvement
02 - 3 Months	4 - Public interest, 02/02/24 - 02/02/24
02 - 12 Months	4 - Public interest, 02/02/24 - 02/02/24
02 - 18 Months	4 - Public interest, 02/02/24 - 02/02/24

Reference to national initiatives

M.S. 2022 (MCMC) 0001
 National Standards Roadmap (2020-2030)
 National Cybersecurity Strategy (2019-2025)
 National Digital Transformation Blueprint (2019-2025)

Alignment to regional/international standards body
 IEC, IEEE, ISO, IEC, ITU, 3GPP, etc.

New Proposal (NP)
reviewed and approved
by Reference Panel (RP)



Engagement with targeted stakeholder to ensure the TC development has holistically covered the sector





Working Group (WG) deliberate and update draft Technical Code via meeting and workshop



Public Engagement (PE) session is a platform for the interested party to have direct interaction with MTSFB SME to further understand on the draft TC

Public Comment (PC) session is to get feedback/comment of draft TC from public



Submission to MCMC for registration



Review Session with MCMC to clarify and justify the overall submitted TC



Registration of TC

Technical Code Development

Technical Code Development Process

As we continue to make significant progress in TC development, we have implemented a more efficient and collaborative approach. Our comprehensive TC Development framework was designed to streamline the process, enhance stakeholder collaboration, and ensure robust, relevant TCs aligned with industry needs. Our goal is to create a structured yet flexible process that can adapt to the evolving demands of the industry while maintaining the highest standards of quality and innovation.

The process begins with the planning of the technical codes following a 3-year mapping of the TC Development plan based on input and regular consultations with MCMC, RP, industry stakeholders and internal studies. This helps us identify gaps and emerging needs through a thorough needs assessment. The New Proposals (NPs) are initiated either through the execution of the plan or are newly proposed items by MCMC or the Working Groups (WGs). The NPs contain detailed project charters outlining objectives, scope, timeline, engagement sessions with identified stakeholders and key deliverables. The proposals are then submitted to the RP for review and approval, where the NPs are evaluated on their impact, feasibility, alignment with strategic goals, and innovation potential.

Upon the approval of NPs, TC drafting and targeted stakeholder engagement commence. The engagements ensure the TCs are relevant and practical, addressing real-world industry challenges through comprehensive input from diverse perspectives. Active collaboration with industry experts, organisations, and regulatory bodies fosters a sense of ownership and commitment, enhancing the quality of the TCs. Our transparent communication and inclusion of stakeholder feedback build trust and credibility, which is essential for gaining stakeholder buy-in. Moreover, stakeholders provide valuable insights into emerging trends and technological advancements, ensuring that TCs remain current and future-proof. By engaging regulatory stakeholders, we ensure alignment with existing regulations, facilitating necessary approvals and promoting a safe, fair industry environment.

The Working Group then deliberates and updates the Technical Code draft via meetings and workshops in preparation for the Public Comment (PC) exercise. The PC period, lasting one month, opens the draft for public scrutiny, and MTSFB can gather diverse feedback from industry experts, organisations, and the general public. This diverse input helps identify potential issues, ambiguities, and areas for improvement that may not have been initially considered. PCs also enhance the credibility and acceptance of the TCs, as they demonstrate a commitment to addressing stakeholder concerns and incorporating community input to create well-rounded, widely supported technical codes that meet the needs of the industry.

During the PC period, a Public Engagement (PE) session will be held to facilitate real-time communication and collaboration between MTSFB and various stakeholders. This direct interaction ensures that the TCs are developed with a deep understanding of diverse perspectives and practical insights. The session also allows for immediate feedback, clarification of concerns, and collaborative problem-solving. PE builds trust and transparency, as stakeholders feel their contributions are valued and considered.

After incorporating industry feedback, the finalised TC is submitted to MCMC for approval. We work closely with MCMC to address any queries or required modifications during the registration process and ultimately obtained official approval and registration of the TCs.

Technical Codes Submitted

01

Maritime Radiocommunications Equipment – Specifications

Purpose:

Establish specifications for radiocommunications equipment used in maritime environments, focusing on type approval requirements.

Target Audience:

Manufacturers, suppliers, and users of maritime radiocommunications equipment.

Highlights:

Ensuring compliance with safety and performance standards for maritime communications equipment, facilitating safe and reliable communication at sea.

WG:

Communications Terminal

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YTL Communications Sdn Bhd

Supported by:

Malaysian Maritime Enforcement Agency
Royal Malaysian Police
Malaysian Armed Forces
Akademi Laut Malaysia/Malaysian Maritime Academy
Marine Department of Malaysia

02

Aeronautical Radiocommunications Equipment – Specifications

Purpose:

Define specifications for radiocommunications equipment used in aviation, with a focus on type approval.

Target Audience:

Aircraft manufacturers, avionics suppliers, aviation regulatory authorities, and air traffic management organisations.

Highlights:

Ensuring compliance with stringent safety and performance standards for radiocommunications equipment used in aircraft, supporting safe and efficient air navigation and communication.

WG:

Communications Terminal

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Technical Code Development

Technical Codes Submitted

03

Digital Terrestrial Television (DTT) Broadcast Service Receiver - Common Test Suite (Third Revision)

Purpose:

Define a common test suite for evaluating the performance and interoperability of DTT broadcast service receivers, particularly focusing on broadcasting.

Target Audience:

Manufacturers, broadcasters, and regulatory authorities involved in DTT broadcast services.

Highlights:

Ensuring compatibility and performance of DTT receivers with broadcast standards, signal formats, and interactive services to ensure quality television broadcasting services.

Purpose of Revision:

- a) Update of the network download test suite.
- b) Deletion of section on immunity to co-channel interference from analogue TV signals and section on immunity to adjacent channel interference from analogue TV signals for radio frequency performance testing.
- c) The test setup and RF performance testing were revised by removing MS4 and certain frequencies from the test environment.
- d) Update of the reference standard and clause according to MCMC MTSFB TC T004:2022 and MCMC MTSFB G002:2020.

WG:

Broadcast Technology

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Radio Television Malaysia

04

Internet of Things - Device Security Requirements

Purpose:

Specify security requirements for IoT devices, focusing on ensuring device security.

Target Audience:

IoT device manufacturers, developers, and users across various industries.

Highlights:

Addressing security vulnerabilities and risks associated with IoT devices, such as unauthorised access, data breaches, and device hijacking, to safeguard IoT ecosystems.

WG:

Security, Trust and Privacy

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05

**Information and Network Security
- Requirements (Second Revision)****Purpose:**

Define requirements for information security management systems (ISMS) with a focus on security.

Target Audience:

Organisations seeking to enhance their information security posture.

Highlights:

Providing a systematic approach to managing information security risks, protecting sensitive information, and complying with regulatory requirements to mitigate security threats and vulnerabilities.

Purpose of Revision:

Includes the addition of the Information and Network Security (INS) framework, replacement of Controls with Information Security Risk Management in Annex A, and the relocation of the Risk Management Process from section 5.2.2 to Annex A. References also have been updated.

WG:

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Supported by:

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Cybersecurity Malaysia

06

**Information and Network Security
- Incident Management (First Revision)****Purpose:**

Establish procedures for managing information security incidents, particularly focusing on security incidents.

Target Audience:

Security professionals, incident response teams, and organisations implementing ISMS.

Highlights:

Streamlining incident detection, response, and recovery processes to minimise the impact of security breaches and data incidents, enhancing organisational resilience against cyber threats.

Purpose of Revision:

Includes the addition of Clause 2 (normative references) and updates to the list of information security incidents to reflect current cyber incidents and attacks. It also revises the information security incident management policy, handling procedures, post-incident activities, and information sharing, as well as updates to the annexes.

WG:

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Bank Negara Malaysia
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Technical Code Development

Technical Codes Submitted

07

Internet Protocol version 6 - Security Requirements

Purpose:

Specify security requirements for IPv6 networks, focusing on security aspects.

Target Audience:

Network administrators, system integrators, and organisations transitioning to IPv6.

Highlights:

Addressing security concerns specific to IPv6, such as address scanning, neighbour discovery vulnerabilities, and transition mechanisms, to enhance the security of IPv6 deployments. incidents, enhancing organisational resilience against cyber threats.

WG:

Numbering and Electronic Addressing

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Cisco Systems

08

Business Continuity Management - Requirements (First Revision)

Purpose:

Establish requirements for developing and implementing business continuity management systems (BCMS), focusing on security aspects.

Target Audience:

Business continuity managers, risk managers, security professionals and organisational leaders responsible for overseeing business continuity planning and management.

Highlights:

Risk assessments and Business Impact Analysis (BIA) to identify threats and vulnerabilities, assess potential disruption consequences and develop Business Continuity Plans (BCPs) with crisis management and communication protocols.

WG:

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KPMG Malaysia
Pejabat Ketua Pegawai Keselamatan Kerajaan Malaysia
UMW Holdings Berhad
BCP & IT Consul

09

Data Integration Framework for Smart Cities (IoT)

Purpose:

Establish a framework for integrating data from various sources within smart cities, particularly focusing on IoT.

Target Audience:

City planners, government agencies, technology vendors, and developers involved in smart city initiatives.

Highlights:

Addressing challenges related to data silos, interoperability, privacy, and security in smart city ecosystems, to enable data-driven decision-making and improve urban services.

WG:

Internet of Things and Smart Sustainable Cities

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Jabatan Perancangan Bandar dan Desa (PLANMalaysia)

Three-OPP (M) Sdn Bhd

10

Interoperability Requirements for Smart City IoT Platform (IoT)

Purpose:

Define interoperability requirements for IoT platforms used in smart city deployments, focusing on IoT interoperability.

Target Audience:

IoT platform developers, solution providers, city authorities, and system integrators.

Highlights:

Addressing interoperability challenges associated with heterogeneous IoT devices, protocols, and applications deployed in smart city environments to enable seamless integration and interoperability.

WG:

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NLTV Education Sdn Bhd

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Technical Code Development

Technical Codes Submitted

11

IMT-2020 (Fifth Generation) - System Architecture and Specifications (First Revision)

Purpose:

Define the system architecture and specifications for IMT-2020 (5G) networks, particularly in the context of the JENDELA/5G initiative.

Target Audience:

Telecommunications industry stakeholders, including network operators, equipment manufacturers, and standardisation bodies.

Highlights:

Establishing standards for 5G network architecture, protocols, and performance to support high-speed broadband, low latency, and massive IoT connectivity, aligning with national broadband plans.

Purpose of Revision:

To align with the latest industrial best practices of 5G technologies emphasising on URLLC and mMTC usage scenarios based on 3GPP Rel-17 and the inclusion of new radio specifications based on Recommendation ITU-R M.2150-1.

WG:

International Mobile Telecommunications & Future Networks

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12

Fixed Network Facilities - In-Building and External (First Revision)**Purpose:**

Define requirements for fixed network facilities for greenfield, both in-building and external, mainly in the JENDELA initiative's context.

Target Audience:

Property developers, building management companies, telecommunications providers, and regulatory authorities.

Highlights:

Ensuring the provision of high-quality telecommunications services in strata development areas, including broadband internet access and telecommunication infrastructure, to support national broadband initiatives.

