

Radio Frequency Monitoring

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RMS – Radio Monitoring and Surveillance Solutions

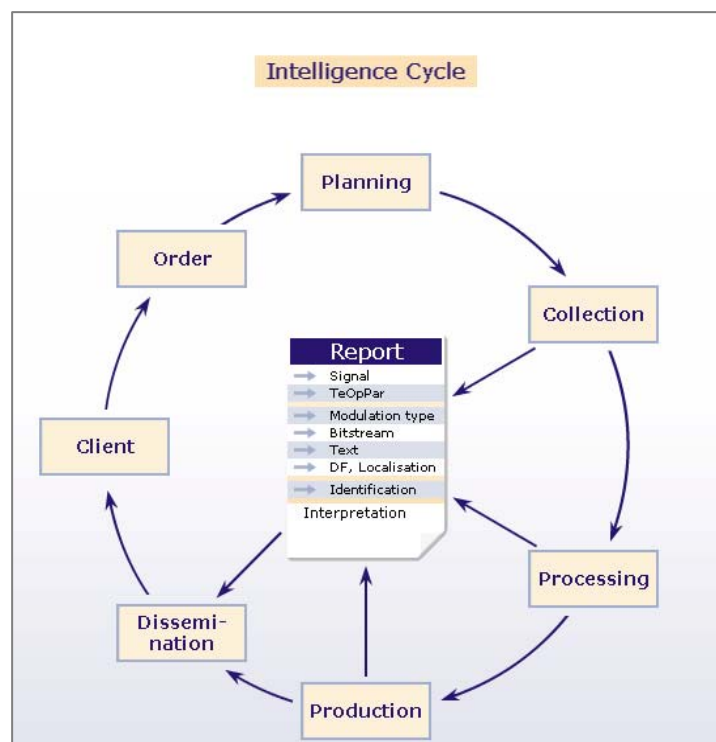
Specialized in the application of the digital signal processing and pattern recognition to communication intelligence, we have the capability to design, produce and deliver complete RMS solutions. We offer comprehensive products for signal analysis, automatic detection & classification, demodulation & decoding, as well as for wideband signal acquisition & processing. We can supply the whole range, from a single stand-alone product to a complete RMS solution, from a single source.

And as an associate partner, we will also support and advise you in large high-tech projects,

COMINT System Design

In close cooperation with our clients and partners, we have developed innovative ideas and concepts for tailor-made, integrated complete solutions.

You can trust our expertise to provide precisely the technology you require for all phases of the intelligence cycle: from planning and direction, through collection and processing, to analysis, production and dissemination. We have developed system solutions for optimum collection of the information and data you have gathered, for discussing it in a team, and for its evaluation and distribution thus living you the best possible support throughout the entire *intelligence cycle*.



