

# Some Funny Yet Relevant Title



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## Introduction

Introduction here

## Adaptive Frequency Hopping

### What Is Frequency Hopping?

Adaptive Frequency Hopping (AFH) is a tehcnique where rather than using one single radiofrequency to transfer data, the frequency is constantly changing between a number of channels. This allows for both faster transfer speeds, and makes it harder for intruders to interfere with the signal.

### Why Is It Adaptive?

The transmitting device is constantly monitoring the different channels to make an estimate of how good quality they are. For example, if one frequency is currently busy or being jammed, then it will simply use another channel.

## Another General Box

Box for another common feature (add more boxes as needed)

## Conclusion

Conclusion here

## References

idk if we need this

- [1] J. M. Smith and A. B. Jones. *Book Title*. Publisher, 7th edition, 2012.
- [2] A. B. Jones and J. M. Smith. Article Title. *Journal title*, 13(52):123–456, March 2013.

## Acknowledgements

Rito

## Wi-Fi

Wi-Fi box here

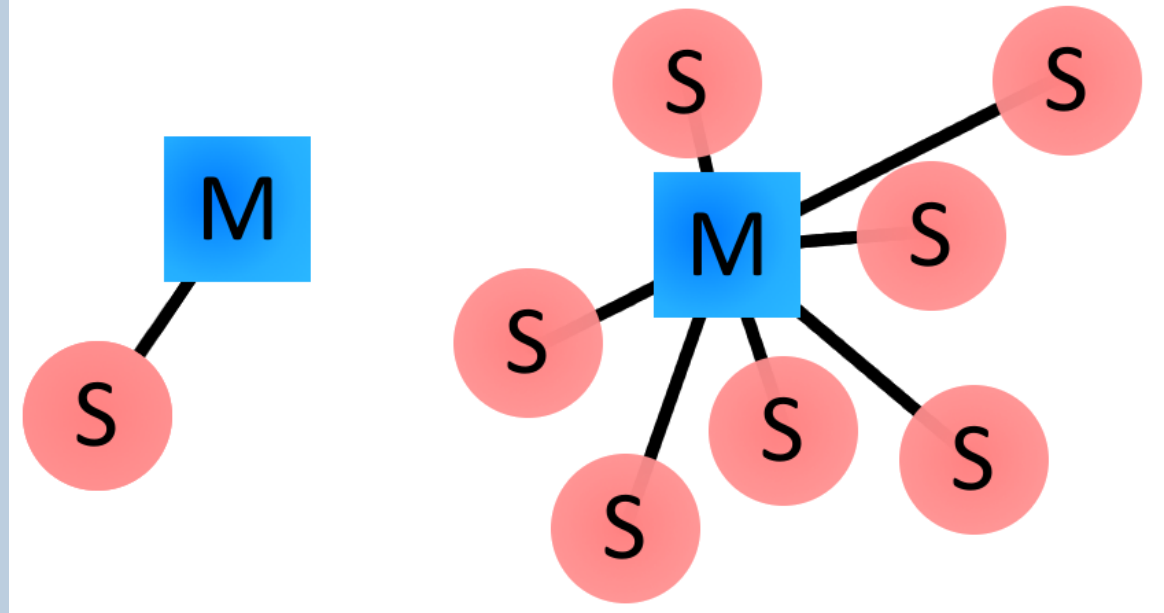
## Optical Fibres

Optical fibre box here

## Bluetooth

**History** Bluetooth was developed by the Swedish telephone company Ericsson AB in 1990, and it first hit the commercial markets in 1999

**Master/Slave Topology** Bluetooth follows a master/slave topology where there is a master device broadcasting data to a maximum of seven slave devices. This network of 8 devices is known as a piconet. The master will always default to being the device which initialised the connection, however master and slave roles can be exchanged given that both devices agree upon this.



**AFH** Bluetooth uses a technique known as AFH, which is explained on the left side of this poster.

## Li-Fi

Li-Fi box here

## Neutrino

**History** Neutrino messaging is a hypothetical form of communication currently undergoing research. It was first experimentally verified to work in 2012 by researchers from the University of Rochester and North Carolina State University.

**Advantages** Unlike traditional forms of communication which rely on electromagnetic radiation, neutrinos are affected only by the weak force and gravity, meaning they can pass messages through virtually anything. This can be utilised to transmit information across vast expanses in space, or for a more present-day application, to send messages to nuclear submarines, as seawater can obstruct electromagnetic radiation.

**Disadvantages** The uninteractive nature of neutrinos causes them to be difficult to detect. Neutrinos also oscillate between 3 flavours - electron, muon, and tau - this can be represented by a neutrino switching between waves of different frequencies as it travels through space. This can be a problem for certain detection methods.

## NFC

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