WG:

Fixed Network Facilities

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Zettabits Technologies (M) Sdn Bhd

13

Radiocommunications Network Facilities -In-Building Coverage System (First Revision)**Purpose:**

Specify requirements for in-building coverage systems, particularly in the context of the JENDELA initiative.

Target Audience:

Building owners, operators, construction companies, and telecommunications service providers.

Highlights:

Improving mobile phone and radio signal coverage within buildings, addressing connectivity challenges, and enhancing communication infrastructure.

Purpose of Revision:

The revision includes the update of the Key Performance Index (KPI) and the addition of Fifth Generation (5G) specifications, which are in line with the current mobile technology in Malaysia.

WG:

Radiocommunications Network Facilities

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Supported by:

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Technical Codes Registered

MCMC MTSFB TC G039:2023

Industrial Internet of Things (IIoT) Connectivity and Communication Framework

Registered date: 23 May 2023

Purpose:

To establish standards and protocols for connectivity and communication in IIoT environments, enhancing integration between industrial systems and digital networks.

Target Audience:

Industrial engineers, IT professionals, and network administrators.

Highlights:

Ensures robust, reliable, and secure communication channels within industrial settings, supporting improved operational efficiency and system integration.



WG

Internet of Things and Smart Sustainable Cities

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MCMC MTSFB TC G044:2023

Internet of Things (IoT) - Baseline Security Requirements for Consumer Devices

Registered date: 31 October 2023

Purpose:

To provide baseline security requirements for consumer IoT devices, ensuring they meet minimum security standards.

Target Audience:

IoT device manufacturers, developers, and cybersecurity professionals.

Highlights:

Protects users from cybersecurity threats by ensuring that consumer IoT devices incorporate data protection, authentication, and vulnerability management measures.



WG

Internet of Things and Smart Sustainable Cities

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Supported by:

PLANMalaysia

Technical Codes Registered

MCMC MTSFB TC G043:2023

Smart Sustainable Cities Architecture in Relations to Information and Communications Aspects

Registered date: 31 October 2023

Purpose:

To outline the architecture for smart sustainable cities, focusing on information and communication technologies (ICT).

Target Audience:

Urban planners, city administrators, ICT professionals, and policymakers.

Highlights:

Provides guidelines for integrating ICT solutions to enhance urban sustainability, efficiency, and quality of life, addressing challenges in urban management and development.



WG Internet of Things and Smart Sustainable Cities

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Step In2 Asia
Malaysia Smart Cities Alliance Association
Malaysian Industry-Government Group for High Technology
Pejabat Setiausaha Kerajaan Negeri Pulau Pinang
PLANMalaysia
PR1MA Communications Sdn Bhd
Sarawak Multimedia Authority

MCMC MTSFB TC G042:2023

Information and Network Security - Malaysia Critical Security Controls (MYCSC)

Registered date: 23 May 2023

Purpose:

To provide a set of critical security controls tailored for Malaysian organisations to protect information and network security.

Target Audience:

Cybersecurity professionals, IT managers, and compliance officers in Malaysia.

Highlights:

Mitigates cyber threats and vulnerabilities by offering best practices and guidelines for information security, ensuring regulatory compliance and enhancing organisational cybersecurity posture.



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MCMC MTSFB TC G016:2023

Information and Network Security - Security Posture Assessment (SPA) (First Revision)

Registered date: 23 May 2023

Purpose:

To provide a framework for assessing the security posture of an organisation, including methodologies and tools for evaluation.

Target Audience:

Security auditors, IT security teams, and compliance officers.

Highlights:

Identifies weaknesses in security controls, evaluates their effectiveness, and recommends improvements, thereby enhancing overall security and risk management.

Purpose of Revision:

The major modifications in this revision include updates and additions to Clause 3 on terms and definitions, changes to the title of Clause 5.1, and modifications to various security assessments in Clauses 5.2, 5.2.2.2, 5.2.3, and 5.2.4, along with additions and modifications to the Security Baseline Assessment (SBA), and new requirements for container security assessment and data security controls review.



WG Security, Trust and Privacy

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Technical Codes Registered

MCMC MTSFB TC G041:2023

Radiocommunications Network Facilities -
Compliance Audit for Radiocommunications Structure

Registered date: 23 May 2023

Purpose:

To specify requirements for conducting compliance audits on radiocommunications structures.

Target Audience:

Compliance auditors, telecommunications engineers, and regulatory bodies.

Highlights:

Ensures that radiocommunications structures meet regulatory standards and operational guidelines, maintaining effective and safe communications infrastructure.



WG

Radiocommunications
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PMW Concrete Industries Sdn Bhd

MCMC MTSFB TC G040:2023

Radiocommunications Network Facilities - External Infrastructure Specifications (First Revision)

Registered date: 23 May 2023

Purpose:

To specify requirements for conducting compliance audits on radiocommunications structures.

Target Audience:

Compliance auditors, telecommunications engineers, and regulatory bodies.

Highlights:

Ensures that radiocommunications structures meet regulatory standards and operational guidelines, maintaining effective and safe communications infrastructure.



WG

Radiocommunications Network Facilities**Draft Lead:**

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MCMC MTSFB TC T020:2023

Aeronautical Radiocommunications Equipment – Specifications

Registered date: 31 October 2023

Purpose:

To outline technical and operational requirements for radiocommunications equipment used in aeronautical applications.

Target Audience:

Aviation engineers, avionics specialists, and regulatory authorities in the aviation industry.

Highlights:

Ensures the safety, reliability, and efficiency of communication systems in aviation, supporting navigational and operational safety.



WG Communications Terminal

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Novatis Resources Sdn Bhd
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MCMC MTSFB TC T021:2023

Maritime Radiocommunications Equipment – Specifications

Registered date: 31 October 2023

Purpose:

To specify technical and operational requirements for radiocommunications equipment used in maritime applications.

Target Audience:

Maritime engineers, communications equipment manufacturers, and regulatory authorities.

Highlights:

Ensures reliable and safe communication for maritime operations, enhancing navigational safety and operational efficiency.



WG Communications Terminal

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Radii Teknologi Sdn Bhd
Royal Malaysian Police
Malaysian Armed Forces
Marine Department of Malaysia

MCMC MTSFB TC G011:2023

Radiocommunications Network Facilities - In-Building Coverage System (First Revision)

Registered date: 31 October 2023**Purpose:**

To provide specifications for in-building coverage systems within radiocommunications networks.

Target Audience:

Telecommunications engineers, building designers, and infrastructure maintenance teams.

Highlights:

Ensures effective indoor communication coverage, addressing design, installation, and maintenance of in-building radiocommunications systems.

**WG Radiocommunications Network Facilities****Draft Lead:**

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U Mobile Sdn Bhd
Webe Digital Sdn Bhd
YTL Communications Sdn Bhd

Supported by:

Ericsson (M) Sdn Bhd

MCMC MTSFB TC G027:2023

IMT-2020 (Fifth Generation) – System Architecture and Specifications (First Revision)

Registered date: 31 October 2023**Purpose:**

To detail the system architecture and technical specifications for 5G (IMT-2020) networks.

Target Audience:

Network architects, telecommunications companies, and mobile service providers.

Highlights:

Supports the deployment and optimisation of 5G technology, addressing network design, functionalities, and performance criteria for advanced mobile communications.

Purpose of Revision:

The objective of revision is to align with the latest industrial best practices of 5G technologies, emphasising on URLLC and mMTC usage scenarios based on 3GPP Rel-17 and the inclusion of new radio specifications based on Recommendation ITU-R M.2150-1.

**WG International Mobile Telecommunications & Future Networks****Draft Lead:**

Yeoh Chun Yeow,
Telekom Malaysia
Berhad

Contributors:

Celcom Axiata Berhad
Digital Nasional Berhad
Digi Telecommunications Sdn Bhd
Fraunhofer IIS
International Islamic University Malaysia
Maxis Broadband Sdn Bhd
Multimedia University Orbitage Sdn Bhd
Politeknik Sultan Haji Ahmad Shah
Rohde & Schwarz Malaysia Sdn Bhd

Telekom Malaysia Berhad
U Mobile Sdn Bhd
Universiti Kebangsaan Malaysia
Universiti Putra Malaysia
Universiti Teknikal Malaysia Melaka
Universiti Teknologi Malaysia
Webe Digital Sdn Bhd
Xcelcius Consultancy Sdn Bhd
YTL Communications Sdn Bhd

Supported by:

Ericsson (M) Sdn Bhd
Tekmark Sdn Bhd

Technical Code Appreciation Event

MTSFB hosted an elegant appreciation dinner in December 2023 to honour the TCs registered in 2022 and 2023 and their contributors to acknowledge the exceptional dedication and hard work of all involved and provide a platform for valuable networking opportunities.

The 15 TCs highlighted during the event and the respective draft leads are:

01

Nicholas Ng Eick Khiam (Provintell)

MCMC MTSFB TC G016:2023 Information and Network Security - Security Posture Assessment (First revision)

02

Shanmugam J.S. Inderan (Maxis)

MCMC MTSFB TC G038:2022 End-to-End (E2E) Quality of Service (QoS) and Quality of Experience (QoE) using Crowdsourcing Application Approach

03

Gopinath Rao Sinniah (Favoriot)

MCMC MTSFB TC G039:2023 Industrial Internet of Things - Connectivity and Communications Framework

04

Mohd Khairil Anuar Mohamad (Maxis)

MCMC MTSFB TC G040:2023 Radiocommunications Network Facilities - External Infrastructure Specifications (First Revision)

05

Mohd Sabri Mohd Jamil (TM)

MCMC MTSFB TC G041:2023 Radiocommunications Network Facilities - Compliance Audit for Radiocommunications Structure

06

Thaib Mustafa (FNS)

MCMC MTSFB TC G042:2023 Information and Network Security-Malaysia Critical Security Controls (MYCSC)

07

Norhanisah Mohd Basri (SIRIM)

MCMC MTSFB TC T004:2022 Specification for Digital Terrestrial Television (DTT) Broadcast Receiver (Second Revision)

08

Syaida Syarafina Sohaimi (SIRIM)

MCMC MTSFB TC T006:2022 Specification for Direct-To-Home (DTH) Broadcast Receiver for Set Top Box (STB) (Second Revision)

09

Hafizah Zainal Abiddin (SIRIM)

MCMC MTSFB TC T014:2022 Digital Terrestrial Television (DTT) - Active Indoor Antenna (First Revision)

10

Gopinath Rao Sinniah (Favoriot)

MCMC MTSFB TC G043:2023 Smart Sustainable Cities - Architecture In Relations To Information And Communications Aspects

11

Yusnani Mohd Yussoff (UiTM)

MCMC MTSFB TC G044:2023 Internet of Things (IoT) - Baseline Security Requirements for Consumer Devices

12

Yeoh Chun Yeow (TM)

MCMC MTSFB TC G027:2023 IMT-2020 (Fifth Generation)- System Architecture and Specifications (First Revision)

13

Mohammad Nur Syafiq (Digi)

MCMC MTSFB TC G011:2023 Radiocommunications Network Facilities - (In-Building Coverage System (First Revision))

14

Ahmad Amzar Hanis Ahamd Zaki (SIRIM)

MCMC MTSFB TC T021:2023 Maritime Radiocommunications Equipment - Specifications

15

Abdul Hafiz Syafiq Rozali (SIRIM)

MCMC MTSFB TC T020:2023 Aeronautical Radiocommunications Equipment - Specifications



Value We Create

At MTSFB, we have long been committed to our mission of developing technical codes that ensure safety, quality, and network interoperability across the Communications and Multimedia industry. Over the years, MTSFB earned a reputation for its meticulous approach to standards creation used by the industry. However, as the pace of technological disruption accelerates and industries undergo rapid transformation, we recognise the need to evolve MTSFB's role to drive even greater value for our stakeholders. After extensive deliberation, a bold new vision emerged: to expand beyond standards development and become a catalyst for innovation, value creation, and industry transformation.

