SARAWAK MULTIMEDIA AUTHORITY

TELECOMMUNICATION POLICY IN SARAWAK

BY SARAWAK MULTIMEDIA AUTHORITY (SMA)

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Purpose

The purpose of the Telecommunications Policy in Sarawak developed by Sarawak Multimedia Authority (SMA) are as follows:-

a. To make recommendations to the State of Sarawak in terms of planning, provision and operational of the telecommunications infrastructure and services.
b. To assist, facilitate and expedite the roll out of the infrastructure and services.
c. To attract new investors to invest in digital and telecommunications infrastructure.
d. To promote social responsibilities among the providers to contribute to the community.

Overview

The Sarawak government had released the Philosophies, Policies and Directions of Communication Towers and structures in May 2005. It has been the intention of the state to ensure that communication and multimedia services are available at reasonable prices. Hence, SACOFA Sdn. Bhd. has been appointed exclusively to construct, own and manage all the telecommunications towers.

On April 2017, during the first International ICT Infrastructure and Digital Economy Sarawak (IDECS) with the theme "Transforming Sarawak through the Digital Economy", the Right Honourable Chief Minister had announced a high level strategic plan for developing the Digital Economy of Sarawak. The Digital economy agenda will liberalise and open up new opportunities for the economy by embracing the philosophy of openness – open market, open economy and open data.

The main objective of the Digital Economy is to accelerate and propel the economic growth of Sarawak. In order to ensure proper development of the Sarawak Digital Economy, Sarawak government has established SMA under the Sarawak Multimedia Authority Ordinance, 2017.

Rationales on the Sarawak Multimedia Authority policies and guidelines

Telecommunications is more than just transmission and reception of voice. It has evolved from analogue to digital services; whereby technology has enabled the transformation of voice, video and data into digital forms. Hence, it is imperative to address the existing segregation and leverage the current resources to:

1. Deliver well-planned provision of telecommunications infrastructures to the State.
2. Minimize adverse land use impacts of Telecommunications Facility
3. Encourage aggressive efforts and cooperation from service providers to reduce the digital divide between rural and urban areas.

4. Ensure telecommunications infrastructures are constructed in a proper manner in accordance with State Ordinance.
5. Consider and add aesthetic values in the construction of telecommunications infrastructures.
6. Create a national model for the common or shared telecommunications facility in Malaysia.
7. Reduce the telecommunications services charges and make it more affordable to the rakyat.
8. Establish a framework for financing the telecommunications sector in Sarawak and to be consistent with long term sustainability.

Objectives

The policy aims to:

1. Establish one stop telecommunications centre in Sarawak.
2. Recognise telecommunications as a basic necessity whereby any new development in the state of Sarawak shall include or earmark the requirements for telecommunications infrastructures.
3. Enhance security and affordability of telecommunications services in Sarawak.
4. Leverage the resources to expedite the Digital Economy agenda.
5. Achieve 99.9% High Speed Broadband penetration in Sarawak.
6. Enforce high quality standard on seamless voice, data on converge network for superior experiences.
7. Develop conducive and progressive broadband ecosystem in close coordination with all stakeholders, including Ministries/ Government Departments/ MCMC to ensure availability to the last mile access.
8. Promote efficient use of spectrum by optimizing the delivery of services irrespective of the location by Fixed-Mobile convergence.
9. Obligate Radio Access Network (RAN) sharing especially in the rural areas.
10. Necessitate the implementation of terrestrial backhauling to towers whereby permissible in terms of location and access.
11. Liberalise the industry and promote healthy competitions to boost competencies and capabilities.
12. Promote new businesses in the telecommunications sector particularly on the end user services.

Laws and Regulations

The following are the current laws and regulations in place: -

CMA Act 1998 Commission Act 1998 [Act 589]

An Act to provide for the establishment of the Malaysian Communications and Multimedia Commission with powers to supervise and regulate the communications and multimedia activities in Malaysia, and to enforce the communications and multimedia laws of Malaysia, for related matters.

Land Code

The Sarawak Land Code legislated in 1958 covers the creation of Native Communal Reserves and Government Reserves in the state of Sarawak. The Land Code has provisions for the creation of native customary rights, including acquisition and guidelines relating to the rights and titles.

SMA Ordinance [1st December, 2017] (Swk. L. N. 232/207)

The establishment of Sarawak Multimedia Authority (SMA) as an entity to be the Authority in state for communication and multimedia activities and for matters connected there with.

