AIMS

Understanding Your Spectrum Through Measurement

A New Concept in Spectrum Monitoring

AIMS enables planners, regulators and stakeholders to increase revenue through improved spectrum management. By measuring and understanding the signal, interference and noise environment across the communications spectrum, the capacity or value of spectrum can be determined efficiently and cost-effectively. This is achieved without any disruption to incumbent services. Identifying and maximising the value of spectrum is becoming increasingly important in a liberalised spectrum trading regime.

What does AIMS do for you?

- Increases revenue through improved spectrum management / valuation
- Measures spectrum quality and usage
- Reveals trends / patterns
- Assists with interference resolution
- Analyses channel capacity

Typical Applications

- Spectrum valuation
- Channel capacity analysis
- Understanding interference environment
- Understanding impacts of liberalisation
- Analysing user behaviour
- Interference resolution
- ITU Man Made Noise measurement
- Support to modelling and prediction tools
- Automated measurement and surveillance
- Long term / short term trend analysis
- Frequency planning
- Site Surveys

Features

- Specially developed algorithms separate signal, interference and noise
- Low-cost and portable system
- Performs scripted measurements autonomously
- Many days data capacity
- Operation up to 10GHz (extendable)
- Works for all major service and modulation types
- Extensive analysis software
- Automatic report generator
- Automatic modulation recognition
- Self calibration
- Unattended operation

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trusted to support secure operations

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- **Electronic Warfare**
- **Technology & Innovation**
- **Information Technology**

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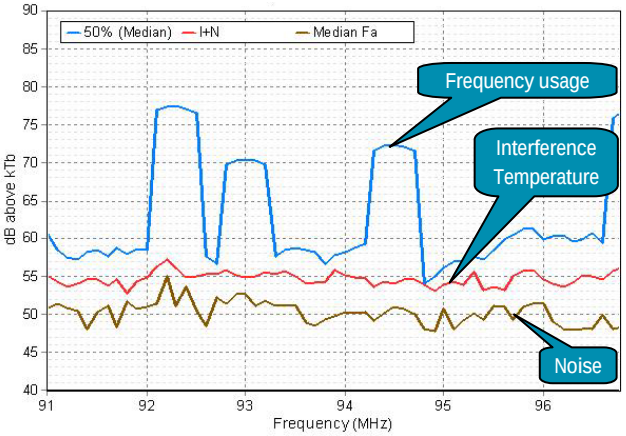
AIMS Measurement Modes

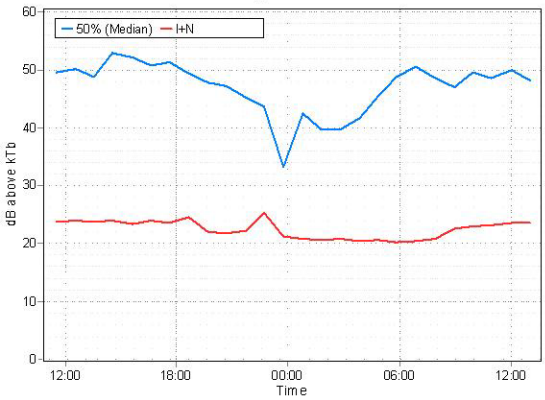
AIMS' signal detection and analysis algorithms are both innovative and flexible. Generic measurement techniques allow AIMS to handle both current and future modulation

Interference Measurement

Novel algorithms measure the Interference Temperature in a communications channel.

This facility effectively allows the analyst to remove the main carrier from a channel and assess the quality of the underlying spectrum, thus providing a powerful tool to evaluate spectrum quality.





Maximising Spectrum Value

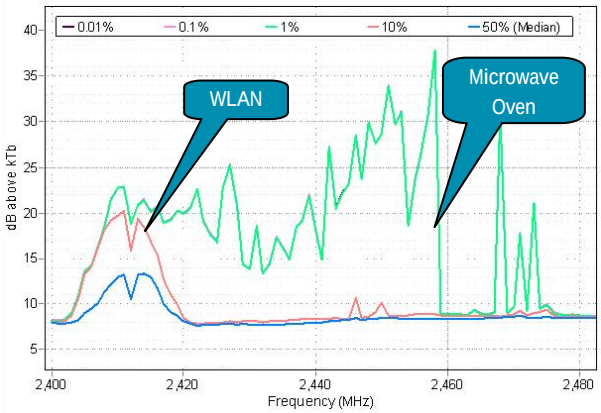
Extensive analysis software identifies channel usage and capacity, helping to maximise the value of spectrum.

Measuring and identifying interference in occupied bands helps to analyse the quality and value of bands before they are released for auction.

Band Utilisation Measurement

AIMS analyses band utilisation by measuring the time-varying received power in each measurement channel.

These features were used recently to assess utilisation of the licence-exempt bands for Ofcom.



Man-made Noise (MMN) Measurement

AIMS measures both the White Gaussian noise (WGN) floor and the Impulsive Noise (IN) characteristics of MMN. The WGN algorithm has been submitted to the ITU-R to be incorporated as a standard method for calculating this parameter. AIMS is therefore becoming the *de facto* system for MMN measurement.

Further details of AIMS' capabilities can be found on the following datasheets:

- AIMS Hardware
- AIMS Software Suite
- AIMS Man Made Noise Measurement