In 2023, MTSFB took a bold step forward by solidifying its value creation initiatives towards driving the

adoption of Technical Codes (TCs) and elevating its standing as a Standards Development Organisation (SDO).

In line with our value creation intent, MTSFB leverages its approach in creating technical codes awareness and technology sharing with our members and partners to reach a wider audience and generate more interest in participating as experts in our activities. This includes contributions to international standards, studies on TC utilisation, technology studies and technical reports, TC awareness programmes, technology talks, and collaborations and partnerships with state governments, industry players, SDOs and associations.

Contribution to International Standards

MTSFB adds value to the development of standards that will not only shape our country but also have a profound impact at regional and international levels.

ITU-T Study Group 5: Environment, Climate Change and Circular Economy

1. L.Suppl.44 (Rev) "Guidelines on best practices and environment friendly policies for effective information and communication technology deployment methods".

Summary:

This is the revision to Supplement 44 to ITU-T L-series Recommendations. This revision includes our contribution to the development of a questionnaire to gather relative information from stakeholders for use cases and key success factors, including an exemplary collection of green best practices to ultimately formulate guidelines on best practices and environment-friendly policies for effective ICT deployment methods.

Status:

Draft

Contributor:

Ratnam N.A.

ITU-T SG5: Working Party 3/5
(Question 11)



ITU-T Study Group 17: Security

2. Rec. ITU-T X.1051 (Information security, cybersecurity and privacy protection Information security controls based on ISO/IEC 27002 for telecommunications organisations).

Summary:

This is a revised Recommendation based on a proposal by Korea. We contributed as one of the co-editors to this Recommendation. This Recommendation establishes guidelines and general principles for initiating, implementing, maintaining and improving information security controls in telecommunications organisations based on ISO/IEC 27002 and provides an implementation baseline of information security controls within telecommunications organisations to ensure the confidentiality, integrity and availability of telecommunications facilities, services and information handled, processed or stored by the facilities and services.

The revision aims for telecommunications organisations to ensure the confidentiality, integrity and availability of global telecommunications facilities, services and the information handled, processed or stored within global facilities and services; adopt secure collaborative processes and controls ensuring the lowering of risks in the delivery of telecommunications services; deliver information security in an effective and efficient manner; adopt a consistent holistic approach to information security; and improve the security culture of organisations, raise staff awareness and increase public trust.

Status:

Completed and published on 13 June 2023

Co-Editor:

Thaib Mustafa

ITU-T SG17: Working Party 3/17 (Question 3)

3. X.1053rev "Information Security controls based on ITU-T X.1051 for small and medium-sized telecommunication organisations".

Summary:

This is a revised Recommendation based on a proposal by Korea. We contributed as one of the co-editors to this Recommendation with the objective of establishing guidelines and general principles for initiating, implementing, maintaining, and improving information security controls in small and medium-sized telecommunication organisations (SMTOs) based on Recommendation ITU-T X.1051.

This guideline aims to achieve the same objectives as ITU-T.1051, specifically for SMTOs.

Status:

Approved as a new work item, currently at drafting stage

Co-Editor:

Thaib Mustafa

ITU-T SG17: Working Party 3/17 (Question 3)

4. Cybersecurity Capability Development Framework (CCDF) X.shcd "Framework for Security Human Capability Development".

Summary:

This is a new Recommendation (Contribution No: C426) accepted as base text (TD1437). This Recommendation is to introduce a framework for Security Human Capability Development (SHCD) that provides guidelines for the development of security practitioners and professionals by recognising their security skills and knowledge in the organisation.

The objectives of this contribution are to improve the preparedness and readiness of an organisation's security knowledge, skill and ability in managing information security controls in ITU-T X.1051; and to enhance the competence of security practitioners and professionals who are relevant, recognised and retained by the organisation.

Status:

New work item approved and at drafting stage

Co-Editor:

Thaib Mustafa, Khairul Ekhwan Kamarudin, Ts Lee Hwee Hsiung, Norkhadhra Nawawi

ITU-T SG17: Working Party 3/17 (Question 3)

35th APT Standardisation Programme Forum (ASTAP-35)

5. APT Report on Requirements and Framework of IoT Elderly Care Solution.

Summary:

This APT Report introduces the elderly care ecosystem, including the need for elderly care solutions. It aims to ensure that a proper system is in place to monitor elderly people remotely.

Status:

Draft

Working Group:

Service and Application (WG SA) - Expert Group on Internet of Things Application / Services (EG IOT)

Contributor:

Dr. Gopinath Rao Sinniah

6. Security Guidelines for Information and Network Security Management (APT/ASTAP/REPT-53)

Summary:

This APT guideline is to provide security guidelines for establishing, implementing, maintaining, and continually improving information and network security management within the context of an organisation. The guideline includes the assessment and treatment of information security risks tailored to the needs of the organisation. The guidelines set out in this document are generic and intended to be applicable to all organisations, regardless of size, type, or nature.

Status:

Registered in April 2023

Working Group:

Service and Application (WG SA)
- Expert Group on Security

Contributor:

Thaib Mustafa

7. A Guideline On Best Practices and Environment Friendly Policies for Effective ICT Deployment

Summary:

This APT Report is to establish the inputs from any implementation of green ICT projects or applications from member states including green ICT policies and strategies with key success factors or challenges to develop a guideline for effective ICT deployment methods. This will serve to provide specific references for the improvement of GICT-driven projects.

Status:

Draft

Working Group:

Policy and Strategic Coordination (WG PSC) - Expert Group on Green ICT and EMF Exposure (EG GICT & EMF)

Contributor:

Ratnam N.A.

National Meetings in 2023

1. National Standards Committee on Smart City (NSC 27)

Summary:

Scope

Standardisation in the field of smart cities that includes development in aspects of compliance requirements, frameworks, guidelines, support techniques and related applications/systems that assist sustainable development in aspects of smart intelligence and electrotechnology to assist integration, interoperability and effectiveness of smart city systems.

Status:

Work Items in progress:

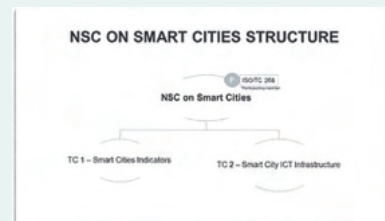
1. Framework on Smart Cities ICT Infrastructure
 - Making reference to MCMC MTSFB TC G043:2023 Smart Sustainable Cities – Architecture in Relations to information and communications Aspects
 - Development in progress
2. Smart Cities – Vocabulary (Malaysia Context)
 - Published

MTSFB WG Involved:

IoT

Representative/Participants:

Norazlina
Zamir
Dr Gopinath Rao



2. Sub-Working Committee for Radiofrequency Electromagnetic Field (RF-EMF) Bil 2/2023

Chair: MCMC

Secretariat: Medical Radiation Surveillance Division | Ministry of Health

Summary:

A sub-working committee (SWC RF-EMF) under the Interagency Working Committee (IAWC) on the health effects of Non-Ionising Radiation (NIR).

Term of Reference:

1. To provide the IAWC on any review or new development of guidelines or documents and activities or research related to NIR on specific field.
2. To report to IAWC on any new updates or other issues of significance.

Responsibilities:

1. To review and develop the scientific basis of any documents such as standards, guidelines, and research papers on RF-EMF for IAWC approval.
2. To provide necessary advice to the IAWC on scientific matters and technical advice on any potential health effects from RF-EMF exposure.
3. To create and promote awareness on RF-EMF to public

Status:

Sharing sessions by

1. Agensi Nuklear Malaysia – Research related to RF-EMF.
2. UTHM – overview research studies on RF-EMF.

Next action for MTSFB:

1. To schedule a briefing on OSH - safety on radiation during installation of tower/base stations on sites.

MTSFB WG Involved:

IFN

Representative/Participants:

Syazilie
Norazlina

3. Briefing Programme on the Malaysian Construction Industry Development Board Act 1994 (Act 520) to Network Facilities Providers (NFP) Licence Holders by the Malaysian Construction Industry Development Board (CIDB) Malaysia

Organiser: MCMC

Summary:

CIDB Malaysia is the agency responsible for regulating and overseeing all construction activities in Malaysia. Under Act 520, every contractor involved in construction work is required to register with CIDB Malaysia and comply with the requirements under the Act.

This briefing is held to provide NFP parties with an understanding of CIDB Malaysia's roles and responsibilities, as well as the requirements under Act 520. Additionally, CIDB Malaysia will provide information regarding the registration of contractors and their subsidiaries under CIDB Malaysia.

MTSFB WG Involved:

FNF

Representative/Participants:

Muhaimin

4. The Department of Skills Development

Summary:

1. Work Visit by the Department of Skills Development to the Industry Lead Body (ILB)

12 April 2023 | MTSFB Office

Work Visit by the Department of Skills Development to the Industry Lead Body (ILB), Malaysia Technical Standard Forum Bhd (MTSFB) under the Knock the Door (KTD) 2023 Programme – Greater TVET through ILB Empowerment.

The purpose of this programme is to serve as a step towards strengthening collaborative relationships between departments in engaging strategic partners for TVET-based human resource development as well as empowering the Implementation of the Malaysian Skills Certification System (SPKM) through ILB.

Representative/Participants:

Normarinee
Norazlina
Syarfina
Humairah

National Meetings in 2023

4. The Department of Skills Development

2. Invitation to Work Meeting for the Coordination of Industry Lead Body (ILB) Activities under the Knock the Door (KTD) ILB 2023 Programme - Greater TVET Through ILB Empowerment

8 August 2023 | Sama - Sama Hotel

The objective of this meeting is to obtain input for potential collaboration proposals that can be implemented with ILB in line with the requirements under the Strategic Collaboration Thrust of the JPK Strategic Framework 2021 – 2025.

Discussion during the event:

- Discussion of all information received during JPK's visit to all ILBs
- Summary of information received during the visits is provided below.

