Radio Regulations for IOT in Mauritius

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University of Mauritius
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2. Greetings
3. Community Groups in Mauritius
4. How I relate to this subject
5. IOT and Radio Communication
6. Regulations in Mauritius
7. International Bodies
8. The End and Questions

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Made with love using beamer, LaTeX and git.
You can view at Radio Regulations for IOT in Mauritius

Who Am I

Who Am I

Geek@Slackware
twitter @zcoldplayer
zcoldplayer xmail Website
Work : SMTT@Meteorological.Services.mu
Active in many User group LUGM, MMC, MSCC, FECM, GDG_MU
and several other hackathons
Passionate about how and why things work.
Fervour Advocate of Free Libre and Open Source Software.

Who are you

Would you mind tell me who you are?

1. @twitter_handle
2. where you work
3. email you want to share
4. Hobbies
5. purpose and expectations of this session

Community Groups in Mauritius

Healthy growth of Community Groups in Mauritius

This turn of the century has seen an uprising of Community groups in Mauritius in the field of the Digital World. The diversity has helped the exchange and sharing of innovative ideas, experience, bleeding edge technology, upcoming events, conferences in the Digital Island of the Republic of Mauritius.

This is a list of some of the active communities in Digital Mauritius.

- Linux User Group Meta, LUGM
- Mauritius Software Craftmanship Community, MSCC
- Mauritius Makers Community, MMC
- Front-End Coders Mauritius, FECM
- PHP User Group of Mauritius, phpMauritiusUG
- Symfonymu
- Google Developers Group Mauritius, GDG_M
- Digital Marketing Mauritius
- Python User Group, PyMUG

My experience with Radio Regulations

My experience with Radio Regulations

- My project was Software Correlation for Radio Astronomy at The Mauritius Radio Telescope, MRT.
- I work at the Meteorological Services and I work with both VHF and HF Radio systems as well as the Doppler Weather Radar.
- I use a DVB-T reciever unit.
- Co-founder of the Mauritius Maker Community

What is IoT?

What is IoT

Internet of Things

Always internet connected computing device

eg :: mobile phone

I'll continue to use this as a reference for IoT and radio frequencies.

Communication for IoT

Communication for IoT can either be wired or wireless or both at the same time. In this session, it will be assuming that wireless communication has been deployed for IoT.

Mobile Phones

As an IoT, mobile phones can always connected to the internet using several distinct wireless technologies.

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Radio Waves

Radio frequency waves

has been the most commonly used way of carrying data wirelessly since more than a century after Hertz proved that electromagnetic waves can be used to carry a signal.

Since then a lot has changed and much of the Radio Spectrum is utilised for several billions and billions of frequencies.

Radio Spectrum

US Radio Spectrum PDF

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Radio Spectrum

US Radio Spectrum PDF

Radio Spectrum

Example

Mobile Digital Phones are always connected to

- GSM - Global System for Mobile Communications
- GPRS - General Packet Radio Service
- 3G
- 4G/LTE
- 5G

Example

DVB-T has replaced analog TV

Example

Electromagnetic Radio Spectrum

Radio Spectrum

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Electromagnetic Radio Spectrum

Radio Frequency Issues

Radio Frequency Electromagnetic waves

entails many issues such as ::

- Interference
- Acceptable safe Radiation levels
- Electromagnetic compatibility
- Security

Solution

- Compliance with Standards
- Certification
- Spectrum Management
- Safety Normalisations

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US Radio Spectrum PDF

ICTA

ICTA.mu

is the regulatory body in charge of

- Allocation
- Management
- Review
- Organisation
- Regulation

of the frequency spectrum in Mauritius by setting up a radio frequency management unit and be the Controller of Certification Authorities.

Nonetheless, the ICTA implements Government policy and provide technical monitoring of the ICT in accordance with recognised international standard practices, protocols.

ICTA Regulations

ICTA Clearance Regulations

Information on regulations and clearance to Import ICT Equipment such as CE marking means the marking affixed on the packaging.

Definition

ICT equipment means an equipment intended for telecommunication or radio communication.

Some examples of Radio Licenses

Types of Licenses

you can apply for in Mauritius

- Radio Apparatus Licence
- Radio Amateur
- INMARSAT Mobile Earth Station
- Network Spectrum
- Temporary Test Licence for Frequency Usage
- Fixed Radio Spectrum

Activities of ICTA includes

- Spectrum assignment and licensing
- Station and Apparatus licensing
- International Spectrum coordination

ICTA and International Bodies

The ICTA ensures operation within the limits of radio frequency

radiation as recommended by the International Commission on Non-ionizing Radiation Protection, ICNIRP.

Other International Bodies include

- relevant ITU-R Study Groups
- ITU Radio Assemblies
- Regional Radiocommunication Conferences
- World Radio Conferences

Questions

QUESTIONS!

Questions

Thanks for your Time

Twitter @zcoldplayer

or

Email z dot coldplayer at xmail dot net