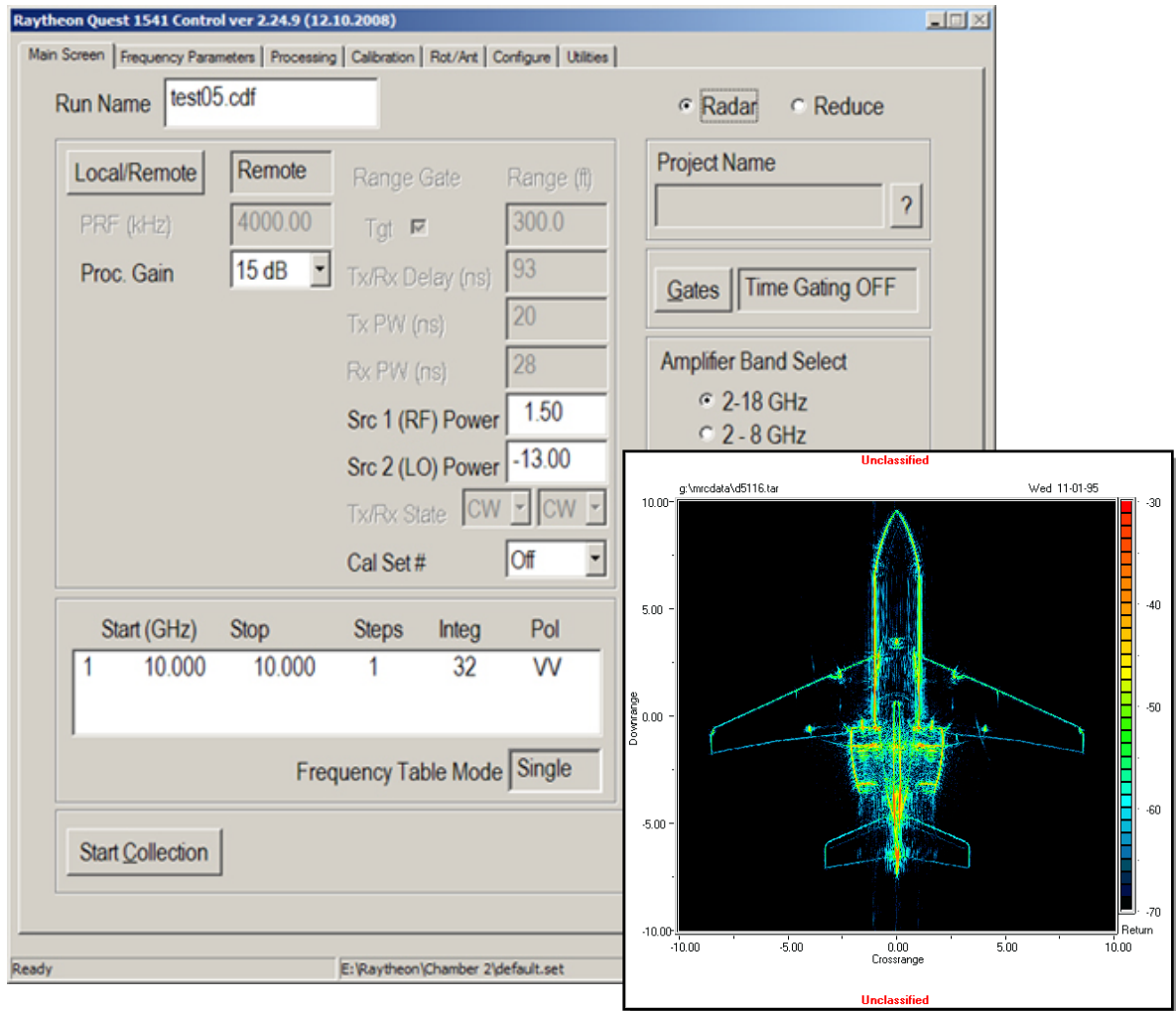


CompuQuest, inc



The Quest family of data acquisition and analysis systems from CompuQuest, inc are true 32/64-bit MS-Windows applications utilizing a multi-threaded architecture optimized for speed and functionality. They offer the latest in power and versatility to the RCS and antenna measurement communities. While the individual systems offer slightly different styles of operator interface, they each adhere to standard Windows interface protocols. As a result, the graphical user interface (GUI) of each provides the operator with a familiar, intuitive environment for setting up and monitoring the data acquisition or data analysis process. A flexible plotting module provides the operator with a wide range of display options, including polar, rectangular, color pixel and contour formats. Operator-defined presets can be saved to disk and later recalled for quick, "one button" operation. Additionally, the operator can design complex batch processes using these presets for unattended, multi-run data collection or data processing sequences.