The SMA 2017 ordinance must be read in conjunction with CMA 1998 and Sarawak Land code. Any discrepancies or irrelevancy, the SMA 2017 must prevail.
State Zoning in terms of defining suburban and rural areas. Refer to ***APPENDIX A.***

Role of Regulators

An ad-hoc committee shall be formed which shall consist of members from the following:

1. Sarawak Multimedia Authority (SMA);
2. Land and Survey Department Sarawak (L&S);
3. Bintulu Development Authority (BDA);
4. Jabatan Kerja Raya, Sarawak (JKR);
5. Ministry of Utility, Sarawak (MOU);
6. State Planning Authority, Sarawak (SPA);
7. Ministry of Local Government and Housing ,Sarawak (MLGH);
8. Regional Corridor Development Authority (RECODA);
9. State Planning Unit of the Chief Minister's Department, Sarawak (SPU); and
10. Additional member(s) co-opted to deliberate and address specific issues

whereby the chairman of this committee shall be appointed by SMA.

The meeting shall be held regularly, as and when required to make decisions on the approval for RoW, wayleaves, land matters and other relevant matters pertaining to the setting up of telecom infrastructure. The formation of the committee is to expedite the roll out of telecommunications infrastructure and services. Refer to the process flow in ***APPENDIX B***.

Tools

Telecommunications facility applications shall be submitted online through specific software application system(s) approved by SMA.

The system(s) will fast track applications pertaining to land acquisition and RoW approval. SMA shall grant access to this/these system(s) for all telecommunications facility providers. This will eliminate any duplication in terms for structures and fibre route. Furthermore, this will also maximise the investment and efficient use of resources. Refer to ***APPENDIX B.***

In order to address the Wayleave/RoW, land or premises acquisition issues and to facilitate the erection and commissioning of the infrastructure in setting up of telecom infrastructure, the system shall have:

- Accessible via the internet or Sarawak Net
- Tracking mechanism
- Online submission or approval
- To standardize submission for mapping and GIS

Approved Telecommunications Facility providers

Registration / Licensing

Mandatory requirements for Telecommunications facility providers are:

- NSP and NFP license from MCMC
- UPKJ license
- CIDB license

All telecommunications facility providers shall be 80% Sarawakian owned and their management teams shall comprise 90% Sarawakian. For any telecommunications facility which the State Government holds the controlling stake, the facility management team shall consist of 100% Sarawakian.

All contractors which are involved in any telecommunications activities in Sarawak shall be required to obtain the licenses from the following agencies:

- UPKJ
- CIDB

Financing

Framework for financing the sector shall be as below:

a. Commercial driven to be funded by Telecommunications Facility provider
b. Non-commercial – USP and clawback will be funded by MCMC and managed by SMA.

Quality of Service

The quality of services shall be evaluated based on performances. Hence, SMA shall impose ex parte regulations for quality of service (QoS) issues fostering higher standards of transparency. Refer to ***APPENDIX D*** **- Reference Items #6, #7 and #8** on QOS.

Protection of Consumer Interest

In carrying out its functions, SMA shall:

- undertake legislative measures on dispute and awareness
- practise transparency
- maximise the usage and reduce the cost
- propose and review pricing mechanism on telecommunications services
- form digital inspectorate for enforcement of SMA ordinance and the Telecommunications Policy.

Human Capital development

SMA shall:

- carry out assessment and certification on human resources only from SMA approved agency or body.
- create a committee to oversee, guide & enabling the resources in skill development in ICT

Only companies with certified level of competency by SMA approved agency will be allowed to operate in Sarawak.

Telecommunications Facility

A telecommunications facility is defined as:

- any part of the infrastructure of a telecommunications network
- equipment cabinet, the premises and access areas to compound
- any cable as in copper or optical fibre, housing or cabinet, tower or structure, trenching, duct, manhole used in telecommunications connectivity.

Telecommunications facility provides transmission of the conversion between data, voice, graphics and video information between or among points by wire, cable, optical fibre, microwave, antenna, dish, radio, satellite or similar facilities.

Telecommunications facility initiatives or projects shall practise energy efficient network planning, infra-sharing, deployment of energy efficient technologies and adoption of Renewable Energy Technology (RET) to reduce carbon footprints.

High Speed Broadband

Broadband is a term used in delivering telecommunications services as in accessing internet at high speed on a bigger capacity or volume. The current standard in delivering the Broadband services in Sarawak are:

(a) Copper telephone lines (e.g. ADSL);
(b) Wireless systems (e.g. mobile broadband, WIFI, Very small aperture satellite(VSAT));
(c) Fibre systems including fibre-to-the-node (FTTN)/ fibre-to-the-premises (FTTP)/Leased line

Each of these digital delivery methods can produce fast broadband in digital format, including voice, text, image, video and graphics with high secure, reliable and stable connection.

The Principles and Guidelines: Site Selection, design, construct and Operation maintenance

1. THE PRINCIPLES AND GUIDELINES: NON-EXCLUSIVE

- Only SMA approved telecommunications facility provider shall erect or construct telecommunications facility in Sarawak.
- Creating an ecosystem in the telecommunications facility to ensure setting up of a common platform for interconnection or usage from various networks in providing non-exclusive and non-discriminatory access.