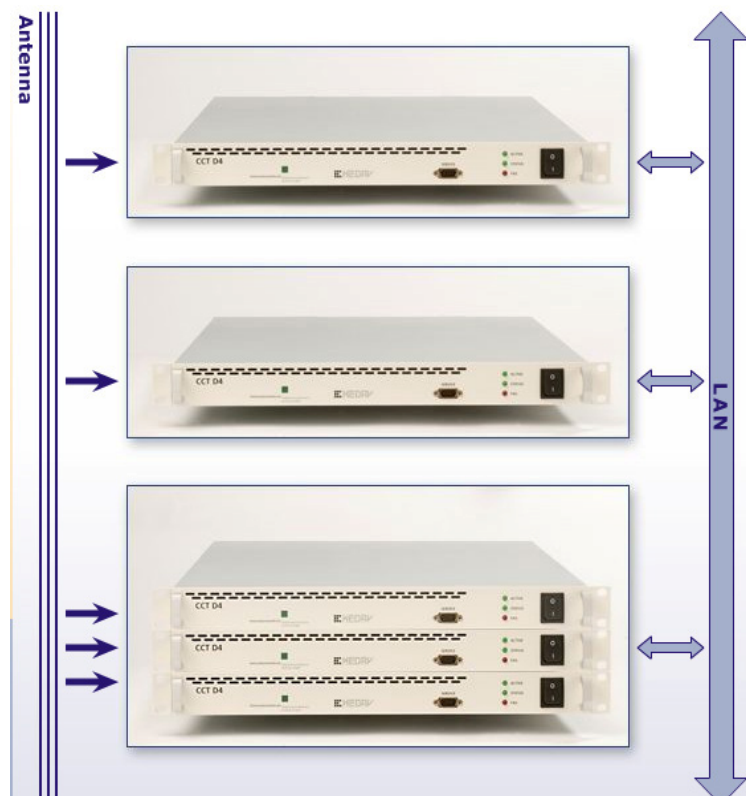
Antennas

By forging partnerships and joint ventures with other highly-specialized companies we can offer you a wide range of antennas for almost any task or application.



Tuners

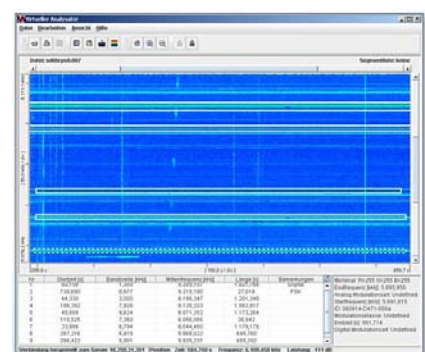
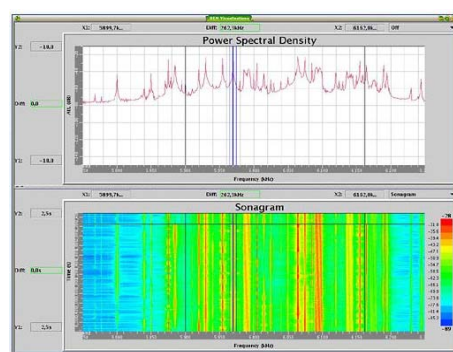
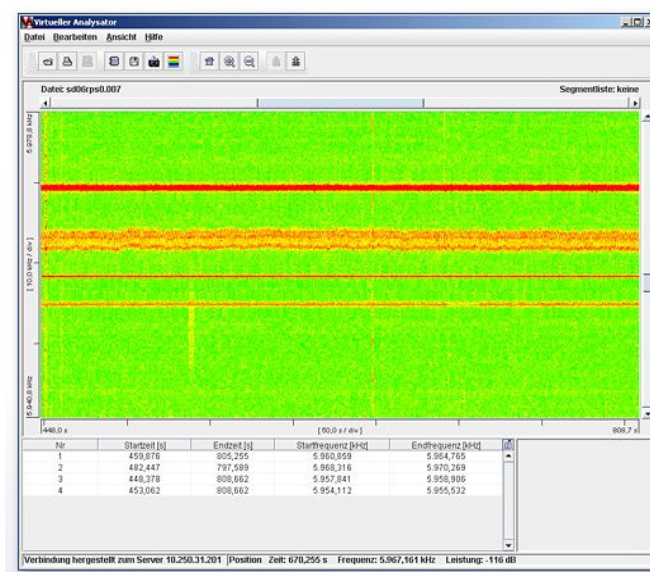
Innovation means: CCT - Because the ComCat CCT tuner can be seamlessly integrated into modern IT structures and concepts. Our tuners directly communicate with PCs and acquisition servers in the system. While just as powerful as conventional, highly-specialized receivers, they are much more flexible in the uses they can be put to. From synchronized multiple-channel reception, through various broadband analysis and evaluation options, to customized design, everything is possible. In IT networks, too, our tuners communicate smoothly with other servers and clients.



Broadband Technology

We are establishing new standards in broadband technology. This is the ideal method for reliably detecting all types of signals, including bursts or frequency hoppers. And significantly reduces the signal search, detection, and processing effort while improving performance. Excellent results are the outcome.

What about the costs? With broadband tuner technology you can now save on expensive signal processing hardware. Because this sophisticated processing software runs on standard PCs which means more flexibility and a system that is always up to date.