No.	Problem Statement	Objective	Activity
1.	1. Lack of PPT in certain fields. 2. Lack of awareness regarding the Malaysian Skills Certification System (SPKM).	Increase the number of Assessment and Verification Personnel (PPV) in each sector according to the field of appointment under ILB.	Involvement of industry players as Assessment and Verification Personnel (PPV).
2.	1. Lack of PPT in certain fields. 2. Lack of awareness regarding the Malaysian Skills Certification System (SPKM).	Increase the number of Qualification Certification Personnel as Certification Personnel (PPKSPP) in each sector according to the field of appointment under ILB.	Induction courses for PPT-PPT/PPD/PP-P, PP-PPD/PPD-LPSDN, and PPT-PPT/PPD-LPSDN.
3.	1. The percentage of skilled workers in the country has not yet reached 35%.	Certify skilled workers under ILB through the implementation of PPT.	PPT Application.
4.	1. There are no sufficient PB to implement the fields under ILB. 2. Industry personnel find it challenging to provide proof of competency through a portfolio.	Encourage ILB to register as Practical Assessment Centres for PPT (PPA-PPT) and act as Coordinating Agencies.	SPKM Practical Assessment Centres (PPA).
5.	1. No standard examination questions have been developed for existing PPA usage. 2. No PPT Practical Assessment Question Bank is available.	Expand the role of ILB in the development and validation of PPT practical assessment questions.	Development and Validation of PPT Practical Assessment Questions.

No.	Problem Statement	Objective	Activity
6.	1. The public is unaware of the existence and functions of ILB. 2. Lack of general awareness about the benefits of programmes under ILB. Example: • HDC: Sponsorship for participation in PPT. • MDEC Programme: eRezeki • BPKLP: Young Agropreneur Grant (GAM) / Young Agropreneur Club (MYAGROSIS)	Increase awareness within the TVET community about the existence of the Industry Lead Body (ILB).	SPKM Outreach to TVET Community with ILB.
7.	1. ILB/Employers are unaware of the channels to obtain information on SPKM graduates for employment opportunities.	Meetings with potential graduates and the industry as part of JPK promotional activities.	SPKM Outreach to TVET Community with ILB.
8.	1. No involvement of ILB representatives in Skills Competition activities.	Involvement of ILB as Judges/Experts/Sponsors in Skills Competitions.	Involvement of ILB as Judges/Experts/Sponsors in Skills Competitions.
9.	1. Companies/PL are unclear about the SLDN application process.	Encourage accreditation of PB SLDN and companies.	PB SLDN Application.
10.	1. Data alignment issues for SLAPB candidates across all PBs under ILB. 2. No access to MySPIKE as the main PB.	Accreditation as a Certified Main Centre for ILB with a high number of PBs.	Implementation as Main PB.

These details were discussed during the roundtable session.

Representative/Participants: Muhaimin, EKhwan

5. MCMC Academy (with assistance from JPK)

Summary:

Workshop on Occupational Skills in the Telecommunications Field for Installation and Maintenance of Transmission Infrastructure

12 September 2023 | Le Meridien Hotel, Putrajaya

Sharing presentation from MTSFB SME on Radiocommunications Technical Code

- MTSFB is supporting the MCMC Academy with their program, i.e., to prepare the module for related Training Institutes.

Representative/Participants: Humairah

Technical Code Utilisation

The Technical Code Utilisation Survey is a comprehensive study aimed to analyse the effectiveness of technical code adoption and utilisation within the industry, identify the benefits and challenges associated with the current codes, evaluate their impact on industry practices, and provide valuable recommendations for enhancing their value and effectiveness. The survey engaged a diverse group of 225 respondents from both member and non-member organisations, yielding crucial insights into the current state of technical code adoption.

The survey results highlighted a strong engagement among responding member organisations, with 76% reporting active use of MTSFB's technical codes. This finding underscores the value and relevance of these standards within the member community. However, the survey also revealed substantial engagement gaps among non-member organisations, with only 46% utilising these standards. This disparity in adoption rates emphasises the need for heightened awareness of MTSFB's presence and more tailored engagement strategies to bridge the gap and foster widespread adoption of technical codes across the industry.

In terms of Working Groups' standardisation activities, Fixed Network Facilities, Internet of Things (IoT), Future Networks and Green information and communication technology (ICT) garner higher interest among respondents due to their pivotal roles in communication and the technology's broad impact on diverse industries. The respondents acknowledged the significance of these working groups in ensuring reliable, secure, and efficient communication networks, while also aligning with Environmental, Social and Governance (ESG) needs.

The invaluable feedback provided by both member and non-member organisations has been instrumental in creating a deeper understanding of the ways to better technical code adoption and utilisation. By leveraging these insights, MTSFB can develop targeted initiatives and programs to address the identified challenges, promote the benefits of technical code adoption, and ensure that these standards continue to drive industry best practices and innovation.



225

respondents from both member and non-member organisations

76%

reporting active use of MTSFB's technical codes by respondents from member organisations

Studies and Technical Reports

In enriching the value of the standardisation work we do and driving innovation, MTSFB is actively involved in related studies on the latest technologies and their applications. In 2023, an Industry Study report on 5G broadcast and a number of technical reports on the Industry Promotion and Development Grant projects were produced.

5G Broadcast Study

In a significant move towards exploring future broadcasting technologies in Malaysia, the Malaysian Communications and Multimedia Commission (MCMC) collaborated with MTSFB to release a comprehensive industry study report on the topic of Future Broadcasting Technology. The report delves into 5G technologies for media providers and broadcasters, specifically focusing on 5G Broadcast.

During the creation of this report, MTSFB achieved verifiable insights and recognised four future technologies:

1. 5G NR (New Radio) for broadcasting (Remote Production & Post-Production via 5G NR)
2. 5G Multicast Broadcast Service (5GMB)
3. 5G Media Streaming (5GMS)
4. 5G Broadcast



Based on these findings, the study provides several recommendations to ensure Malaysia remains at the forefront of 5G broadcasting developments:




- Actively engaging with all stakeholders, including the 5G-MAG MEDIA ACTION GROUP and 3GPP, to stay informed about the latest advancements in the field.
- Conducting regular discussions on global and international progress in 5G broadcasting, enabling the standardisation committee to make informed decisions and guide the industry forward.
- Conducting a Proof of Concept (PoC) to gain a better understanding of 5G Broadcast's capabilities, encourage its adoption, and address concerns related to bandwidth and delay issues through physical verification.
- Recognising the potential of 5G Broadcast to replace specialised broadcast infrastructure, reduce monopoly in the supply of certain production equipment, and lead to increased competition and innovation within the industry.
- Implementing policies that enhance collaboration between industry players, such as service providers, broadcast network operators, and broadcasters, to drive the successful adoption and implementation of 5G Broadcast technology in the country.

Industry Promotion and Development Grant

The Industry Promotion and Development Grant (IPDG) was conceived to advance knowledge, drive Research and Development (R&D), and enhance competitiveness in technological innovation by fostering Proof-of-Concept (PoC) projects that significantly contribute to the communications and multimedia industry. This grant supports initiatives that add value through the development of technical codes, ultimately raising industry standards and benefiting all stakeholders.

Recognising the necessity for a structured and efficient approach to managing these grants, MTSFB, together with MCMC, developed a comprehensive IPDG Framework in 2023. This framework encompasses several key components and guidelines aimed at ensuring effective management and impactful outcomes for the IPDG. This framework is designed to provide a structured approach that supports a clear grant management process, ensuring governance, transparency, accountability, and strategic alignment with industry priorities.

List of study and technical reports produced

No.	Technical Report	Category
1	<p>Industry Study Report: Future Broadcasting Technology</p>  <p>In a significant move towards exploring future broadcasting technologies in Malaysia, the Malaysian Communications and Multimedia Commission (MCMC) collaborated with MTSFB to release a comprehensive industry study report on the topic of Future Broadcasting Technology. The report delves into 5G technologies for media providers and broadcasters, specifically focusing on 5G Broadcast.</p>	Technology Study
2	<p>Designing a Green Delivery Network for Medicine and Vaccine Delivery in Rural Area Using Drone</p>  <p>Grant recipient: UCSI University</p> <p>This project explores sustainable and efficient methods for delivering critical healthcare supplies to remote areas, addressing a vital need for accessible healthcare.</p>	Industry Promotion & Development Grant
3	<p>AI-IoT Based Interactive Children Educational Application</p>  <p>Grant recipient: Universiti Teknikal Malaysia Melaka</p> <p>Focusing on the intersection of artificial intelligence and the Internet of Things, this initiative aims to develop innovative educational tools that enhance children's learning experiences, making education more interactive and effective.</p>	Industry Promotion & Development Grant

No.	Technical Report	Category
4	<p>Monitoring System and Localisation of COVID-19 Patient</p>  <p>Grant recipient: Universiti Malaysia Perlis</p> <p>This project aims to improve public health response capabilities by developing advanced systems for tracking and managing COVID-19 patients, thereby enhancing the ability to respond to health crises.</p>	Industry Promotion & Development Grant
5	<p>Lightning Interference in 4G Wireless Communication Links</p>  <p>Grant recipient: Universiti Teknikal Malaysia Melaka</p> <p>Addressing the natural challenges faced by wireless communication networks, this study investigates methods to mitigate lightning interference, ensuring more reliable communication services.</p>	Industry Promotion & Development Grant
6	<p>Vision-Based Intelligent Traffic Monitoring System (VBITMS)</p>  <p>Grant recipient: Universiti Malaysia Pahang</p> <p>This initiative seeks to improve traffic management and safety through the use of advanced vision-based monitoring technologies, contributing to smarter and safer urban mobility solutions.</p>	Industry Promotion & Development Grant

Technical Code Awareness Programmes

MTSFB is committed to educating and engaging stakeholders about the technical codes and standards we develop through our Technical Code Awareness Programme. This programme is designed to ensure that industry professionals, regulators, developers, and the public have a comprehensive understanding of the purpose, implementation, and benefits of these codes, fostering widespread adoption and compliance.

Our Technical Code Awareness Programme focuses on three key objectives:

Educating Stakeholders:

We provide comprehensive knowledge about our technical codes and their applications.

Facilitating Adoption:

By demonstrating the value and practicality of our standards, we aim to promote their adoption across the industry.

Ensuring Compliance:

Our programmes help stakeholders understand the compliance requirements associated with our technical codes and provides them with the knowledge and resources necessary to meet those requirements.

Awareness Programmes

9 Feb 2023

Topics highlighted:

a) INS: Capability Development and Capacity Building (Ts Lee Hwee Hsiung)



b) IoT - Application Security Requirements (Prof Dr Shahrulniza Musa)



Awareness Programmes

17 Jul 2023

State Penang's Visit to MTSFB



Topics highlighted:

a) Pole Specifications for New Development Area (Zulkefli Zabri)



b) Last Mile Pole for SDU Brownfield Area Expansion (Mohd Faiz Hasmi)



c) Use Cases on Pole Installation and Maintenance (Mohamed Azli Ab Jalil)



Awareness Programmes

12 Sep 2023

Target audience: Cybercity and Cybercentre Building Operators and Consultants managed by MDEC



TCs highlighted:

a) Fixed Network Facilities - In-Building and External (Mohd Faiz Hasmi)



b) Radiocommunications Network Facilities - In-Building Coverage System (Mohammad Nur Syafiq Aziz)



c)



23 Oct 2023

Target audience: Malacca state stakeholders and UTeM staff and students



TCs highlighted:

a) Basic Civil Works (Ts Sufian Sulaiman)



b) Fixed Network Facilities - In-building and External (Ts Mohd Yusairi Abu Hassan)



8 Dec 2023

Target audience: IEM members and IEEE members

TCs highlighted:

a) IMT-2020 - System Architecture and Future Network (Yeoh Chun Yeow)



Technology Talks

MTSFB's Technology Talks (Tech Talk) is an initiative that fosters collaboration, knowledge sharing, and innovation within the communication and multimedia industry. These talks provide a platform for industry professionals, researchers, regulators, and other stakeholders to discuss emerging technologies, share best practices, and explore collaborative opportunities.