- Enabling, promoting and enforcing common Infrastructure sharing on telecommunications facility.
- If facilities are built on state and native land, it shall be as accordance to Sarawak Land Code. Valid agreement between provider and private ownership upon SMA approval is required if Telecommunications facility is engaging private land owner.
- Maximizing Power Transmission Tower Pylon for rural and remote RAN sites.
- Locally managed on:
  - ✓ Local content on Sarawak
  - ✓ Price or rental
  - ✓ Required cooperation amongst Licensees to promote competition
  - ✓ Interconnection rules with dominant Licensees
- All Telecommunications facility owned by SMA. No telecommunications facility providers shall dominate or monopolize any services in the industry.
- Telecommunications facility provider shall be appointed by SMA for operation and maintenance.
- On FTTX, the telecommunications facility providers shall allocate 50% ports to other RSP in brownfield and for greenfield, telecommunications facility providers shall open all to Multiple RSP.
- Any service providers companies and telecommunications facility providers who are not "deem native" as stipulated and defined in "Sarawak Land Code" will also be able to use the SMA owned Telecommunications facility.
- To promote the Borneo of Internet Exchange (BIX) among the service providers and encourage border or regional connectivity, especially outside of Sarawak, and ensure that barriers to entry (e.g. membership fees) to new as well as the existing Internet Exchange Point (IXP) are as low as possible and do not constitute an obstacle for peering among Internet Service Providers (ISPs).

2. THE PRINCIPLES AND GUIDELINES: A TELECOMMUNICATIONS FACILITY SHALL BE DESIGNED TO DISGUISE WITH THE SURROUNDING

- The visual impact of the telecommunications facility shall have minimal visual impact to the surrounding area.
- The structure inclusive of support mounting and others shall be integrated with building design and appearance.
- Support or extra facilities or devices associated with the telecommunications facility shall be in a proper housing or cabinet, using the same background colour or assimilating with surrounding. Refer to ***APPENDIX D*** **- Reference Item #1.**
- A telecommunications facility shall be not obstructed and minimise the impact on any landmark, heritage area or any panorama.
- The Installation of the transmission lines in cities and major town shall be practical or within underground duct. Refer to ***APPENDIX D*** **- Reference Item #2.**

3. **THE PRINCIPLES AND GUIDELINES: TELECOMMUNICATIONS FACILITIES SHOULD BE LOCATED IN A PRACTICAL AND STANDARD MANNER.**

- Any new housing, area or land development shall include allocation for telecommunications facility and transmission. Uniform Building By Law by Ministry Urban Development and Natural Resources.
- All telecommunications facility which are located in the state land or future development land shall be gazetted or alienated for telecommunications purposes.
- All existing and illegal telecommunications facility which are not approved by SMA shall be dismantled. Cost for relocation and dismantling shall be borne by the service provider. Cost of migration or shifting shall also be borne by the service provider. The service providers have 3 months to vacant upon SMA instruction to relocate.
- The installation of new telecommunications infrastructure on the roof top or on any high-rise building shall only be applicable for buildings of more than 5-storey and above. If there is no suitable location that can fulfil the technical objectives of the coverage, voice quality and radio traffic capacity demand, the telecommunication facility provider may appeal to the Authority by submitting a written notice of appeal to the Authority subject to the payment of processing fee to be decided by the Authority's Appeals and Reviews Committee.
- Structures extension on the rooftop or high-rise building shall not be allowed. The maximum height of the structure shall not exceed 3 meters.
- Telecommunications lines are to be located, as far as practical, underground or within an existing underground conduit or duct.
- Reducing or minimizing any unnecessary proliferation of telecommunications facilities.
- Maximizing and enhancing BBGP to the telecommunications facilities especially in the rural and remote areas

4. **THE PRINCIPLES AND GUIDELINES: MINIMISE DISTURBANCE AND RISK AND MAXIMISE COMPLIANCE**

- The siting and height of any telecommunications facility must comply with any relevant site and height requirements specified in ***APPENDIX B.***
- Any telecommunications facility near to the airports shall comply to Department of Civil Aviation regulation.
- The telecommunications facility installation must be accordance to the standard specifications of the approved manufacturers.
- The telecommunications facility shall not alter or modify hence jeopardizing the building structure.
- The telecommunications facility shall be erected and constructed in the designated and agreed boundary upon alienation approval by SPA. Refer to ***APPENDIX C.***
- Construction debris or obstruction during and after construction shall be mitigated. Construction works shall comply to JKR standard. Refer to ***APPENDIX D*** **- Reference Item #3.**
- Construction activities shall comply to Safety & health requirements as stipulated in DOSH Guideline. Refer to ***APPENDIX D*** **- Reference Item #4.**
- Impact on the flora and fauna shall be minimize and the landscape to be restored after the construction works

