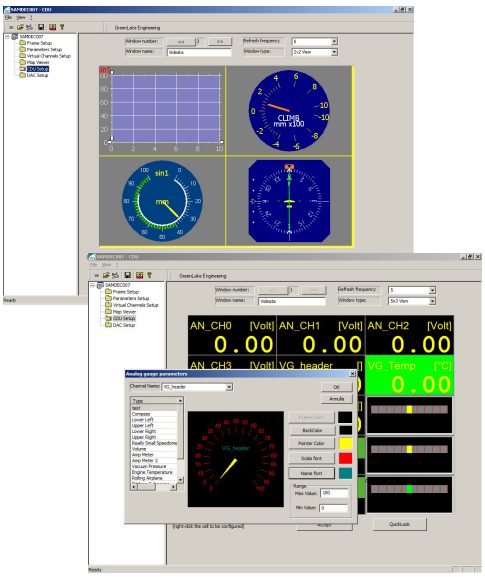
GLE/VASw-TS Graphical Package for Telemetry Stations

- Real time visualization for PCM data streams on customizable graphic panels.
- Various standard display types, including: numeric, bar graph, angular gages and y-t.
- IRIG time or GPS time synchronization and data tagging options.
- Real-Time engineering units conversion.
- Equation editor to create "virtual" channels.
- Real-time data storage to file.
- CVSD voice format decoder option.
- Easy interface for DAC output option.
- Server/Client architecture to build multi-user telemetry systems.
- Different software drivers to support various PCM decoder devices.
- MS-Windows-based with user-friendly GUI.
- Compatible to XidML setup/configuration format



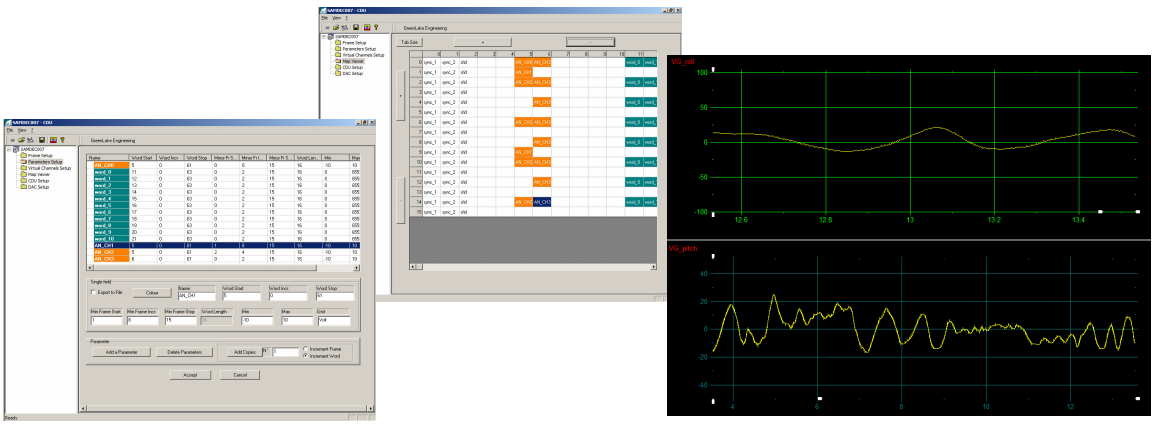
Overview

GLE/VASw-TS is a powerful software package specifically designed for IRIG-106 PCM stream decommutation, measurement data extraction, real time data processing, virtual channels editor, numerical and graphical visualization and data storage.
Thanks to many available visualization options GLE/VASw-TS is the ideal platform for the visualization and monitoring of the acquired PCM data. Among the others, users can select numeric, bar graph, time history and cockpit gages and associate them to the extracted parameters or any other derived complex parameters created from decoded data through the math engine.
The latter comprises many of the most popular math functions, including algebraic, exp & log, trigonometric, statistical, bit handling and logic (L&R Shift, And..), format conversion (i.e. IntToFloat) built-in functions. Users can hence create nested formulas for specific calculation purposes.
The PCM frame set-up page enables the programming of the decommutator, defining the global map parameter, including the data rate, the major and minor frame dimension, the word length, the sync words and SFID properties. Decoded parameters can be also saved to file in real time in order to be recovered for post-processing purposes.

GLE/VASw-TS can decode also voice input according to the CVSD format and outputs decoded data through PC sound card, while up to output channels can be configured for DAC boards, when needed.

GLE/VASw-TS can be easily adapted for many of the most diffused telemetry front-ends and data decommutator devices for real time data display and storage. Moreover it can support data coming from digital buses like RS232/422, ARINC 429, Mil-Std 1553 and others.

The functionality of the single user GLE/VASw-TS software license can be expanded with the addition of one ore more client licenses that allow the creation of an easily scalable Ethernet-networked multi-user telemetry station. The data decoding task is performed by the server workstation that distributes via Ethernet protocol the decoded and time tagged data to the various client workstations.