The Tech Talk series aims to support industry-wide growth, enhance technical standards development, and cultivate a culture of continuous learning and innovation. Moreover, the Tech Talks play a crucial role in building a robust network of professionals and organisations committed to advancing the communication and multimedia industry.

5 Apr 2023

MTSFB - Deloitte CxO Roundtable

TMT Predictions 2023 presentation by Duncan Stewart, Director of TMT Research for Deloitte Canada and forum: "TMT Predictions and the impact to the nation's telco standards"



17 May 2023

5G Expert Dialogue with 5GMF, Japan

Dialogue session on 5G deployment in both countries and report on the current state and prospect of network development for 5G/local 5G/mmWave towards global collaboration



Sharing session: Empowering the nation through ICT by Maxis, IEEE, and Deloitte in conjunction with World Telecommunication and Information Society Day 2023



Marvin Liong from Maxis spoke about forging ahead with partnerships to empower the nation with IoT.



Assoc Prof Dr Imran Ibrahim shared about collaborative projects with communities on telecommunications.



Mohd Fairuz Ismail from Deloitte talked about the trends in ICT and the possibilities for future technologies.

Technology Talks

21 Jul 2023

Tech Talk on Metaverse

Metaverse-ready Wireless Communications and Computing Systems by Prof Haris Gačanin, Professor, RWTH Aachen University



11 Oct 2023

Webinar: Towards Autonomous Networks together

Speakers:

Leon Wong,
Rakuten Mobile, Inc

Dr Norehan Yahya,
XCelcius Consultancy



24 Oct 2023

5G Broadcast Technology and Use Cases

1. '5G Broadcast - The road towards commercialisation' by Aziz Taga from Rohde & Schwarz

2. '5G simplifies remote production' by Peter Lim from Cedar Broadcast & Communications (M) Sdn Bhd



Enroute to 5G Advance and 6G: Challenges and New Paradigm

1. 'Technology evolution/revolution leading to 6G' by Muthu Kumaran – Keysight



2. 'Reconfigurable Intelligent Surface – empowering 6G' by Dr Youseff Nasser - Greenerwave



3. Panel Discussion: Anwar Faizd Osman – TM; Yeoh Chun Yeow – TM R&D; Dr Norehan Yahya – Xcelcius; Muthu Kumaran – Keysight; and Dr. Youssef - Greenerwave



Collaborations, Engagement and Partnerships

State Authorities

MTSFB promotes industry best practices through the development and adoption of technical codes. By collaborating with state authorities, MTSFB can disseminate these best practices more widely and encourage their adoption across the industry. This collaboration helps raise industry standards, improve the quality of services and products, and enhance overall industry performance.



Penang State Government

MTSFB worked closely with the Penang State Government through the Pejabat Setiausaha Kerajaan Negeri Pulau Pinang (SUK Pulau Pinang) to develop TCs tailored to industry needs.

MTSFB has aligned its relevant TCs and services with Penang2030, particularly the Smart Penang2030 initiative, which prioritises connectivity and infrastructure, smart manufacturing, and smart cities. MTSFB's CEO was also appointed as a member of the Technical Infrastructure Committee for Penang State due to credibility, experience and expertise.

TCs adopted in the project implementation and development of Penang State's Telecommunication Infrastructure Guidelines:

- Basic Civil Works – Part 1: General Requirements
- Basic Civil Works – Part 2: Open Trench
- Basic Civil Works – Part 3: Micro Trench
- Basic Civil Works – Part 4: Horizontal Directional Drilling (HDD)



Melaka State Government

MTSFB provided a source of reference for the Melaka State Government to refine efforts and plans in driving the achievement of Smart Melaka Blueprint 2035.

Standards Development Organisation

MTSFB is also working together with other national and international organisations to collaborate on initiatives benefiting the industry by signing a formal Memorandum of Understanding (MoU). These MoUs are designed to foster collaboration, facilitate knowledge sharing, spread awareness and drive the adoption and development of technical codes.

In 2023, MTSFB signed individual MoUs with 5 organisations, namely The IO Foundation (TIOF), Fifth Generation Mobile Communication Promotion Forum (5GMF) Japan, Telecommunication Technology Committee (TTC) Japan, Universiti Kuala Lumpur (UniKL) and Taiwan Association of Information and Communication Standards (TAICS).



MTSFB and TTC Japan agree to support and encourage collaboration in the development of technical standards and technical projects for telecommunication applications.



The MoU with TIOF covers aspects such as collaboration in the area of standardisation, participation of TIOF in the working groups, and promotion of activities to benefit the communications and multimedia industry.



MTSFB and 5GMF forged a commitment to collaborate on research and information sharing on 5G mobile architectures and applications, as well as standardisation works on 5G and beyond.



The MoU between MTSFB and UniKL covers academic research and educational activities to create higher awareness and adoption of TCs, as well as contribution to the development of TCs by the staff and students of UniKL.



MTSFB and TAICS agree to cooperate in the fields of Information and Communications Technology (ICT) and Communications and Multimedia Industry (CMI) development, covering a broad range of areas. This includes encouraging and developing collaborative activities in various ways to support the exchange of ideas and expertise.

Collaborations, Engagement and Partnerships

Standards Development Organisation

Government Agencies

Ensuring the infrastructure performance of the Cybercities and Cybercentres with MDEC

Malaysia Digital Economy Corporation (MDEC) and MTSFB have been long-standing partners in the pursuit of elevating Malaysia's digital infrastructure standards. In 2023, we have further strengthened our collaboration to drive the nation's digital transformation agenda forward.

Through the adoption of TCs for the development and performance management of Malaysia Digital's cybercities and cybercentres, MDEC and MTSFB are committed to achieving the following objectives:

01 Enhancing the technical infrastructure

02 Optimising performance standards

03 Improving connectivity within these digital hubs

04 Bolstering Malaysia's global competitiveness

This session was also aimed to facilitate the review of the performance criteria mapped against the updated TC on Fixed Network Facilities – In-building and External.



Collaboration with Industry Players

Deloitte

Another significant collaboration was the co-organisation of events with Deloitte, one of the largest professional services networks in the world. The activities included a CXO roundtable and the 2023 Global Technology, Media and Telco (TMT) Predictions Forum sharing session with Duncan Stewart, the Director of TMT Research for Deloitte Canada and a globally recognised expert on the forecasting of consumer and enterprise technology, media and telecommunications trends.

Yee Wing Peng, CEO of Deloitte Malaysia and Leonard Woo from Deloitte South East Asia provided an overview of how the predictions would impact Malaysia's TMT landscape from a regional and local perspective. The key takeaways from these discussions were incorporated into the TC roadmap of 2024/2025, ensuring that MTSFB remains at the forefront of technological advancements and industry trends.



Collaborations, Engagement and Partnerships

Standards Development Organisation

Collaboration with Industry Players

Spacelabs Technology

One notable collaboration was the study visit to Spacelabs, a key player in the arena of sports and entertainment services and solutions. Renowned for their pioneering work in broadcasting technologies, Spacelabs specialises in high-definition (HD) and ultra-high-definition (UHD) broadcasting, digital transmission, and advanced compression techniques. MTSFB's entourage was first brought to Paroi Stadium, Negeri Sembilan, to observe the setup on-site, then proceeded to the remote studio in Bukit Jalil to see the rest of the remote broadcast process.

The visit provided MTSFB with valuable firsthand insights into cutting-edge technologies, innovative solutions, and emerging trends in the

broadcasting sector. The team gained a deeper understanding of the latest advancements in UHD broadcasting and how they can be integrated into current broadcasting systems to provide superior picture quality and enhanced viewer experience. Additionally, the visit illuminated the transition from traditional broadcasting to IP-based broadcasting and its benefits in terms of flexibility, scalability, and cost-efficiency.

Of particular interest was the demonstration of advanced broadcasting equipment and software, such as automated production systems and real-time data analytics tools. This proactive approach to technical code development will undoubtedly enhance the competitiveness, efficiency, and quality of broadcasting services in Malaysia.



Associations

In our ongoing efforts to foster a vibrant and collaborative industry ecosystem, MTSFB has actively engaged with key industry associations such as the Institute of Engineers Malaysia (IEM) and Institute of Electrical and Electronics Engineers (IEEE) Malaysia to organise joint events throughout the year. These initiatives, including the Technical Code (TC) Awareness Programme and Tech Talks, have been instrumental in promoting knowledge exchange, networking, and synergistic partnerships among industry stakeholders. Such collaborations also serve as platforms for industry professionals to share valuable insights, best practices, and unique experiences, contributing to the collective growth and advancement of the industry.

Special Recognition by IEEE Malaysia

MTSFB's unwavering commitment to fostering strong industry partnerships and driving technological advancement has been recognised by the esteemed Institute of Electrical and Electronics Engineers (IEEE) Malaysia.

On 28 January 2023, MTSFB was honoured to receive the Best Industrial Collaborator 2022 award from the IEEE Malaysia Communication Society and Vehicular Technology Society Joint Chapter (IEEE ComSoc/VTS) during their Annual

General Meeting. The award was presented by Prof Dr Mohamad Yusoff Alias, Chair of IEEE ComSoc/VTS.

Further solidifying our position as a key industry partner, MTSFB was once again recognised by IEEE on 24 June 2023, with the 2023 Outstanding Industry Award (Collaboration and Partnership) during the IEEE Malaysia Inspiration Night 2023.



Internal Focus

In 2023, we made efforts to improve and strengthen our internal processes, enhance governance, and cultivate a culture of excellence and integrity.



Revision of Limit of Authorities Manual

We meticulously reviewed and updated our Limit of Authorities (LoA) Manual to ensure transparency, accountability, and efficient decision-making across the organisation. This revision streamlines our processes and empowers our team to make informed decisions promptly.



Performance Management Framework

We introduced a robust performance management system that aligns individual goals with organisational objectives to drive productivity and excellence. This framework enables our team to set clear targets, receive regular feedback, and continuously develop their skills, ultimately contributing to the overall success of our organisation.



Code of Business Ethics and Integrity Guideline

We established clear guidelines to steer our actions and ensure compliance with legal and ethical standards. The Code of Business Ethics and Integrity Guideline provides a roadmap for navigating complex situations, fostering a culture of accountability, and preserving our reputation as a trusted partner.



Employee Handbook Enhancement

Our commitment to fostering a positive work environment, emphasising employee well-being, and promoting ethical conduct is reflected in our revised Employee Handbook. The updated handbook includes updates on the overall staff compensation and benefits, as well as integrity controls, such as the inclusion of whistleblowing terms.



Corporate Integrity Pledge

Our commitment to integrity is unwavering. The Corporate Integrity Pledge reinforces ethical behaviour, trust, and transparency at all levels. We conducted a gap assessment, and the development of missing policies.

Directors' Report and
**Financial
Statements**



MALAYSIAN TECHNICAL STANDARDS FORUM BHD.