- Reinstatement or rectification costs shall be borne the telecommunications providers and service provider for the damages done during construction.
- Safety and health standard shall comply to ISO45001

5. **THE PRINCIPLES AND GUIDELINES: ENSURE THAT THE TELECOMMUNICATIONS FACILITY, TRANSMISSION AND RF ARE NOT HAZARDOUS TO THE SURROUNDING**

- Telecommunications facility shall be designed, installed and operated to minimize EMF emission to human.
- All telecommunications facilities shall be assessed and certified by "SMA appointed and approved agency".
- Service providers shall optimise use of optical fibre as their telecommunications line particularly in cities and major towns.

6. **THE PRINCIPLES AND GUIDELINES: SERVICE PROVIDERS RESPONSIBILITY**

- The network latency within the local network i.e. from the Broadband customer to the International Gateway Service Provider Gateway should be < 120ms for 90% of the time during busy hours.
- To provide high quality standard on seamless voice, data on converge network for superior experience, hence eliminating drop calls.
- To promote common WTTX, RGW/RNC/BSC for Sarawak rural and remote RAN sharing.
- SMA shall advocate RAN sharing in Sarawak. The service providers shall oblige to serve the coverage at rural and remote areas.
- Promoting dark fibre and core swap.
- All service and facility providers shall provide access to their dashboard on their network's health.
- Ensuring the network are resilient and robust as in the design shall be in ring or redundant.
- Telecommunications facility providers shall ensure that their remote and rural sites are connecting to SARES (Sarawak Rural Electrification scheme).

Types of Telecommunications Facility

Base station

To maximize the radio frequency spectrum usage, a cellular network is divided or designed into cells depends on terrain and reception characteristics. A cellular network is used by the mobile service providers to accomplish both coverage and capacity for their subscribers. Large geographic areas are split into smaller cells to avoid line-of-sight signal loss and to support a large number of active subscribers in that area. These network cells overlap at the boundaries to limit gaps in coverage.
If the base stations are too far from each other, call quality will be impacted hence subscribers will experience drop calls and service interruption. A base station comprises of many elements: the

transceiver and transmission equipment, Radio Frequency antennas, tower or support mounting which provide the required heights for better coverage. The specific type of antenna required depends upon the desired range of the coverage area. The antenna types are:

- omnidirectional antenna
- sectorize/Directional antenna

Line-of-sight (LOS) radio communication dishes are used for communication between base stations where fibres are not available. These microwave dishes will communicate by transmitting and receiving radio signal to the neighbouring dish at a nearby base station. The area covered by each cell base station is depending on:

- the height of the antenna above the ground and clear obstruction to maximise the coverage.
- the spectrum in which the service providers are operating also effect the coverage. As in third generation or 3G technology has shorter the distance the signal travels compare to 2G. Long Term Evolution or 4G has the shortest signal compare to 3G.

Macrocell Base Station

Macrocell base stations provide the main infrastructure for a mobile telecommunications network. Antennas for macrocells are usually mounted on towers, rooftops and other structures but may be within a building. They are positioned at a height so that it will not be obstructed by surrounding buildings and terrain.

Microcell

Smaller antenna mounted externally at street level and to disguise with its surrounding. The antenna is linked into the telecommunications network via cable or optical fibre. Microcells provide coverage for a small geographic as in a limited area such as a mall, a hotel, or a transportation hub.

Pico cell or In building Coverage

The picocell base station is usually found in the MDF room. The solution provides a more localised coverage area especially inside buildings where coverage is poor or where there is a dense population of users such as in hospitals, airport terminals, office buildings, hotels, stadiums, and shopping centres.

Associate to Telecommunications Facility

Aerial or Above ground Facility

The facilities to include are:

- Poles and the accessories
- Shelter or housing for equipment as in termination box, cabinets or pillar.
- Joints, mid joints or other equipment for interconnect or joining fibres

Underground Facility

Underground facilities to includes:

- Open trenching, Micro trenching, direct burial and Pit.
- Manholes, hand holes or surface lid for service or operation purposes which is on the ground.
- Joints, mid joints or other underground equipment, devices or housing that meant for joining or for fibres interconnectivity.

Underground Conduit or Cable

An underground duct, conduit or cable is placed into the ground by trenching or direct burial. The cables must be approved and certified by SMA. Once in the ground, the ground shall be reinstated. The depth shall not be lesser that 1 metre deep and an underground duct, conduit or cable may be on any land upon approval by authorities. Refer to ***APPENDIX B*** on ROW or Wayleave.