Broadband Search and Direction Finding Systems

Our CCT broadband tuners were also developed for use in direction finding or DF systems.

They include functions for:

- Synchronization and
- Calibration

The following DF algorithms are available:

- Watson Watt (HF)
- Amplitude correlation (VHF/UHF)
- Interferometer

We supply direction finding antennas for an abundance of different applications. Together with our partners we can supply a wide range in this area, too.



Signal Analysis

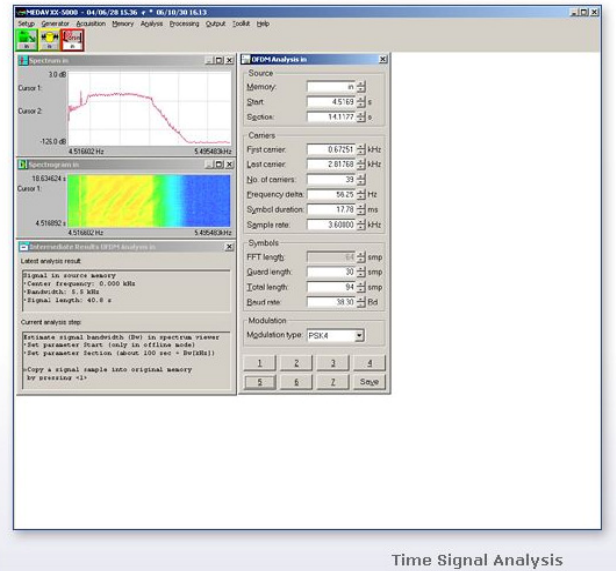
Elaman supplies innovative products and solutions for interactive signal analysis and signal processing:

For example:

- Time-signal analysis
- Spectrum analysis
- DF analysis

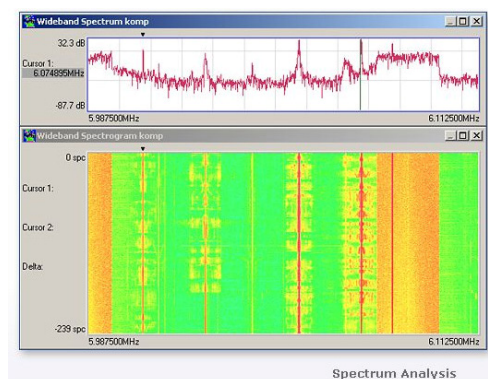
Or:

- Demodulation
- Decoding
- Classification

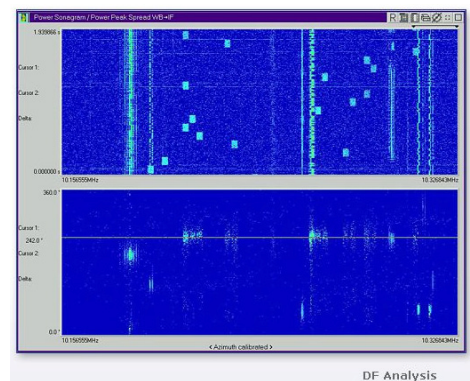


Time Signal Analysis

Using these sophisticated analysis algorithms and advanced COMINT signal processing, experts can also derive meaningful results for difficult signal scenarios providing a basis for swift and reliable decision-making.



