W-CODE

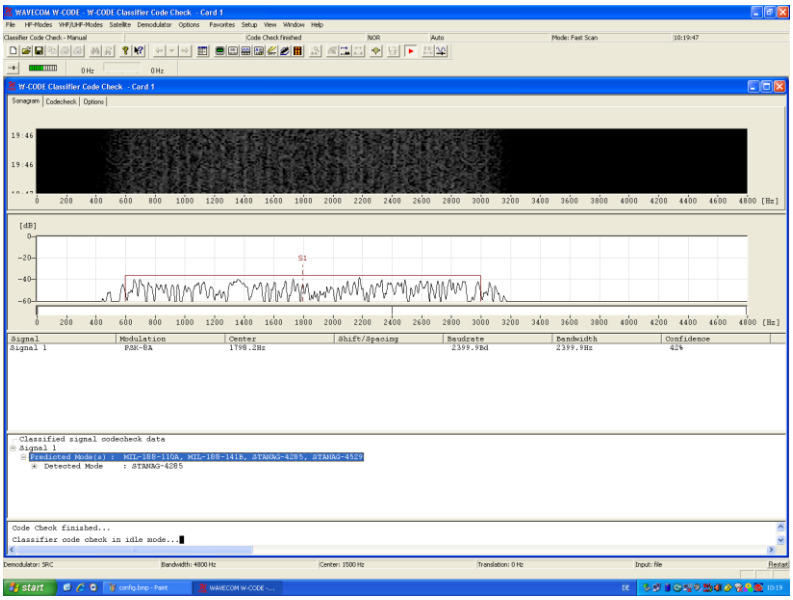
The reference in data decoding

W-CODE

Software Decoder

The COMINT Solution for

- **Government Agencies**
- **Homeland and Government Security Agencies**
- **Defence Contractors**
- **Telecommunications Authorities**
- **Defence Signal Corps**



Overview

The W-CODE is a new, software decoder in the well known WAVECOM® line of decoders.
The W-CODE software is designed to work with your existing equipment - no proprietary hardware required. It allows seamless integration with SDR (Software Defined Radio) receivers with IQ data or digital audio outputs.
One client license provided with each software package (Multiple licenses on request). W-CODE provides all functions required to analyze, decode and process radio data communications throughout the spectrum (HF, VHF, UHF, SHF).

Features

- TCP/IP data input (LAN) for IQ or PCM coded data. Data conversion to the WAVECOM format is done by a separate, external application. Source code available on request
- Decoding from PC soundcard with sampling rates up to 192 kHz
- Internal sampling rate converter
- Direct decoding from audio files
- Virtual Audio Cable (VAC) support
- More than 180 modes are currently implemented, including INMARSAT
- New modes: Robust-Packet-Radio, CLOVER2, CLOVER2000, PACTOR3, CODAN9001
- Powerful 48 and 96 kHz wideband FFT
- Adaptive Equalizer for high-speed PSK protocols
- Optional BitView tool
- Tested with a number of Software Defined Radios (SDR) e.g. WiNRADiO, Perseus, RF-SPACE SDR14/SDRIQ
- Drivers for other SDRs (IZT, R+S, EADS, AOR etc.) on request
- Additional external input device under development (multi-input AF/IF/70 MHz, tunable 0-25 MHz and 52.5-87.5 MHz)
- XML Remote Control Interface with the same command set as the W61PC
- Optional INMARSAT monitoring mode for data, fax and voice with additional external WAVECOM input device
- Optional software classifier plug-in with 4 and 8 kHz bandwidth and FSK, MFSK, PKS, and OFDM support
- Pass band filters to mitigate poor propagation conditions or process wideband receiver input
- In preparation: New function to add customer specific alphabets
- Worldwide support

Functions

The decoder can be used in a number of configurations:

- Local use as a PC application
- Remote use via a LAN with standard W-CODE application instances in client-server mode
- Remote control from other applications using third party software (using TCP/IP and XML)

These features allow the system to be adapted to the client's requirements and applications.

The determination of signal characteristics is assisted by a large number of analysis and measurement functions operating over a wide range of signal parameters.
The implementation of complex systems for monitoring on a large scale is only limited by the number of de-

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coders and the performance of the hardware and software.
The configuration of the system components can be completely adapted to the requirements of the customer.

A W-CODE decoder may be controlled from everywhere in the network and its output may be sent to one or more applications on the network.
In order to process the data output, control the decoder and the code parameters, an integrated remote control interface allows easy control of the W-CODE from a customer application.

The easy-to-use graphical user interface (GUI) with well structured pull-down menus allows an operator to become familiar with the W-CODE in a short time. A high degree of operator proficiency can quickly be achieved.
All of the integrated analysis tools contain many different methods and viewing options. The GUI assists the operator in analyzing the important signal parameters.
Exact measurements are easily made using adjustable cursors with associated numerical displays. Dynamic zoom functions allow magnification of details in any selected window. The scroll buffering feature makes it possible to move back and forward in signal history.
Real-time FFT functions with a fast display refresh rate are implemented. Powerful functions provide the tools for analyzing unknown signals.
A wide range of system default settings can be configured, e.g. input signal level, measuring interval, centre frequency and demodulator type.

Services

For authorized government agencies WAVECOM is able to provide:

- Additional customer specific modes
- Software source code and a complete development environment
- Training

Applications

Typical fields of applications for the WAVECOM decoders include:

- Manual or automated monitoring of radio data communications in the HF/VHF/UHF/SHF (satellite) bands
- Signal intelligence
- Signal analysis and classification

For government agencies, and telecommunications authorities, the applications range from stationary monitoring of one transmission with a single system to fully automated broadband monitoring employing many systems.
Decoded data can be imported from third-party applications running on the same or another computer in the network.

Software generated time stamps may be automatically added to each line of decoded data to ensure precise backtracking of any signal.

System Requirements

- High quality soundcard
- Microsoft WINDOWS Vista/XP
- Pentium 4, 1.6 GHz, 512MB RAM

Specification, Prices

See: www.wavecom.ch

Availability

• W-CODE	July 2008
• W-CODE-LT (Ruggedized Laptop)	July 2008

For more information contact your local dealer or WAVECOM ELEKTRONIK AG.

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