Horizontal Directional Drilling

Underground horizontal directional drilling is a process whereby a new route is construct in the Cities, town, suburban and road crossing areas. In most cases, a conduit is inserted through the narrow shaft bored in the ground. A new cable is then pull through the duct or conduit in the underground from one end point to the other.

Micro Trenching

Also known as slot-cut trenching, which involves using a diamond circular saw to cut a 0.75 - 1.5-inch-wide, 4-inch-deep trench. Micro duct is installed in the bottom of the trench and it is then backfilled and sealed. The usage of air blown fibre in speeding up the project.

Temporary Facility

A temporary telecommunications facility which includes Coverage on wheels, Rapid Deployment Structure (RDS) is to provide:

- service coverage during either routine or emergency maintenance of an existing telecommunications facility, or
- service coverage during the construction or installation of a replacement telecommunications facility, or
- additional service coverage at events such as sporting carnivals, cultural festivals, business conventions, government events or the like.

A temporary Telecommunications Facility to be used for a special event, or to support a local, provincial, territorial or national emergency operation for a period of up to three months, and which shall be removed within three months of the event;

Significant Telecommunications Facility

Freestanding structures which are used for advertisement or infotainment usage. Only 15 meters and above structure can be use for Telecommunications purposes upon approval from SMA.

Smart Pole

Aside from providing street light, smart pole can also house technology to improve mobile performance. Other functions of the smart pole may include digital signage, Closed Circuit Television (CCTV), and push to talk emergency system, among others. Smart pole can be installed at road-side and public places. Refer to ***APPENDIX D*** **- Reference Item #5.**

Very Small Aperture Terminal (VSAT)

A satellite-based service used to transmit and receive data, video and voice to remote and inaccessible locations. It is an easy-to-deploy interim solution to serve the remote communities.

Optical Ground Wire (OPGW)

An optical ground wire is a type of cable that is used in overhead power lines. Such cable combines the functions of grounding and communications. An OPGW cable contains a tubular structure with one or more optical fibres in it, surrounded by layers of steel and aluminium wire. The OPGW cable is run between the tops of high-voltage electricity pylons.

Cable Landing Station (CLS)

The submarine cable requires power to terminates or spur off in order:

- To provide power to submarine repeaters or amplifiers
- Provides a location for the Submarine Line Terminating Equipment (SLTE)
- Provides a location for domestic and/or International interconnection

Fibre To The X (FTTX)

The installation of optical fibre from service providers to its customers, based on the location of the fibre's termination point.

Development Permissible Without Consent

- Development for the purpose of preventive and operational purposes on telecommunications line or network cables for existing underground facilities.
- Installation of telecommunications network at telecommunications facility.
- Development for the purpose of subscriber connections unless the connections requires to pass by a State land or local heritage item or is located in a heritage conservation area.
- Any structures below 30 meters, telecommunications facility provider required to
  - give written notice of its intention to carry out the development to the council of the area
  - To proceed after 21 days prior to notice given
  - To erect based on the guidelines concerning site selection, design, construction or operating principles for telecommunications facilities

Maintenance of Telecommunications Facility

Maintenance activities are required for the periodic upkeep and repair of facilities in order to ensure the proper functioning of the facility. Maintenance is not to result in any more than a minimal increase in size, area occupied by, or noise levels associated with the facility.