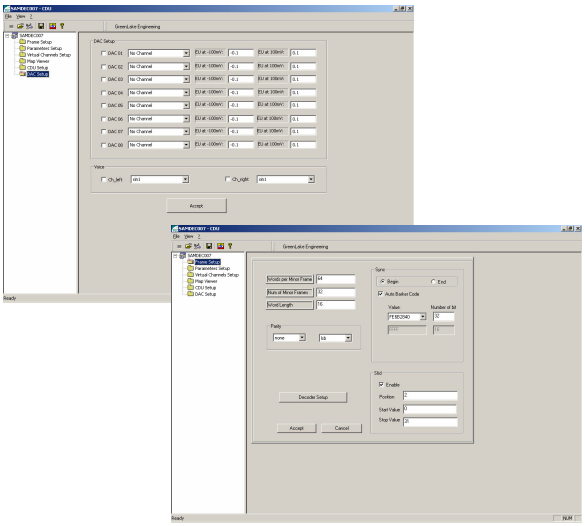
Technical Specifications

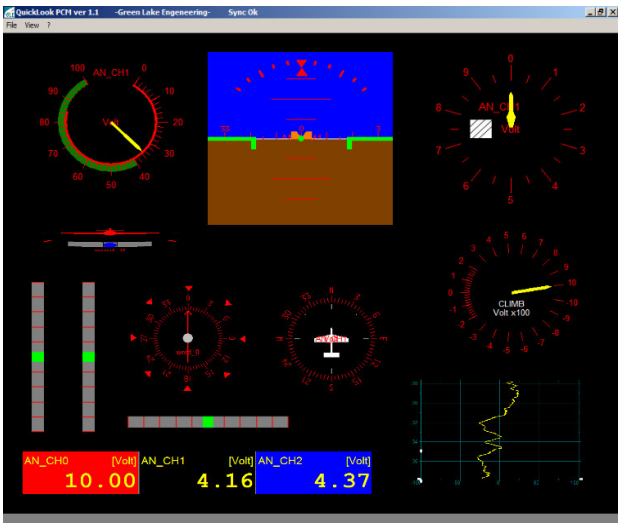
GLE/VASw-TS

GLE/VASw-TS is a Graphical Package for Telemetry Stations and it is composed by well defined sections which easily drive the user in the setup of the parameters and of the visualization options.	
Frame Setup	In this section the main characteristics of the IRIG 106 stream can be defined like the format frame, the word length, the sync words and SFID properties.
Parameter Setup	The word selection and the main characteristics of the physical parameters to be extracted from the map can be set in this worksheet in a very user friendly environment. It is mainly formed by a spreadsheet where each row corresponds to a selected channel with all the related properties describing its position inside the map. The addition of channels which differ only for start word in the minor frame can be quickly done through the "Add Copies" button. Alternatively the names and the parameters position may be read directly from files generated by third party programs.
Map Viewer	This useful tool summarizes the entire map structure and the parameters position as defined in the previous sections. It looks like a common worksheet where the placed parameters have different colors and can easily be identified through the zoom buttons.
Parameter linearization and EU conversion	It is possible to define on one-channel-basis the raw data linear or polynomial conversion in engineering unit and to specify an engineering unit label for each virtual channel. The calibration coefficients may also be read directly from files generated by third party programs.
Virtual Channels Setup	Besides physical channels, virtual channels obtained through calculations, can be added here to the list of the parameters to be displayed. The equation editor allows to create a formula just clicking on the needed physical channels from the list and selecting the desired operators. Nested formulas including both physical and virtual channels are also permitted. The available operations include algebraic, exp & log, trigonometric, statistical, bit handling and logic (L&R Shift, And..), format conversion (i.e. IntToFloat) built-in functions. Further it is possible to specify an engineering unit label for each virtual channel.
Visualization Setup	Many different panels can be freely defined by the user. The standard available displays include numeric, bar graph, strip-charts, standard and cockpit gages a. Each of them can be customized in terms of background and foreground colors, scaling and font sizes. For the numeric format the user can associate to each cell one parameter (physical or virtual), define the eventual average of the last N samples and define upper and lower thresholds to change the cell color background in alarm mode. The refresh rate of each visualization panel can be selected by the user.
Data storage	The software support the real-time storage to file of the whole telemetry date together with the time tagging. It is also possible, both in real-time and post-processing, to save selected parameters in standard file formats for the successive analysis with different software packages.

Some possible Options are:

CVSD voice format decoding - DAC output of physical and virtual channels – Server/Client Architecture - Synchronization of IRIG or GPS time - Different PCM format than IRIG 106 - Software drivers for various digital bus interfaces including RS232, RS422, ARINC 429, ARINC 573/717, Mil Std 1553, CAN-bus, Ethernet and others.





Due to continuous developments the specifications are subject to change without prior notice

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