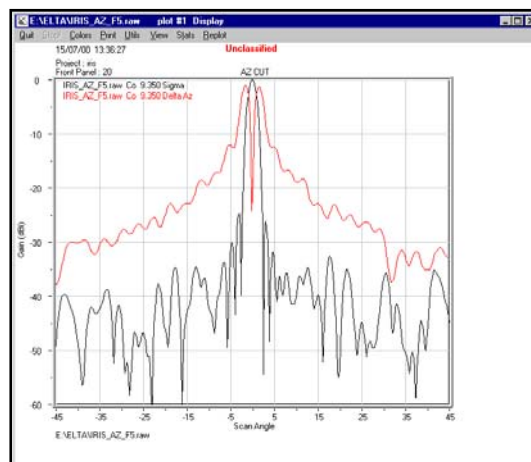
Quest 1541

The Quest 1541 Data Acquisition System is designed to interface to several currently installed radar systems including the Scientific Atlanta 1790/2090, the SPC MkIII/MkIV/Mk5 and the MMS-300, fully supporting all of the existing functionality. The software also provides for the setup and control of multi-axis positioner systems, with the modular design allowing for easy interfacing to a wide range of positioner hardware. Drivers currently exist for most of the standard products including Scientific Atlanta/MI Technologies, Orbit and Flam and Russell. All of the main parameters affecting the radar and positioner control, as well as the realtime/post-collection data processing functions, are displayed and controlled on a single set of “tabbed” user screens. By integrating all of the control, collection and processing functions into a single computer, Quest 1541 allows the operator to efficiently control the radar to collect, store and display target RCS or antenna data.

A wide range of real-time processing can be performed during data collection with up to eight plots generated and displayed simultaneously on a color monitor. In its dual monitor configuration, Quest 1541 can display these plots on a separate monitor from the user screen. The data are fully calibrated for amplitude and phase, and the operator can elect to perform background subtraction to improve data quality. Real-time outputs include RCS or phase as a function of position or time. Other 2D plots include RCS as a function of frequency or downrange. 3D global range and frequency plots are available as a function of position in either color pixel or contour formats. Both rectilinear and polar grid styles are supported for the 2D and 3D outputs. A “replot” capability is provided to allow the data to be redisplayed on modified axes without repeating the entire collection or reduction process. Diagnostic outputs include range strobes, transfer functions and I/Q circularity plots, providing the operator a real-time view of system stability.

The Quest 1541 system supports high-speed collection of data to a variety of output devices. The devices can be mounted locally via a standard SCSI interface or remotely via a network connection through a separate CPU. This network architecture allows users from multiple stations to process the data in near real-time even before a collection run has completed.

The Quest 1541 system provides a wide range of system diagnostic and utility functions. These modes are accessed through a separate “tabbed” dialog screen. This serves to remove these non-standard collection modes from normal test operations. The Utilities Screen provides the operator with the ability to modify or set the system parameters necessary for a particular diagnostic function. Appropriate “widgets” are displayed on the user screen depending on the diagnostic function selected. Any radar parameter modified during diagnostics is returned to its original value on exit from this mode. This allows the operator to go from normal collection to diagnostic testing and back again with no lost time for radar setup. The modular design of the diagnostics and utilities function provides for easy growth and customization. New or customer-specific modes can be added simply with the addition of new subroutines.



MASA Langley Quest 1541 Program ver 1.97-1 (10.28.2008)

Main Screen | Frequency Parameters | Calibration | Processing | Rot/Ant | Configure

Run Name: test29.cdf

Measurement | Analysis

Local/Remote: Remote | RF On/Off: RF On

PRF (kHz): 300.00 | Source Power 1: 10.00

Averages: 4 | 128 | Source Power 2: 10.00

VBW (MHz): 55 | Calibration Set: Off

IF Atten (H Pol): 0 | Polarization: HH Pol | HV Pol | VV Pol | VH Pol

IF Attn (V Pol): 0

RF Attenuation: 3 | Data Channels: Channel 1 | Channel 2

RF Attn (V Pol): 0

RFP Atten: 0.0

Current Project: Testing

Gate: Time Gating OFF

Power Meter

Pulse Generators

Setup: default set

Batch Mode: Define

Store Raw Data: | Enable Run Log:

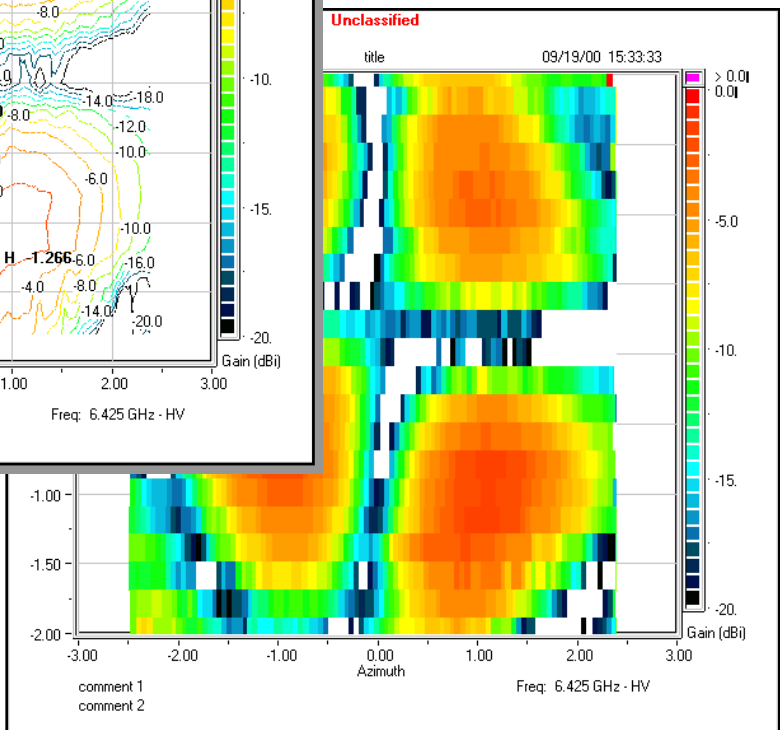
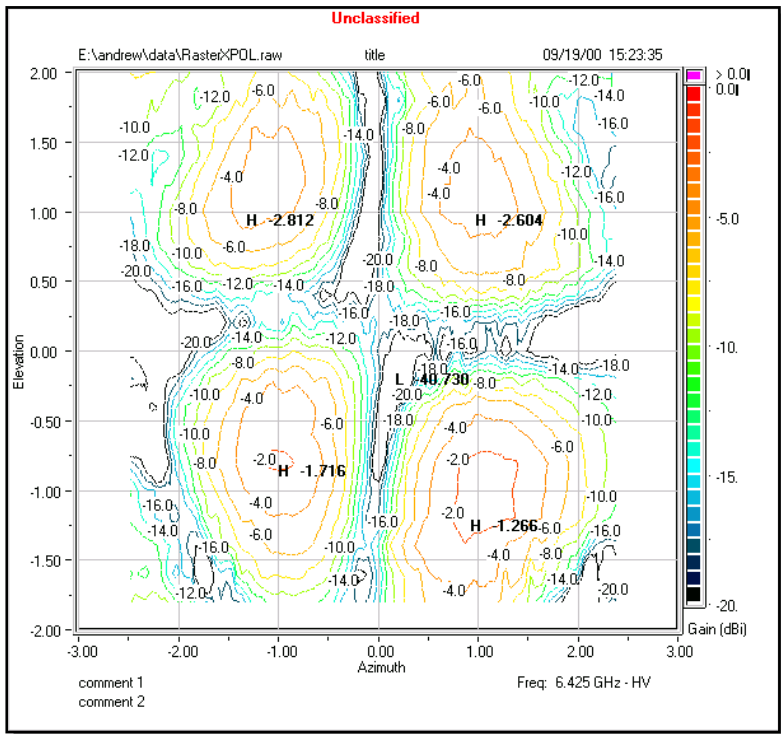
Start	Stop	Steps	Integ	Pol	
1	500	2000	33	128	HH

Frequency Table Mode: List

Operator Name: Stew P

Start Collection | Movie Viewer | Exit Program

Ready | Simulation Mode | 11:06:10 AM



COMPLETE SYSTEM

- Off-line Processing
- Calibrated RCS
- Fine Downrange Profiles
- Background Subtraction
- Time-domain Gating
- Configurable Interface
- Doppler Spectra
- Numerous Printing Options

POWERFUL OPTIONS

- ISAR Imaging
- SAR Imaging
- 3D Imaging
- Nearfield Correction
- Edit and Reconstruction
- Image Math
- Antenna Measurement
- Full Scattering Matrix
- Statistical Analysis
- Movie Generation / Animation

FLEXIBLE INTERFACES

- Agilent PNA
- MKIV / MKV
- HP 8510 / HP 8530 / HP 8720
- National Instruments IEEE-488/DIO
- Multi-axis Positioner Control
- Switch Box Control

MULTIPLE DISPLAY FORMATS

- RCS and Antenna Processing
- Global Range and Swept Frequency
- Line, Pixel, Contour, "Waterfall"
- Rectilinear and Polar Plots

USER FRIENDLY

- Standard Windows GUI Protocols
- Single, Intuitive User Screen
- Screen Edit of all Parameters
- Pre-defined Setups
- Multi-level Error Checking

PC PLATFORM

- Inexpensive, Off-the-shelf Hardware
- Easily Upgradable or Expandable
- Multiple Displays Support
- Network Communications
- Supports Standard Peripherals
- Windows Vista/XP/2000

FLEXIBLE FILE FORMATS

- elan
- Lintek 5000
- Radarman
- Common Data Format (CDF)
- SPC MK III / IV / V

ANTENNA STATISTICS

- Beamwidths at 1, 3, 6, 10 dB
- Peak, Sidelobe and Null Locations
- Hemispherical and Radiative Levels
- Efficiency and Directivity
- Full Antenna Gain Listings
- Automated PASS / FAIL Testing

COMPUQUEST BACKED

- Source Code Included
- One Year Warranty
- Full Documentation
- On-Line Help

For additional information or a demo version of any of the CompuQuest products, please contact CompuQuest, inc. at:

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