(Incorporated in Malaysia and Limited by Guarantee)

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DIRECTORS' REPORT

DIRECTORS' REPORT FOR THE FINANCIAL YEAR ENDED 31 DECEMBER 2023

The directors hereby submit their report together with the audited financial statements of the Company for the financial year ended 31 December 2023.

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.

FINANCIAL RESULTS

	RM
Operating surplus after taxation	285,717
Accumulated surplus brought forward	<u>1,252,383</u>
Accumulated surplus carried forward	<u><u>1,538,100</u></u>

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:

Azni Risa binti Ramlan
 Norazizan bin Mohamad
 Fami bin Abdul Hamid
 Nivendran A/L Veerappan

DIRECTORS' REPORT

DIRECTORS' REPORT FOR THE FINANCIAL YEAR ENDED 31 DECEMBER 2023

Liew Sze Yarn

Mohd Mazlan bin Abd Razak

Amirah binti Abd Majid

Fauziah binti Fadzil

Mohd Izni Zuhdi bin Mohamed Rawi

(Alternate director to Azni Risa binti Ramlan)

Mohamad Isa bin Mohd Razhali

(Alternate director to Nivendran A/L Veerappan)

Mohd Fuad bin Romeli

(Alternate director to Liew Sze Yarn)

Low Chia Seng

(Alternate director to Mohd Mazlan bin Abd Razak)

Ong Cheok Seong

(Alternate director to Amirah binti Abd Majid)

Siti Rizaidah binti Mokhtar

(Appointed w.e.f 22.12.2023)

(Alternate director to Fami bin Abdul Hamid)

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

During and at the end of the financial year, no arrangement subsisted to which the Company is a party, with the object or objects of enabling directors of the Company to acquire benefits by means of the acquisition of shares in or debentures of the Company or any other body corporate.

Since the end of the previous financial year, no director of the Company has received or become entitled to receive any benefits (other than those shown below) by reason of a contract made by the Company or a related corporation with the director or with a firm which the director is a member or with a company in which the director has a substantial financial interest.

The directors' benefits paid to or receivable by directors in respect of the financial year ended 31 December 2023 are as follows:

Directors of the Company
- Meeting allowance

RM

9,000

DIRECTORS' REPORT

DIRECTORS' REPORT FOR THE FINANCIAL YEAR ENDED 31 DECEMBER 2023

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 all known bad debts had been written off and that adequate 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.

DIRECTORS' REPORT

DIRECTORS' REPORT FOR THE FINANCIAL YEAR ENDED 31 DECEMBER 2023

INDEMNIFYING DIRECTORS, OFFICERS OR AUDITORS

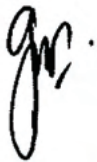
No indemnities have been given or insurance premiums paid, during or since the end of the year, for any person who is or has been director, officer or auditor of the Company.

AUDITORS

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

The auditors' remuneration of the Company during the year is RM12,000.

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



AZNI RISA BINTI RAMLAN

Director



NORAZIZAN BIN MOHAMAD

Director

Kuala Lumpur

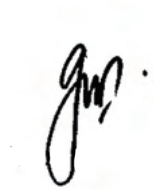
Dated: 14 MAY 2024

STATEMENT BY DIRECTORS

PURSUANT TO SECTION 251(2) OF THE COMPANIES ACT, 2016

We, **AZNI RISA BINTI RAMLAN** and **NORAZIZAN BIN MOHAMAD**, two of the directors of MALAYSIAN TECHNICAL STANDARDS FORUM BHD., do hereby state that, in the opinion of the directors, the accompanying financial statements set out on pages 10 to 41 are drawn up in accordance with Malaysian Financial Reporting Standards, International Financial Reporting Standards and the requirements of the Companies Act, 2016 in Malaysia so as to give a true and fair view of the financial position of the Company as at 31 December 2023 and of its financial performance and cash flows for the financial year then ended.

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



AZNI RISA BINTI RAMLAN

Director



NORAZIZAN BIN MOHAMAD

Director

Kuala Lumpur

Dated: 14 MAY 2024

STATUTORY DECLARATION

PURSUANT TO SECTION 251(1)(b) OF THE COMPANIES ACT, 2016

I, **NORMARINEE MOHD NOR.**, the officer primarily responsible for the accounting records and financial management of MALAYSIAN TECHNICAL STANDARDS FORUM BHD., do solemnly and sincerely declare that the accompanying 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)
NORMARINEE MOHD NOR.)
at Kuala Lumpur in the)
Federal Territory Kuala Lumpur on **14 MAY 2024**)



NORMARINEE MOHD NOR.

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 2023, and the statement of profit or loss and other comprehensive income, statement of changes in non-distributable fund and statement of cash flows for the year then ended, and notes to the financial statements, including material accounting policy information, 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 at 31 December 2023, 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' International Code of Ethics for Professional Accountants (including International Independence Standards) ("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.

INDEPENDENT AUDITORS' REPORT

TO THE MEMBERS OF MALAYSIAN TECHNICAL STANDARDS FORUM BHD.

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.

INDEPENDENT AUDITORS' REPORT

TO THE MEMBERS OF MALAYSIAN TECHNICAL STANDARDS FORUM BHD.

- 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

Ahmad Shahrul Hj Mohamed
02138/04/2025 J
Chartered Accountant

Kuala Lumpur
Dated:

STATEMENT OF FINANCIAL POSITION

AS AT 31 DECEMBER 2023

	Note	2023 RM	2022 RM
ASSETS			
Non-Current Assets			
Property, plant and equipment	5	40,701	23,266
Right-of-use assets	6	448,687	524,522
		<u>489,388</u>	<u>547,788</u>
Current Assets			
Amount due from members	7	22,666	45,000
Other receivables, deposits and prepayments	8	51,964	314,106
Tax recoverable		14,450	14,450
Cash and cash equivalents	9	3,595,266	1,957,384
		<u>3,684,346</u>	<u>2,330,940</u>
TOTAL ASSETS		<u>4,173,734</u>	<u>2,878,728</u>
EQUITY			
Non-distributable fund			
Membership fund	10	175,000	168,000
Accumulated surplus		1,538,100	1,252,383
Total Equity		<u>1,713,100</u>	<u>1,420,383</u>
LIABILITIES			
Non-Current Liabilities			
Project grants	11	1,598,364	668,088
Lease liabilities	12	397,066	463,524
		<u>1,995,430</u>	<u>1,131,612</u>
Current Liabilities			
Other payables and accruals	13	398,746	264,428
Lease liabilities	12	66,458	62,305
		<u>465,204</u>	<u>326,733</u>
Total Liabilities		<u>2,460,634</u>	<u>1,458,345</u>
TOTAL EQUITY AND LIABILITIES		<u>4,173,734</u>	<u>2,878,728</u>

The accompanying notes form an integral part of the financial statements.

STATEMENT OF PROFIT OR LOSS AND OTHER COMPREHENSIVE INCOME

FOR THE FINANCIAL YEAR ENDED 31 DECEMBER 2023

	Note	2023 RM	2022 RM
Revenue	14	460,552	365,823
Other operating income	15	2,316,087	1,696,895
Operating expenses		(2,490,922)	(1,778,781)
Operating surplus before taxation	16	285,717	283,937
Taxation	17	-	-
Net operating surplus after taxation		<u>285,717</u>	<u>283,937</u>

The accompanying notes form an integral part of the financial statements.

STATEMENT OF CHANGES IN NON-DISTRIBUTABLE FUND

FOR THE FINANCIAL YEAR ENDED 31 DECEMBER 2023

	Membership fund RM	Accumulated surplus RM	Total RM
Balance as at 31 December 2021	163,000	968,446	1,131,446
Subscription from new members (Note 10)	5,000	-	5,000
Surplus of income over expenditure for financial year	-	283,937	283,937
Balance as at 31 December 2022	<u>168,000</u>	<u>1,252,383</u>	<u>1,420,383</u>
Subscription from new members (Note 10)	7,000	-	7,000
Surplus of income over expenditure for financial year	-	285,717	285,717
Balance as at 31 December 2023	<u><u>175,000</u></u>	<u><u>1,538,100</u></u>	<u><u>1,713,100</u></u>

The accompanying notes form an integral part of the financial statements.

STATEMENT OF CASH FLOWS

FOR THE FINANCIAL YEAR ENDED 31 DECEMBER 2023

	2023 RM	2022 RM
CASH FLOWS FROM OPERATING ACTIVITIES		
Operating surplus before taxation	285,717	283,937
Adjustments for:		
Depreciation of property, plant and equipment		
- property, plant and equipment	7,476	10,604
- right-of-use assets	75,835	6,320
Interest expense	32,195	2,862
Reversal of impairment losses on amount due from members	-	(2,000)
Utilisation of government grants	(2,310,247)	(1,693,836)
Operating deficit before working capital changes	(1,909,024)	(1,392,113)
Changes in working capital:		
- amount due from members and other receivables	284,476	(340,677)
- other payables	705,751	(160,723)
Cash used in operations	(918,797)	(1,893,513)
Income taxes paid	(7,225)	(7,225)
Income taxes refund	7,225	8,500
<i>Net cash used in operating activities</i>	(918,797)	(1,892,238)
CASH FLOW FROM INVESTING ACTIVITY		
Purchase of property, plant and equipment	(24,911)	(25,200)
Net cash used in investing activity	(24,911)	(25,200)
CASH FLOWS FROM FINANCING ACTIVITIES		
Proceeds from members' initial contribution	7,000	5,000
Payment of lease liabilities	(94,500)	(7,875)
Receipts of grants	2,669,090	1,355,589
<i>Net cash provided by financing activities</i>	2,581,590	1,352,714
Net increase/(decrease) in cash and cash equivalents	1,637,882	(564,724)
Cash and cash equivalents brought forward	1,957,384	2,522,108
Cash and cash equivalents carried forward (Note 9)	3,595,266	1,957,384

The accompanying notes form an integral part of the financial statements.

NOTES TO THE FINANCIAL STATEMENTS

- 31 DECEMBER 2023

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 Level 3A, MCMC Tower 2, Jalan Impact, Cyber 6, 63000 Cyberjaya, Selangor Darul Ehsan.
- (c) The registered office is located at 12th Floor, Menara Symphony, No. 5, Jalan Prof. Khoo Kay Kim, Seksyen 13, 46200 Petaling Jaya, Selangor Darul Ehsan.

2. BASIS OF PREPARATION OF THE FINANCIAL STATEMENTS

(a) Statement of compliance

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

The following are accounting standards, amendments and interpretations of the MFRSs Framework 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 2024:

- Amendment to MFRS 16, Leases – Lease Liability in a Sale and Leaseback
- Amendment to MFRS 101, Presentation of Financial Statements – Classification of Non-current Liabilities with Covenants
- Amendment to MFRS 107, Statement of Cash Flows and MFRS 7, Financial Instrument Disclosure – Supplier Finance Arrangements

MFRSs, Interpretations and amendments effective for annual periods beginning on or after 1 January 2025:

- Amendment to MFRS 121, The Effect of Changes in Foreign Exchange Rates – Lack of Exchangeability

NOTES TO THE FINANCIAL STATEMENTS

- 31 DECEMBER 2023

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

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

The Directors believe that the adoption of the above amendments, improvements and MFRS will not have any significant effect on the financial performance and position of the Company upon their initial application.

