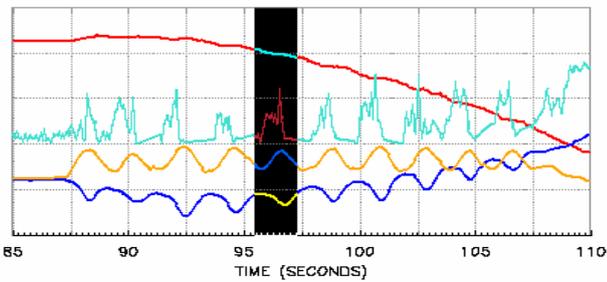




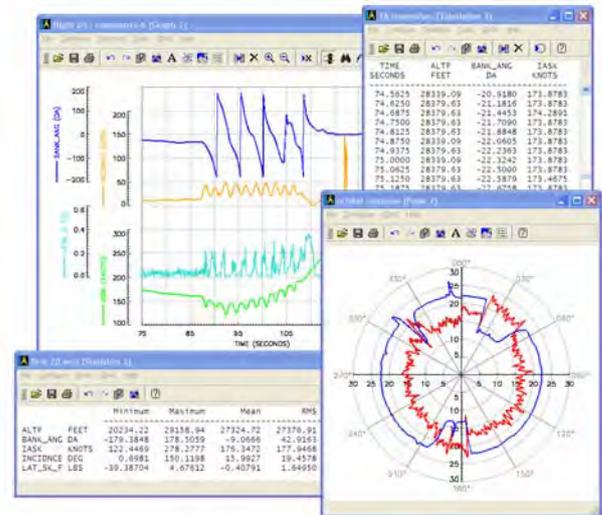
Modern flight test recording systems generate huge amounts of data, often Gigabytes in size. The comprehensive data loading and manipulation facilities in GDAS enable this to be reduced to a more manageable level. Interactive data editing facilities enable the identification and extraction of the required samples as well as the manipulation and reduction of the data, facilitating rapid, easy interpretation of the data.



Many flight test recording systems now access the aircraft data buses to record on-board systems in great detail. GDAS is able to handle the asynchronous nature of this data with ease, maintaining time-stamps and synchronisation across data streams, even during complex calculations and data editing.

### Graphical Displays

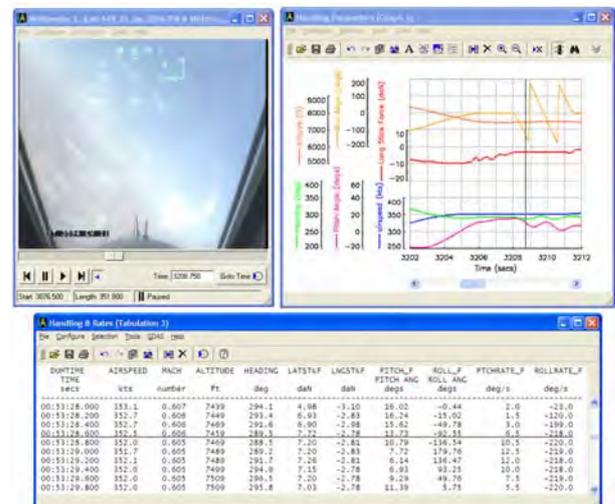
One of the main requirements for any data analysis software is the ability to present results in a form suitable for the target audience; this often takes the form of graphs or tables in a technical report. GDAS has the capability to present data in the form of two-dimensional time-history and cross-plot graphs, polar plots, tabulated listings, and statistical displays. Multiple display windows can be presented, each showing many parameters,



allowing complex analyses and comparisons to be visualised.

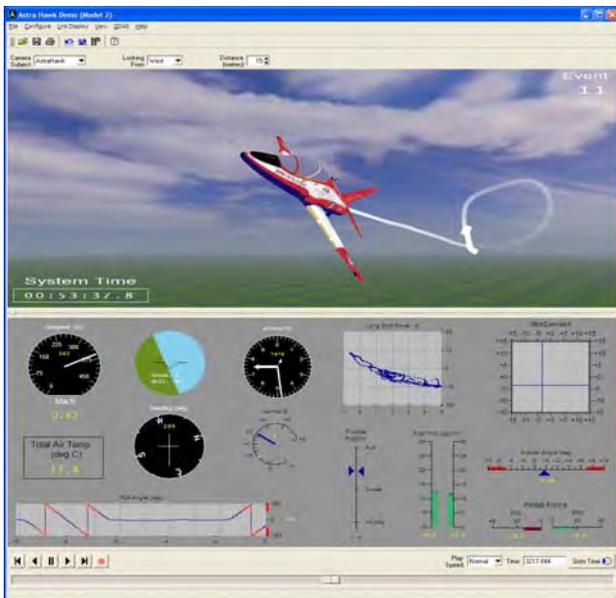
### Multimedia Displays

The modern flight test environment demands the use of high-tech solutions to visualise and understand complex functions in minimal time, often employing video, simulation and other forms of data. GDAS has the capability to synchronise multimedia and recorded flight data to provide a new dimension to integrated flight test analysis.