Spectrum Analysis

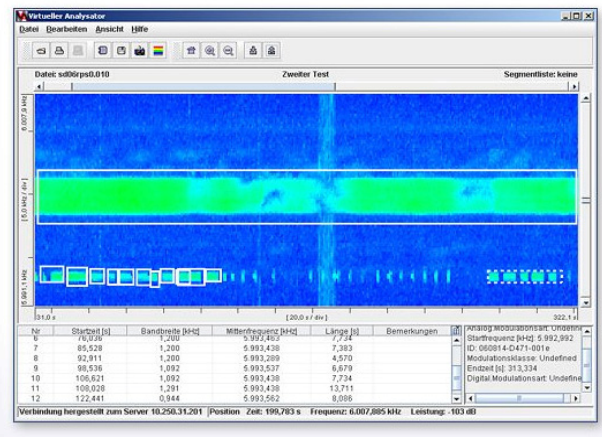
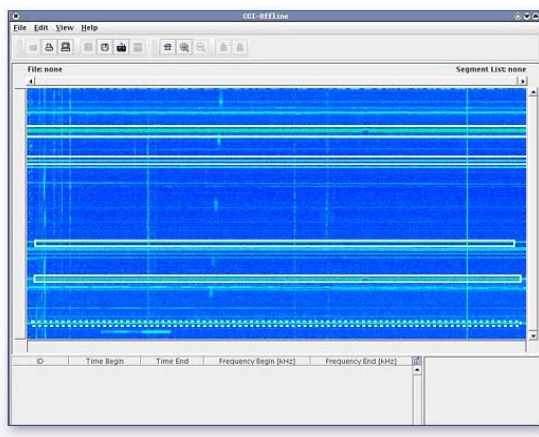
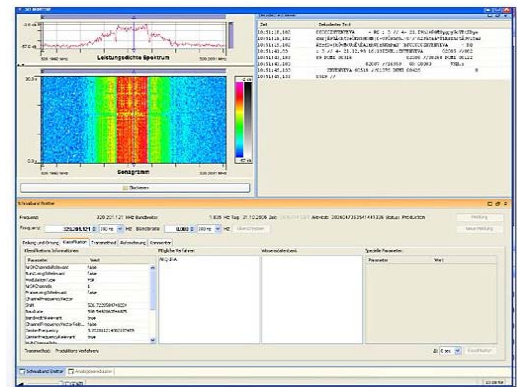
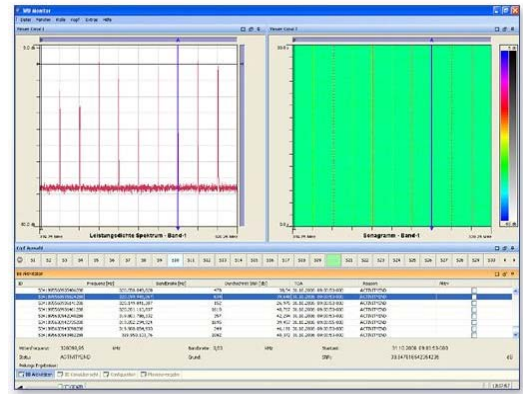


DF Analysis

Signal Detection and Classification

Our software allows signal detection and classification to be performed largely automatically. First, the program generates a symbolic representation of the broadband signal. Individual emitters are detected by the system and described as segments in the time-frequency domain. The meta data, too, are automatically added to the segments. The result is a list of emitters with all the important technical parameters, such as signals, spectrums, and modulation types, and other meta data.

Needless to say these data are decisive to further processing. If adequately conditioned, they provide an invaluable source of information. And secure the necessary knowledge advantage.



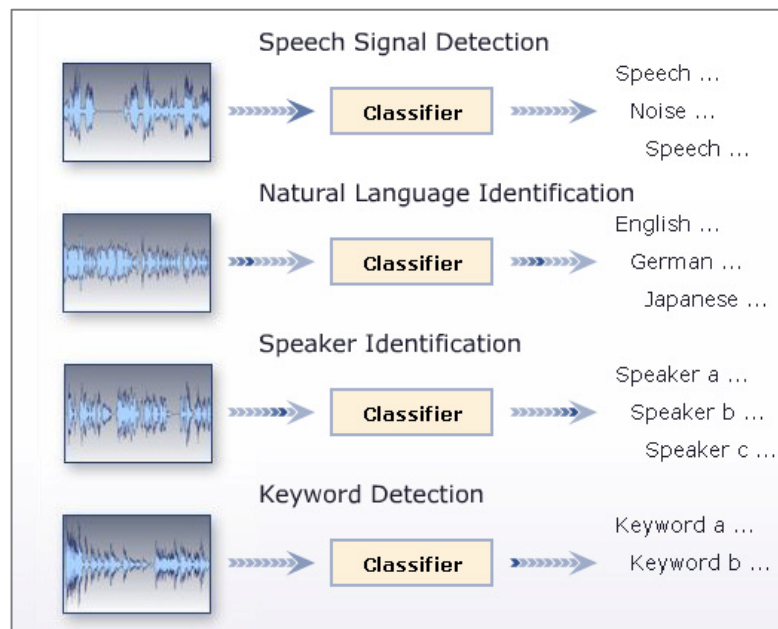
Speech Technology

We also develop programs and software for natural language technology and speech recognition. The human voice and language are very complex, so we work with the latest speech pattern recognition technology.