(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 unless otherwise stated.

(d) Use of estimates and judgements

The preparation of the financial statements in conformity with MFRSs requires Directors 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.

For the current financial year, there were 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 Note 7 – 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

NOTES TO THE FINANCIAL STATEMENTS

- 31 DECEMBER 2023

4. MATERIAL ACCOUNTING POLICY INFORMATION

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

(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.

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.

(ii) Financial instrument categories and subsequent measurement

Financial assets

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.

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Interest income is recognised by applying effective interest rate to the gross carrying amount except for credit impaired financial assets (see Note 4(e)(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(e)(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.

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(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(e)(i)).

Financial liabilities

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;

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- (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.

(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.

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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 stated 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.

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 are recognised net within "other income" and "other expenses" respectively in profit or loss.

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(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 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 from the date that they are available for use.

The estimated useful lives are at the following rates:

Directors of the Company	33.33%
Furniture and fittings	20%
Office equipment	20%

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

(c) Leases

(i) Definition of a lease

A contract is, or contains, a lease if the contract conveys a right to control the use of an identified asset for a period of time in exchange for consideration. To assess whether a contract conveys the right to control the use of an identified asset, the Company assesses whether:

- the contract involves the use of an identified asset – this may be specified explicitly or implicitly, and should be physically distinct or represent substantially all of the capacity of physically distinct asset. If the supplier has substantive substitution right, then the asset is not identified;
- the customer has the right to obtain substantially all of the economic benefits from use of the asset throughout the period of use; and

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- the customer has the right to direct the use of the asset. The customer has this right when it has the decision-making rights that are most relevant to changing how and for what purpose the asset is used.

In rare cases where the decision about how and for what purpose the asset is used is predetermined, the customer has the right to direct the use of the asset if either the customer has the right to operate the asset; or the customer designed the asset in a way that predetermines how and for what purpose it will be used.

At inception or on reassessment of a contract that contains a lease component, the Company allocates the consideration in the contract to each lease and non-lease component on the basis on their relative stand-alone prices. However, for lease of properties in which the Company is a lessee, it has elected not to separate non-lease components and will instead account for the lease and non-lease components as a single lease component.

(ii) Recognition and initial measurement

(a) As a lessee

The Company recognises a right-of-use asset and a lease liability at the lease commencement date. The right-of-use asset initially measured at cost, which comprises the initial amount of the lease liability adjusted for any lease payments made at or before the commencement date, plus any initial direct costs incurred and estimate of costs to dismantle and remove the underlying asset or to restore the underlying asset or the site on which it is located, less any lease incentives received.

The lease liability is initially measured at the present value of the lease payments that are not paid at the commencement date, discounted using the interest rate implicit in the lease or, if that rate cannot be readily determined, the Company's incremental borrowing rate. Generally, the Company uses its incremental borrowing rate as the discount rate.

Lease payments included in the measurement at the present value of the liability comprise the following:

- Fixed payments, including in-substance fixed payments less any incentives receivable;

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- Variable lease payments that depend on an index or a rate, initially measured using the index or rate as at the commencement date;
- Amounts expected to be payable under a residual value guarantee;
- The exercise price under a purchase option that the Company is reasonably certain to exercise; and
- Penalties for early termination of lease unless the Company is reasonably certain not to terminate early.

The Company excludes variable lease payments that linked to future performance or usage of the underlying asset from the lease liability. Instead, these payments are recognised in profit or loss in the period in which the performance or use occurs.

The Company has elected not to recognise right-of-use assets and lease liabilities for the short-term leases that have a lease term of 12 months or less and leases of low-value assets. The Company recognises the lease payments associated with these leases as an expense on a straight-line basis over the lease term.

(b) As a lessor

When the Company acts as a lessor, it determines at lease inception whether each lease is a finance lease or an operating lease.

To classify each lease, the Company makes an overall assessment of whether the lease transfers substantially all of the risks and rewards incidental to ownership of the underlying asset. If this is the case, then the lease is a financial lease; if not, then it is an operating lease.

If an arrangement contains lease and non-lease components, the Company applies MFRS 15 to allocate the consideration in the contract based on the stand-alone selling prices.

When the Company is an intermediate lessor, it accounts for its interests in the head lease and the sublease separately. It assesses the lease classification of a sublease with reference to the right-of-use asset arising from the head lease, not with reference to underlying asset. If a head lease is a short-term lease to which the Company applies the exemption described above, then it classifies the sublease as an operating lease.

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(iii) Subsequent measurement

(a) As a lessee

The right-of-use asset is subsequently depreciated using the straight-line method from the commencement date to the earlier of the end of the useful life of the right-of-use asset or the end of the lease term. The estimated useful lives of the right-of-use assets are determined on the same basis as those of property, plant and equipment. In addition, the right-of-use asset is periodically reduced by impairment losses, if any, and adjusted for certain remeasurements of the lease liability.

The lease liability is measured at amortised cost using the effective interest method. It is remeasured when there is a change in future lease payments arising from a change in an index or rate, if there is revision of in-substance fixed lease payments, or if there is a change in the Company's estimate of the amount expected to be payable under a residual value guarantee, or if the Group changes its assessment of whether it will exercise a purchase, extension or termination option.

When the lease liability is remeasured, a corresponding adjustment is made to the carrying amount of the right-of-use asset, or is recorded in profit or loss if the carrying amount of the right-of-use asset has been reduced to zero.

(b) As a lessor

The Company recognises lease payments received under operation leases as income on a straight-line basis over the lease term as part of "revenue".

(d) Cash and cash equivalents

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

(e) Impairment

(i) Financial assets

The Company recognises loss allowances for expected credit losses on financial assets measured at amortised cost, debt investments measured at fair value through other comprehensive income, contract assets and lease receivables. Expected credit losses are a probability-weighted estimate of credit losses.

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The Company measures loss allowances at an amount equal to lifetime expected credit loss, except for debt securities that are determined to have low credit risk at the reporting date, cash and bank balance and other debt securities for which credit risk has not increased significantly since initial recognition, which are measured at 12-month expected credit loss. Loss allowances for trade receivables, contract assets and lease receivables are always measured at an amount equal to lifetime expected credit loss.

When determining whether the credit risk of a financial asset has increased significantly since initial recognition and when estimating expected credit loss, the Company considers reasonable and supportable information that is relevant and available without undue cost or effort. This includes both quantitative and qualitative information and analysis, based on the Company's historical experience and informed credit assessment and including forward-looking information, where available.

Lifetime expected credit losses are the expected credit losses that result from all possible default events over the expected life of the asset, while 12-month expected credit losses are the portion of expected credit losses that result from default events that are possible within the 12 months after the reporting date. The maximum period considered when estimating expected credit losses is the maximum contractual period over which the Company is exposed to credit risk.

The Company estimates the expected credit losses on trade receivables using a provision matrix with reference to historical credit loss experience.

An impairment loss in respect of financial assets measured at amortised cost is recognised in profit or loss and the carrying amount of the asset is reduced through the use of an allowance account.

An impairment loss in respect of debt investments measured at fair value through other comprehensive income is recognised in profit or loss and the allowance account is recognised in other comprehensive income.

At each reporting date, the Company assesses whether financial assets carried at amortised cost and debt securities at fair value through other comprehensive income are credit impaired. A financial asset is credit impaired when one or more events that have a detrimental impact on the estimated future cash flows of the financial asset have occurred.

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The gross carrying amount of a financial asset is written off (either partially or full) to the extent that there is no realistic prospect of recovery. This is generally the case when the Company determines that the debtor does not have assets or sources of income that could generate sufficient cash flows to repay the amounts subject to the write-off. However, financial assets that are written off could still be subject to enforcement activities in order to comply with the Company's procedures for recovery amounts due.

(ii) Other assets

The carrying amounts on other assets (except for inventories, contract assets, lease receivables, deferred tax asset, asset arising from employee benefits, investment properties measured at fair value and non-current assets (or disposal groups) classified as held for sale) are reviewed at the end of each reporting period 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 cash-generating units.

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 or cash-generating unit.

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 cash-generating unit (group of cash-generating units) and then to reduce the carrying amounts of the other assets in the cash-generating unit (groups of cash-generating 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.

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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.

(f) Provisions

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 assessments of the 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.

(h) Project grants

Project grants are recognised as non-current liability upon receipt from Malaysian Communications and Multimedia Commission for industry promotion and development purposes. All expenditure related to the grant is shown as disbursement of grant.

(i) 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.

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(j) Income tax

Income tax expense comprises current and deferred tax. Current tax and deferred tax are 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 year, and any adjustment to tax payable in respect of previous financial 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 or loss. Deferred tax is measured at the tax rates that are expected to be applied 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 or 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 year 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 the future taxable profits will be available against which the unutilised tax incentive can be utilised.

(k) 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.

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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.

(ii) Contribution plans

The Company's contributions to statutory pension funds are charged to profit or loss in the financial year to which they relate. Prepaid contributions are recognised as an asset to the extent that a cash refund or a reduction in future payments is available. As required by law, companies in Malaysia make such contribution to the Employees Provident Fund ("EPF").

(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 is 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.

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5. PROPERTY, PLANT AND EQUIPMENT

	COST			
	Balance as at 1.1.2023	Additions	Disposals	Balance as at 31.12.2023
	RM	RM	RM	RM
Computers	151,748	22,383	-	174,131
Furniture and fittings	8,423	-	-	8,423
Office equipment	21,831	2,528	-	24,359
	182,002	24,911	-	206,913

	ACCUMULATED DEPRECIATION			
	Balance as at 1.1.2023	Charges	Disposals	Balance as at 31.12.2023
	RM	RM	RM	RM
Computers	134,117	2,941	-	137,058
Furniture and fittings	8,422	-	-	8,422
Office equipment	16,197	4,535	-	20,732
	158,736	7,476	-	166,212

	CARRYING VALUE		Depreciation
	2023 RM	2022 RM	2022 RM
Computers	37,073	17,631	7,570
Furniture and fittings	1	1	8,422
Office equipment	3,627	5,634	20,732
	40,701	23,266	10,604

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

	2023 RM	2022 RM
Computers	121,822	121,822
Furniture and fittings	8,423	8,423
Office equipment	11,831	11,831
	142,076	142,076

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6. RIGHT-OF-USE ASSETS

	2023 RM	2022 RM
Cost		
At 1 January	530,842	-
Additions	-	530,842
At 31 December	<u>530,842</u>	<u>530,842</u>
Accumulated depreciation		
At 1 January	6,320	-
Charges	75,835	6,320
At 31 December	<u>82,155</u>	<u>6,320</u>
Carrying amount		
At 31 December	<u>448,687</u>	<u>524,522</u>

The Company leases an office space that runs for 7 years.