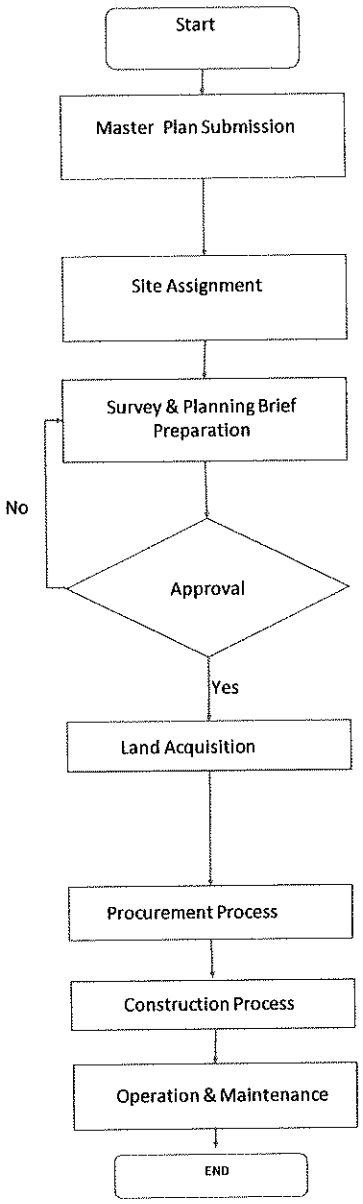
Glossary

ADSS	All-dielectric self-supporting (ADSS) cable
BBGP	Broadband to the General Population
BDA	Bintulu Development Authority
BTS	Base Transmission Station
BSC	Base Station Controller
CLS	Cable Landing Station
CIDB	Construction Industry Development Board
EMF	Electro Magnetic Field
ICT	Information Communication Technology
GIS	Geographical Information System
LOS	Line of Sight
L&S	Land and Survey
FTTC	Fibre To The Curb/Closet/Cabinet
FTTN	Fibre To The Node
FTTP	Fibre To The Premises
FTTH	Fibre To The Home
FTTB	Fibre To The Building
FTTX	Fibre To The X
MCMC	Malaysian Communications and Multimedia Commission
MDF	Main distribution Frame
MOU	Ministry Of Utilities
NFP	Network Facilities Provider
NSP	Network Service Provider
RAN	Radio Access Network
RECODA	Regional Corridor Development Authority
RET	Renewable Energy Technology
RGW	Residential Gateway
RNC	Radio Network Controller
RoW	Right Of Way
RSP	Retail Service Provider
SATS	Sarawak Tower System
SAWS	Sarawak e-Wayleave System
SMA	Sarawak Multimedia Authority
SPA	State Planning Authority
SPU	State Planning Unit
UPKJ	Unit Pendaftaran Kontraktor Dan Juruperunding
USP	Universal Service Provision
WTTX	Wireless To The X

APPENDIX A: Categories of Administrative Division and Districts

Division	District	Category	Sub-District	Category
Kuching	Kuching	Urban	Padawan	Rural
	Bau	Rural		
	Lundu	Rural	Sematan	Rural
Samarahan	Samarahan	Rural		
	Asajaya	Rural		
	Simunjan	Rural	Sebuyau	Rural
Serian	Serian	Rural	Siburan	Rural
	Tebedu	Rural		
Sri Aman	Sri Aman	Rural	Lingga	Rural
			Pantu	Rural
	Lubok Antu	Rural	Engkilili	Rural
Betong	Betong	Rural	Spaoh	Rural
			Debak	Rural
	Saratok	Rural	Nanga Budu	Rural
	Pusa	Rural	Maludam	Rural
	Kabong	Rural	Roban	Rural
Sarikei	Sarikei	Rural		
	Maradong	Rural		
	Julau	Rural		
	Pakan	Rural		
Sibu	Sibu	Urban		
	Kanowit	Rural		
	Selangau	Rural		
Mukah	Mukah	Rural	Balingian	Rural
	Dalat	Rural	Oya	Rural
	Matu	Rural	Igan	Rural
	Daro	Rural		
	Tanjung Manis	Rural		
Bintulu	Bintulu	Urban		
	Tatau	Rural		
	Sebauh	Rural		
Kapit	Kapit	Rural	Ng. Merit	Rural
	Belaga	Rural	Sg. Asap	Rural
	Song	Rural		
	Bukit Mabong	Rural		
Miri	Miri	Urban	Bario	Rural
	Marudi	Rural	Mulu	Rural
	Subis	Rural	Niah-Suai	Rural
	Beluru	Rural	Tinjar	Rural
	Telang Usan	Rural	Long Lama	Rural
			Long Bedian	Rural
Limbang	Limbang	Rural	Ng. Medamit	Rural
	Lawas	Rural	Sundar	Rural
			Trusan	Rural