## Displays

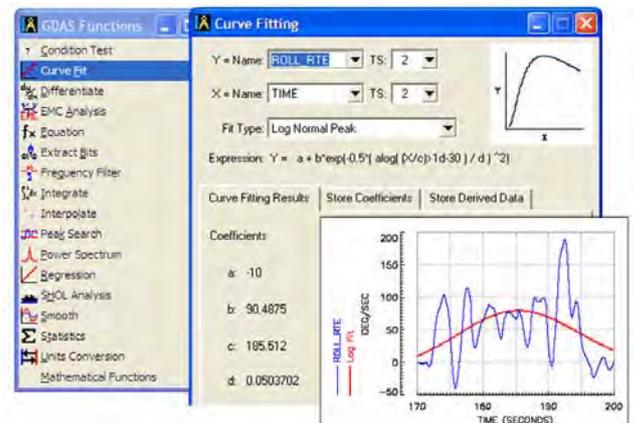
GDAS has the capability to display recorded test data via virtual 3D models in a simulated test scene and this greatly enhances the ability of the test engineer, and other interested parties, to understand complex test manoeuvres and aircraft responses to stimuli. A set of 2D dials, gauges and readout models can also further visualise recorded data. Alarms and other event tools may be easily specified to highlight data limit excursions and enable extremes to be rapidly identified. Full display interaction is provided enabling on-the-spot updates as the situation demands. Multiple models in the same 3D scene, or multiple displays viewed from different perspectives, may be synchronised with the instruments.



Additionally, the model displays may be grouped with multimedia and graphical displays to provide a synchronised holistic view of the test environment. This is also available with real-time, telemetered data streams in the QinetiQ Telemetry facility.

## Analysis Functions

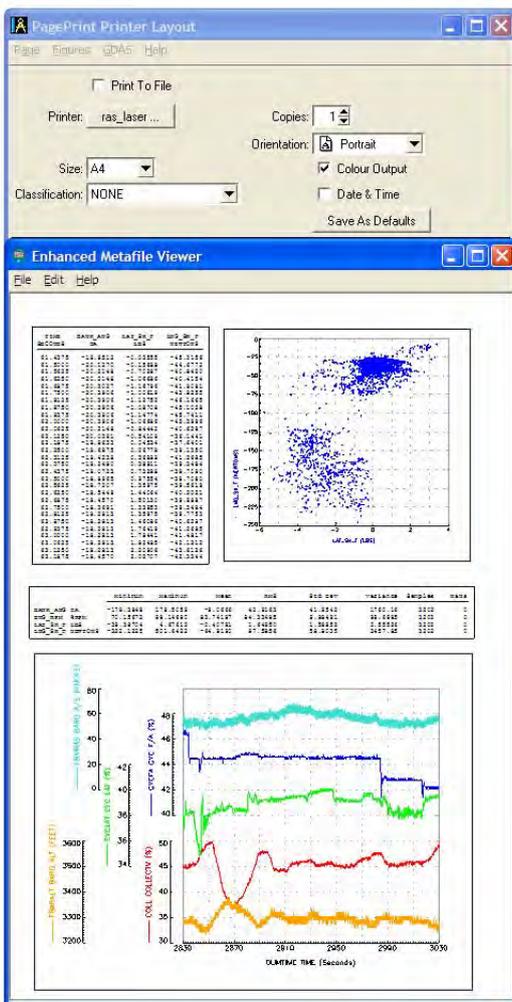
Recorded flight test engineering data often requires further algorithmic manipulation to present it to a standard or allow comparison from different test conditions. GDAS has a powerful set of analysis functions enabling derived parameters to be calculated. Simple arithmetic functions may be derived via an easy to use interface as well as more complex algebraic functions and derivatives such as curve fitting, smoothing, frequency analysis and data searching and condition tests.



Derived parameters may be 'nested' from other derived parameters enabling complex derivations to be performed. The function definition is stored along with the derived data. Similarly, the layout of all displays and model simulations may be saved to configuration files to enable their exact reproduction with multiple data sets. Allied with the stored derived parameters, this creates a powerful tool for the rapid, repeatable analysis of a series of complex tests, typical of today's intensive flight test programmes.

## Printing and Export

All graphical displays are produced as WYSIWYG output enabling finalisation of results presentation to take place as analysis develops. Report quality output to printers, plotters and various image file types is easily achieved. Direct export of displays to word-processors via the system clipboard makes the production of technical reports from displayed results a routine occurrence.



## Programming and Scripting

GDAS provides a highly usable GUI to enable engineers to easily scope, manipulate, analyse and present their data. Access to a high-level language and fully documented libraries of interface and analysis software enables bespoke procedures to be readily composed. These may be integrated with the customisable menus and toolbar to allow a tailored, 'push-button' interface to be constructed.

## Help and Documentation

GDAS is provided with a complete documentation package comprising a Reference Manual of public interface and user libraries, an illustrated User Guide, and a comprehensive Tutorial with graded lessons for novices. This information is also available on line.

### GDAS Software Support

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