

## Answers to WinSoft questions 5, 6 and 7:

**Question 5:** The answer to question (7) does not provide enough information. Please describe in detail the data streaming interface. What is the communication method? What is the data format? Can you provide documentation for the WinPlot and PCGoal applications?

**Answer:** WinPlot is a data plotting application that runs on the Windows workstation platform. The software is specifically tailored to meet the needs of the NASA engine and component testing environment where vast amounts of data is recorded and analyzed. WinPlot supports the viewing of test data from pre-test through test and archive, in both historical and real-time modes. The software package runs on a standard Windows desktop system. Under most circumstances the recommended system requirements for the OS is sufficient for WinPlot. The source code is written in Microsoft Visual C++ 6.0 and is compatible with the Windows 98/NT/2000 platforms. Code modules and dynamic libraries are included in the software, which allow user versatility in importing, defining, viewing, and printing data.

Some of the primary functionalities of WinPlot include the following:

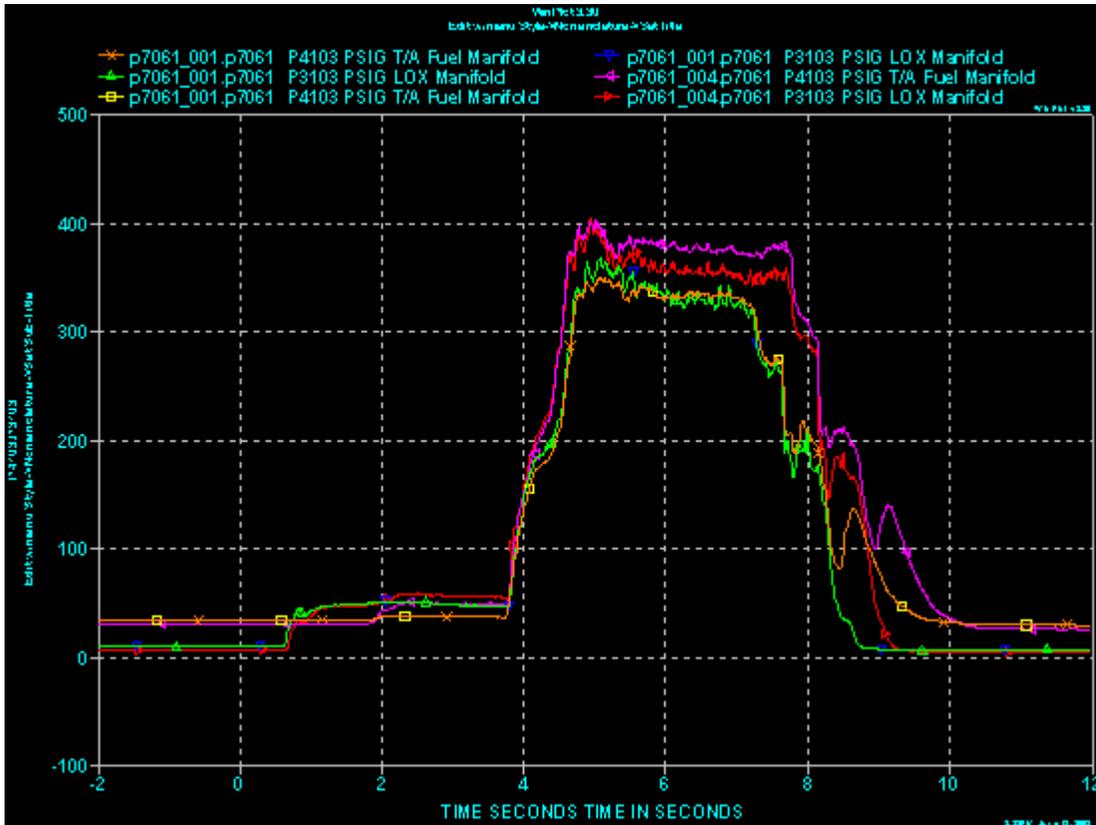
- Scripting - All interactive functionality is supported in WinPlot script language. The comprehensive functional support of scripting allows a user to do everything from basic setup to complete data analysis packages.
- Expressions – Capability to perform a wide range of mathematical expressions, including standard math functions. Allows users to make complex calculations by combining parameter data from various sources/files, constants and math functions all within the same expression with data automatically calculated for each point within a specified time period.
- Real-time – Capability to display real-time data without limiting any of the functionality of the program. All interactive and scripting capability is available for real-time data analysis. Real-time data can be intermixed with posttest data/flight data for comparative analysis without performing any special setups.
- Zoom and Pan – Data views can be easily manipulated via mouse or keyboard to achieve a desired view. Scaling may be zoomed in/out or panned up/down/left/right to reach any desired level of detail. Axes may also be set specifically to a desired precision.

PCGoal provides tabular data across multiple displays. It can be replaced by a vendors display utility.

The above information is considered adequate for bidding purposes. After award, the successful offeror can obtain any documentation desired on these systems from the NASA Technology Transfer Office.

**Question 6:** The answer to question (9) does not clarify the plot display functional requirements. Please provide an example screenshot from WinPlot and describe the desired functionality of plot displays.

**Answer:**



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- Expressions – Capability to perform a wide range of mathematical expressions, including standard math functions. Allows users to make complex calculations by combining parameter data from various sources/files, constants and math functions all within the same expression with data automatically calculated for each point within a specified time period.
- Real-time – Capability to display real-time data without limiting any of the functionality of the program. All interactive and scripting capability is available for

real-time data analysis. Real-time data can be intermixed with posttest data/flight data for comparative analysis without performing any special setups.

- Zoom and Pan – Data views can be easily manipulated via mouse or keyboard to achieve a desired view. Scaling may be zoomed in/out or panned up/down/left/right to reach any desired level of detail. Axes may also be set specifically to a desired precision.

**Question 7:** In section 4.5.7.4, please provide documentation for the SunAcc library.

**Answer:** SunAcc is a library that allows applications to read and write the standardized Sun format data files. This code runs on the Windows platform as well as various versions and implementations of the UNIX O/S. This code contains a complete function set allowing for creation and manipulation of data files both real-time and static. Common uses include production of archive data files from Stennis Space Center, Marshall Space Flight Center and Kennedy Space Center. WinPlot, PCGoal and various other applications utilize this library for data access.

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