APPENDIX B: 1. TELECOMMUNICATIONS TOWER PLANNING AND IMPLEMENTATION PROCESS*

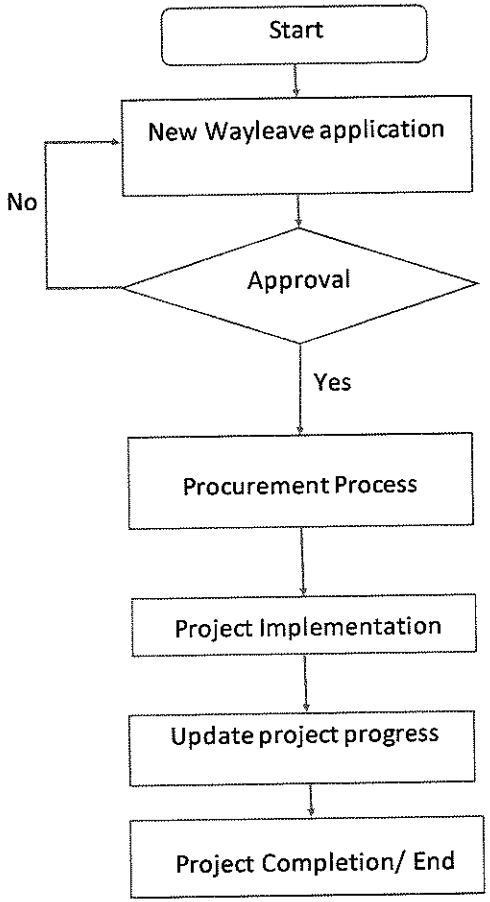


Description of Activity	Responsibility	System	Timeline	Remarks
Tower Master Plan Submission	SMA		3 days	1.Master Plan is a high level tower plan covering 1km radius of planned site/area. Actual tower site location with coordinates will be based on actual requirements by SMA, telecommunications facility providers and Telcos. SMA will consolidate the the towers. 2. Master plan will be tabled to the Telecommunication Planning Committee for siting approval.
1.Tower assignment based on requested by the Telecommunication service provider 2.Request shall be channeled to online to Telecommunication Providers as the one-stop-center/Coordinator for tower	Telcos/ TF	SATS		The request to be done online. Details on the 1. Site name 2. Latitude and Longitude 3. Structure height
1. Desktop Study 2. Identification of location, development & potential issues. 3. Site pre-acquisition 4. Preparation of Planning Brief for online submission 5. Submission of Planning Brief	TF		25 days	Telecommunication Facility is required to update their progress in the system
Decision on Survey and Planning Brief by Telecommunications Planning Committee	TF	SATS	3 days	
Carry out land acquisition. There are 3 types of lands: a. State Land b. Private Land c. NCR Land (registered and unregistered) For Rooftop, valid TA is required upon complying with SMA requirement.	TF	SATS	14 days	TF is required to upload all relevant documents. TF is required to update the progress in the system
1.Carry out Tender exercise 2.Award the tender to the successful tenderers with complete Project management timeline	TF	SATS	25 days	Updates to be carried out via TF's internal system. However, TF need to update in the SATS on 1. Procurement progress 2. Tender date
1.Update on progress of the construction to SMA 2.Report on the completion of the project to SMA	TF	SATS	60 - 90 days	
Upon completion, the tower shall be owned by SMA but operated and maintained by TF	TF	SATS		TF shall provide the information on the project manager and requester of the site. For any new users, TF shall update the system.

Notes:
"days" refers to working days
SATS - Sarawak Tower System, application approved by SMA for the purpose of planning, submission and processing of telecommunication facilities and proposals
Telcos - Telecommunications Service Provider
TF - Telecommunication facility provider
Structures below 30m will be under self-regulation

** The Telecommunication Tower Planning and Implementation Process is current as at the date of this version of this policy document, and is subject to change based on decisions of SMA Board*

APPENDIX B: 2. TELECOMMUNICATIONS FIBER INSTALLATION APPROVAL AND IMPLEMENTATION PROCESS



Description of Activity	Responsibility	System	Timeline	Remarks
Submission of new wayleave application	TF	SAWS		1. TF shall submit application through online application (SAWS). All documentation must be complete and in accordance to the requirements.
Decision on Planning Brief by Telecommunications Planning Committee	TF	SAWS	5 days	
1. Carry out Tender exercise 2. Award the tender to the successful tenderers with complete Project management timeline	TF	SAWS	25 days	Updates to be carried out via TF's internal system. However, TF need to update in the SAWS on 1. Procurement progress 2. Tender date
Project implementation	TF	SAWS		TF is required to update :- a. Time line b. Apply for Work Permit.
Progress update	TF	SAWS		TF is required to update the progress in the system

Notes:
"days" refers to working days

TF- Telecommunications facility provider
SAWS - Sarawak e-Wayleave System (SAWS), application system approved by SMA for the purpose of wayleave planning, request submission and management

** The Telecommunication Fiber Installation Approval and Implementation Process is current as at the date of this version of this policy document, an is subject to change based on decisions of SMA Board*

APPENDIX C: Minimum Setback Requirements for Telecommunication Structures in Sarawak

Table 1. Minimum Setback on new communication structure to the nearest building from the base of the telecommunication tower

	Category	(A)	(B)	(C)	(D)
No	Type of building	Mini Pole/Street Lighting pole (≤ 15m)	Lamp Pole (≤ $30m$)	Monopole (≤ $45m$)	Minaret (≤ $30m$)
1	Residential (all residential building including kampung house)	5m	15m	20m	NA
2	Institutional / Government building / Religious / schools	5m	15m	20m	Within religious complex (<10m)
3	Commercial (all commercial, shopping complex, office complex, cinemas, etc)	5m	10m	10m	NA
4	Industrial	5m	7.5m	7.5m	NA
5	Recreational / Sport Complex (e.g. Stadium, sport complex, swimming pool, etc)	5m	15m	20m	NA

**Note: The minimum setback is current as at the date of this version of this policy document and is subject to change based on decisions of SMA Board

Table 2. Minimum Setback on new communication structure for existing parks and open space from the base of the telecommunication tower.