We can provide speech recognition software to solve the following tasks:

- Speech signal detection
- Natural language identification
- Keyword detection

We also supply training and configuration systems. So you can configure and train our language recognition software according to your needs simply and ergonomically.



Virtual Devices and PC-Based Architecture

Traditionally, conventional technical equipment for signal processing has comprised individual devices or dedicated hardware modules based on VXI technology, for example. This technology was tried, tested, and reliable, but also bulky, inflexible, and costly – by no means ideal.

So we have consciously sought new directions in the development of our equipment. Today, the virtual devices are software modules which boast the functions of hardware devices but run on commercially available PCs without any specialized hardware.

The advantages to you:

- More flexibility
- Improved integration into server-based IT systems
- Considerable cost savings

By separating the processor and software lifecycles no huge investment is ever needed to keep you equipment state of the art. Putting you in control of your future.



Your Advantages:

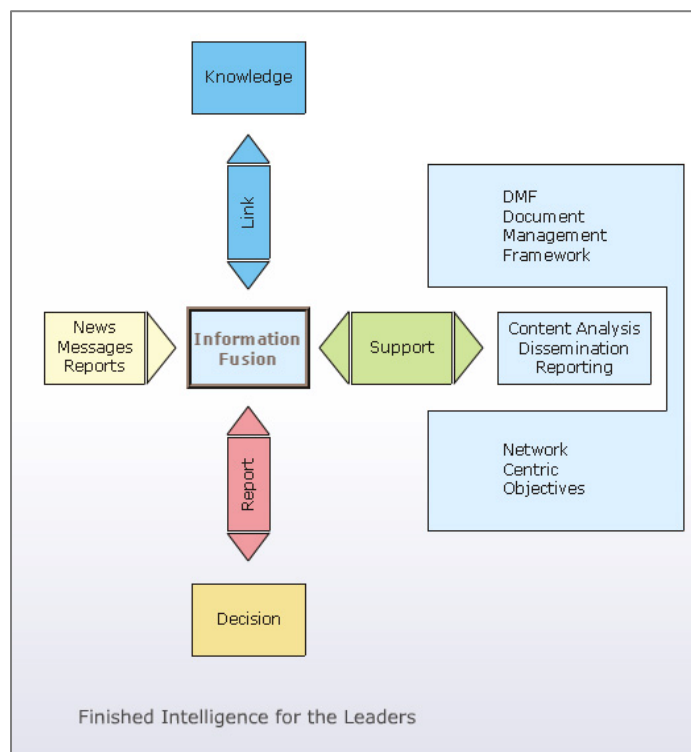
- more flexibility
- improved integration
- considerable cost savings
- separation of processor and software lifecycles

Production of finished Intelligence

Are you looking for an innovative but low-cost comprehensive RMS solution that works? Do you want to optimize the working processes in your operations to allow you to make the right decisions quickly and reliably? With us you have found what you were looking for.

With our system solutions we can help you to collate all the latest messages, reports and information, compare them with your own level of knowledge and evaluate them. The systems will support you with fast processing and reliable archiving of data and will enhance your internal communication. All the resources of your department, your experience, knowledge, and know-how, are exploited to the fullest. And we will provide the interfaces you need to ensure that cooperation with other departments and areas also runs smoothly.

We can even supply complete workstations including equipment, software, and technical support, if that is what you need. This makes use of synergies, optimizes work routines, and prepares and supports decision-making processes perfectly.





If you would like further Information about ELAMAN,
or would like to discuss a specific requirement or project, please contact us at:

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