

# Radio Regulations for IOT in Mauritius

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Phase II

University of Mauritius

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# 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 receiver 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

## 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

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Electromagnetic Radio Spectrum

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# 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