	Category	(A)	(B)	(C)	(D)
No	Type of building	Mini Pole/Street Lighting pole (≤ 15m)	Lamp Pole (≤ $30m$)	Monopole (≤ $45m$)	Minaret (≤ $30m$)
1	Outside Gazetted Parks and open space	Next to within SEB substation	20m from parks& open space external boundary	25m	NA
2	Within Gazetted Parks and open space (3-5 Acres)	Next to within SEB substation	Next to within SEB substation	Not Permitted	Within religious complex (<10m)
3	Within Undesignated Open Space	Next to within SEB substation	Next to within SEB substation	Not Permitted	NA
4	Within River Reserve and Buffer Zone	Refer to Paragraph 7			NA

**Note: The minimum setback is current as at the date of this version of this policy document and is subject to change based on decisions of SMA Board

APPENDIX C: Minimum Setback Requirements for Telecommunication Structures in Sarawak

Table 3. Minimum Setback for telecommunication tower from different type of roads should be measured from the base of the tower to the road reserve boundary as follows.

Road Type	Road Reserve Width	Minimum Setbacks
1. Protocol Road	Designated by the government	300 m
2. Trunk Road	34m or more	200 m
3. Distributor Road	20 m to 25 m	100 m
4. Access Road	15 m or less	50 m

**Note: The minimum setback is current as at the date of this version of this policy document and is subject to change based on decisions of SMA Board

Excerpt from "Pengeculian untuk mengemukakan permohonan cadangan tapak pembangunan untuk cadangan Menara telekomunikasi ketinggian kurang 30 meter (Self Regulation)". Rujukan: 6/KPPS/SPA/6-38/263 (Vol 3.1)

1. Adalah dimaklumkan bahawa Majlis Perancangan Negeri (MPN) telah bersetuju dengan cadangan pihak SACOFA supaya tidak perlu mengemukakan permohonan bagi mendapat kelulusan daripada MPN untuk cadangan Menara telekomunikasi ketinggian kurang 30 meter (self regulator) dengan syarat pihak SACOFA mendapat kebenaran daripada pihak-pihak berkaitan/berkepentingan seperti pemilik tanah, pemilik bangunan, Pihak Berkuasa Tempatan, jabatan-jabatan kerajaan dan sebagainya. Pembinaan Menara tersebut hendaklah mengikut garis panduan/piawaian setbacks yang ditetapkan oleh MPN.

Excerpt from "Setback guideline review 2013 and telecommunication structure. Rujukan: 163/KPPS/SPA/6-38/263 (Vol 2)

2. Pembinaan struktur telekomunikasi "within River reserve and buffer zone" adalah tidak dibenarkan. Walau bagaimanpun, sekiranya memang ada keperluan untuk pembinaan struktur di Kawasan tersebut oleh Pihak SACOFA, maka permohonan boleh dikemukan untuk pertimbangan Majlis Perancangan Negeri secara "case to case basis".

3. Bagi pembinaan struktur komunikasi di atas bumbung (roof top structure) untuk bangunan berketinggian 4 tingkat dan ke bawah adalah tidak dibernarkan. Sekiranya ada keperluan pihak SACOFA perlu mengemukakan permohonan secara "case to case basis" untuk pertimbangan Majlis Perancangan Negeri. Manakala bagi bangunan 5 tigkat dank e atas, permohonan hendaklah dikemukan kepada pihak Jabatan Tanah dan survey (JTS) atau Lembaga Kemajuan

APPENDIX C: Minimum Setback Requirements for Telecommunication Structures in Sarawak

Bintulu (BDA). Majlis Perancangan Negeri memberi kuasa kepada Pengarah Jabatan Tanah dan Survei dan Pengurus Besar Lembaga Kemajuan Bintulu untuk mempertimbangkan permohonan tersebut secara "case to case basis"

APPENDIX D

List of Reference Items to External Guidelines, Standards and Requirements

Reference Item #	Reference Item Description
1.	MCMC-MTSFB: Technical Standards and Infrastructure Requirements Radiocommunications Network Infrastructure (External)
2.	MCMC-MTSFB: Technical Standard of In-Building Fibre Cabling For Fibre-To-The-Premise
3.	Guideline for Works Related to Public Utility Installation within The Road Reserve
4.	Guidelines for Public Safety and Health at Construction Sites
5.	MCMC-MTSFB-TC-G010_2017_RNF-Smart-Pole
6.	CMA 1998: Commission Determination on the Mandatory Standards for Quality of Services (Broadband access Service)
7.	CMA 1998: Commission Determination on the Mandatory Standards for Quality of Services (Digital Lease Line Service)
8.	CMA 1998: Commission Determination on the Mandatory Standards for Quality of Services (Public Cellular Service)