Set out below the carrying amounts of lease liabilities and the movement during the period:

	2023 RM	2022 RM
As at 1 January	525,829	-
Additions	-	530,842
Accretion of interest	32,195	2,862
Payments	(94,500)	(7,875)
At 31 December	<u>463,524</u>	<u>525,829</u>
Current	66,458	62,305
Non-Current	397,066	463,524
At 31 December	<u>463,524</u>	<u>525,829</u>

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7. AMOUNT DUE FROM MEMBERS

	2023 RM	2022 RM
Amount due from members	70,520	139,529
Less: Accumulated impairment losses	<u>(47,854)</u>	<u>(94,529)</u>
	<u>22,666</u>	<u>45,000</u>

8. OTHER RECEIVABLES, DEPOSITS AND PREPAYMENTS

	2023 RM	2022 RM
Other receivables	7,623	276,547
Deposits	34,368	33,200
Prepayments	<u>9,973</u>	<u>4,359</u>
	<u>51,964</u>	<u>314,106</u>

9. CASH AND CASH EQUIVALENTS

	2023 RM	2022 RM
Cash in hand and at bank	<u>3,595,266</u>	<u>1,957,384</u>

10. MEMBERSHIP FUND

	2023 RM	2022 RM
At 1 January	168,000	163,000
Subscription from new members	<u>7,000</u>	<u>5,000</u>
At 31 December	<u>175,000</u>	<u>168,000</u>

The membership fund represents the initial contribution from the members.

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	2023 RM	2022 RM
At 1 January	86	82
Add: New members	7	5
Less: Discontinued memberships	(3)	(1)
At 31 December	<u>90</u>	<u>86</u>

11. PROJECT GRANTS

	2023 RM	2022 RM
Malaysian Communications and Multimedia Commission (MCMC)		
- Green ICT (GICT)	189,664	231,513
- Internet of Things (IOT)	408,700	436,575
- Industry Promotion and Development (IPDG)	1,000,000	-
	<u>1,598,364</u>	<u>668,088</u>

The movements of the project grants are as follows:

	2023 RM	2022 RM
At 1 January	668,088	1,074,329
Additions during the year	1,000,000	-
Disbursed during the year	(69,724)	(406,241)
At 31 December	<u>1,598,364</u>	<u>668,088</u>

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12. LEASE LIABILITIES

	2023 RM	2022 RM
Future lease payments payable		
- not later than 1 year	94,500	94,500
- later than 1 year	<u>464,625</u>	<u>559,125</u>
	559,125	653,625
Future finance charges	<u>(95,601)</u>	<u>(127,796)</u>
Present value of lease payments	<u><u>463,524</u></u>	<u><u>525,829</u></u>
<u>Present value of lease payments</u>		
- not later than 1 year	66,458	62,305
- later than 1 year	<u>397,066</u>	<u>463,524</u>
	<u><u>463,524</u></u>	<u><u>525,829</u></u>

13. OTHER PAYABLES AND ACCRUALS

	2023 RM	2022 RM
Other payables	52,131	-
Working group honorarium payable	79,507	16,627
Technical code incentive payable	90,257	166,614
Drafter incentive payable	8,200	5,600
Amount due to members	-	1,000
Government grants	86,213	-
Others	<u>82,438</u>	<u>74,587</u>
	<u><u>398,746</u></u>	<u><u>264,428</u></u>

14. REVENUE

	2023 RM	2022 RM
Subscription fees	<u>460,552</u>	<u>365,823</u>

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15. OTHER OPERATING INCOME

	2023 RM	2022 RM
Utilisation of government grants	2,310,247	1,693,836
Reversal of impairment losses on amount due from members	-	2,000
Others	5,840	1,059
	<u>2,316,087</u>	<u>1,696,895</u>

16. OPERATING SURPLUS BEFORE TAXATION

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

	2023 RM	2022 RM
Auditors' remuneration	12,000	12,000
Depreciation		
- property, plant and equipment	7,476	10,604
- right-of-use assets	75,835	6,320
Directors' meeting allowances	9,000	6,250
Interest on lease liabilities	32,195	2,862
Rental:		
- equipment	12,220	3,420
- space	6,410	9,260
	<u>120,936</u>	<u>50,716</u>

17. TAXATION

Reconciliation of tax expense with operating surplus before taxation:

	2023 RM	2022 RM
Operating surplus before taxation	285,717	283,937
Tax at the current income tax rate of 24%	68,572	68,145
Tax effect in respect of:		
Non-allowable expenses	596,419	426,174
Disregarded income	(110,532)	(87,798)
Non-taxable income	(554,459)	(406,521)
Tax expense	<u>-</u>	<u>-</u>

NOTES TO THE FINANCIAL STATEMENTS

- 31 DECEMBER 2023

18. STAFF COSTS

	2023 RM	2022 RM
Salaries, bonus and allowances	1,024,333	992,742
EPF contribution	130,645	108,694
SOCSSO contribution	9,648	8,363
Other employee benefits	48,395	26,147
	<u>1,213,021</u>	<u>1,135,946</u>

The numbers of employees in the Company at the end of the financial year were 12 (2022: 12).

19. FINANCIAL INSTRUMENTS

(a) Categories of financial instruments

The table below provides an analysis of financial instruments categorised as amortised cost ("AC").

	Carrying amount RM	AC RM
2022		
Financial assets		
Amount due from members	22,666	22,666
Other receivables, deposit and prepayments	51,964	51,964
Cash and cash equivalents	3,595,266	3,595,266
	<u>3,669,896</u>	<u>3,669,896</u>
Financial liabilities		
Other payables and accruals	(398,746)	(398,746)
Project grants	(1,598,364)	(1,598,364)
	<u>(1,997,110)</u>	<u>(1,997,110)</u>

NOTES TO THE FINANCIAL STATEMENTS

- 31 DECEMBER 2023

	Carrying amount RM	AC RM
<u>2022</u>		
<u>Financial assets</u>		
Amount due from members	45,000	45,000
Other receivables, deposit and prepayments	314,106	314,106
Cash and cash equivalents	1,957,384	1,957,384
	<u>2,316,490</u>	<u>2,316,490</u>
<u>Financial liabilities</u>		
Other payables and accruals	(264,428)	(264,428)
Project grants	(668,088)	(668,088)
	<u>(932,516)</u>	<u>(932,516)</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.

NOTES TO THE FINANCIAL STATEMENTS

- 31 DECEMBER 2023

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 previous year.

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 receivables 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;

NOTES TO THE FINANCIAL STATEMENTS

- 31 DECEMBER 2023

- (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.

	Gross-carrying amount RM	Loss allowance RM	Net balance RM
2023			
Current (not past due)	1,000	-	1,000
1-30 days past due	-	-	-
31-60 days past due	1,666	-	1,666
61-90 days past due	18,000	-	18,000
	20,666	-	20,666
Credit impaired			
More than 120 days	49,854	(47,854)	2,000
	70,520	(47,854)	22,666
2022			
91-120 days past due	38,000	-	38,000
More than 120 days	7,000	-	7,000
	45,000	-	45,000
Credit impaired			
More than 120 days	94,529	(94,529)	-
	139,529	(94,529)	45,000

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.

NOTES TO THE FINANCIAL STATEMENTS

- 31 DECEMBER 2023

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.

	Credit impaired RM	Total RM
Balance at 1 January 2022	96,529	96,529
Amount reversed	(2,000)	(2,000)
Balance at 31 December 2022/ 1 January 2023	94,529	94,529
Amount written off	(46,675)	(46,675)
Balance at 31 December 2023	47,854	47,854

(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.

NOTES TO THE FINANCIAL STATEMENTS

- 31 DECEMBER 2023

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	2 to 5 years RM
2023					
<i>Non-derivative financial liabilities</i>					
Other payables and accruals	398,746	-	398,746	398,746	-
Project grants	1,598,364	-	1,598,364	1,598,364	-
Lease liabilities	463,524	6.47%	559,125	94,500	464,625
	<u>2,460,634</u>		<u>2,556,235</u>	<u>2,091,610</u>	<u>464,625</u>
2022					
<i>Non-derivative financial liabilities</i>					
Other payables and accruals	264,428	-	264,428	264,428	-
Project grants	668,088	-	668,088	668,088	-
Lease liabilities	525,829	6.47%	653,625	94,500	559,125
	<u>1,458,345</u>		<u>1,586,141</u>	<u>1,027,016</u>	<u>559,125</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.

20. CAPITAL MANAGEMENT

The Company considers its non-distributable fund as its capital. As at 31 December 2023 the Company is not exposed to any capital risk as there are no outstanding borrowings made with financial institutions.

DETAILED STATEMENT OF PROFIT OR LOSS AND OTHER COMPREHENSIVE INCOME

FOR THE FINANCIAL YEAR ENDED 31 DECEMBER 2023

	2023 RM	2022 RM
Revenue		
Subscription fees	460,552	365,823
Add: Other operating income		
Utilisation of government grants	2,310,247	1,693,836
Reversal of impairment losses on amount due from members	-	2,000
Others	5,840	1,059
Total income	<u>2,776,639</u>	<u>2,062,718</u>
Less: Administrative expenses		
Accommodation	118,809	52,738
Air ticket	56,806	27,007
Appreciation	14,507	5,640
Auditors' remuneration	12,000	12,000
Bank charges	1,404	1,411
Courier and postage	1,344	3,802
Depreciation		
- property, plant and equipment	7,476	10,604
- right-of-use assets	75,835	6,320
Directors' meeting allowances	9,000	6,250
Event - Functions	95,214	-
Filing fees	-	1,200
Group personal accident	-	2,991
Honorarium	160,080	115,240
Human resource matters		
- Professional fee	10,600	-
- Consultancy fee	12,720	-
Infectious disease medical cost	116	11,588
Insurance	79	1,230
Interest on lease liabilities	32,195	2,862
Meals allowance	35,995	27,480
Meeting package	193,365	169,410
Membership fees	29,223	23,337
Mover service	-	5,412
Office expenses	711	237
Petrol, parking and toll	40,192	10,551
<i>Balance carried forward to next page</i>	<u>907,671</u>	<u>497,310</u>

DETAILED STATEMENT OF PROFIT OR LOSS AND OTHER COMPREHENSIVE INCOME

FOR THE FINANCIAL YEAR ENDED 31 DECEMBER 2023

	2023 RM	2022 RM
<i>Balance brought forward from previous page</i>	907,671	497,310
Printing and stationeries	13,250	4,327
Promotion	84,337	11,599
Publication	22,631	18,571
Refreshment	13,167	21,051
Rental		
- equipment	12,220	3,420
- space	6,410	9,260
Staff costs		
- Salary and allowances	921,107	875,293
- EPF contributions	130,645	108,694
- SOCSO contributions	9,648	8,363
- EIS	1,102	888
- Ex gratia	85,435	105,275
- Dental	2,170	320
- Entertainment	889	636
- Insurance	13,690	11,600
- Maternity subsidy	104	3,000
- Medical	22,116	10,339
- Medical check up	133	-
- Optic	9,080	-
- Telecommunication allowance	16,902	11,538
Sales and service tax	2,219	1,918
Secretarial fees	26,740	9,457
Stamp duty	1,634	-
Tax agent fees	3,127	3,127
Telephone, fax and internet	20	8,538
Temporary staff	69,767	-
Training and seminar	51,196	7,506
Travelling	24,421	2,475
Upkeep of computer and software	39,091	44,276
	2,490,922	1,778,781
Operating surplus before taxation	285,717	283,937
Less: Taxation	-	-
Net operating surplus after taxation	285,717	283,937



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