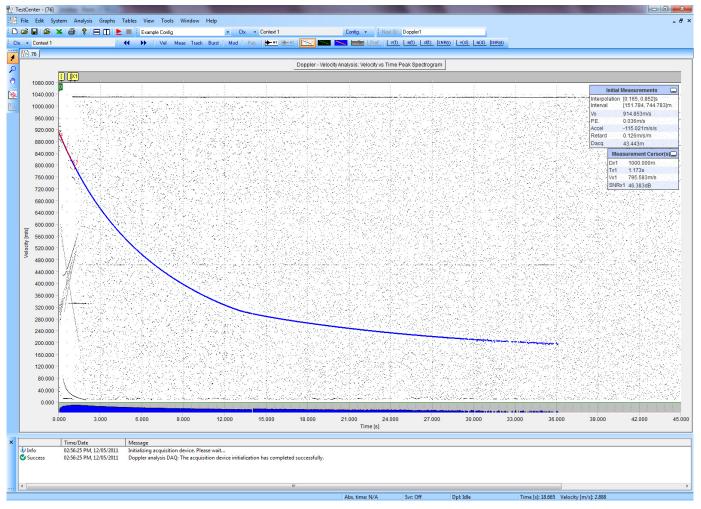
# TestCenter

TestCenter is a Windows based software that provides the calculations and analysis interface for ballistic instrumentation of all sort of projectiles. This multitasked application allows the operator to see and start analyzing the data even before the end of the acquisition.

INFINITION

Key Features:

- Compatible with Microsoft Windows XP, 7, 8;
- Runs on conventional Pentium based PC;
- Multiple test configuration definitions (user defined) for acquisition and analysis parameters;
- Raw data recorded and saved on disk for all channels;
- Multiple analysis contexts allowing several analyses to be performed simultaneously (ex: dual muzzle velocity measurements using two radar units);
- Velocity analysis, modulation (spin) analysis, drag and trajectory analysis, in-bore measurement, rate of fire measurement, and more;
- Multitasked (concurrent) data acquisition, processing and results display for maximum responsiveness;
- Advanced report generation based on Microsoft Excel;
- Multiple objects tracking;
- Trajectory prediction (PM and MPM ballistic models);

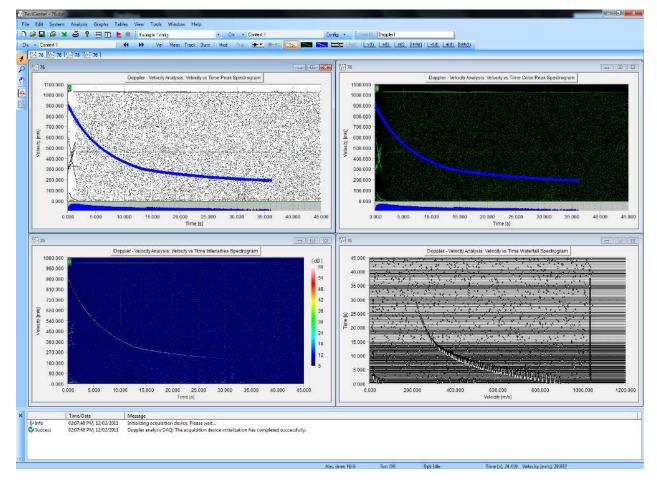


TestCenter software

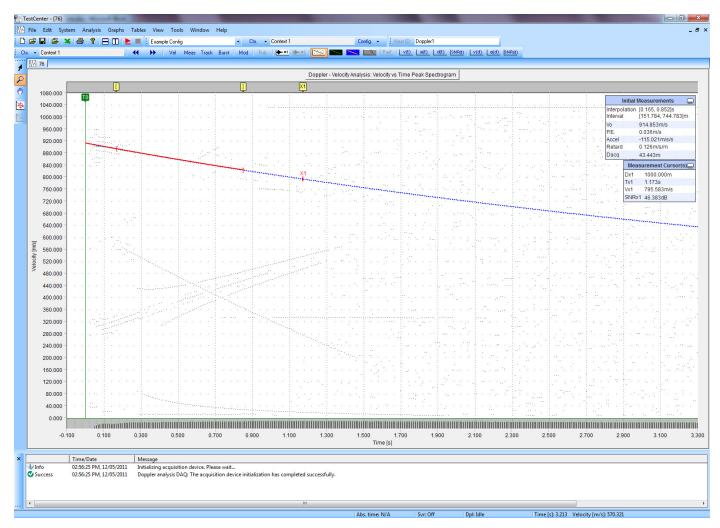
#### **Data Processing**

The TestCenter application used in conjunction with Infinition CW Doppler radar systems is a powerful tool capable of measuring projectile velocity standard projectiles, basebleed, tracers, sub-calibers, rockets, etc.

- Velocity Analysis
  - Variable FFT size (no limitation) with up to 6 analysis segments (overlapping FFT supported);
  - Computed data: radial velocity, acceleration, distance and signal-to-noise ratio as a function of time and distance;
  - Velocity graphs:
    - Peak Spectrogram;
    - Color Peak Spectrogram (DTI);
    - Intensities Spectrogram;
    - Waterfall Spectrogram;
    - Velocity, acceleration, distance and signal-to-noise ratio as a function of time or distance;
  - Velocity related measurements:
    - Muzzle velocity (projectiles);
    - Retardation (projectiles);
    - Acceleration (projectiles);
    - Maximum velocity, launch time, burn time (rockets);
    - Velocity, time of flight, distance and signal-to-noise ratio at a user specified distance or time;
  - In-bore measurement with mode correction capability;
  - o Contexts allowing simultaneous on-screen analysis of two different antennas in the same acquisition;

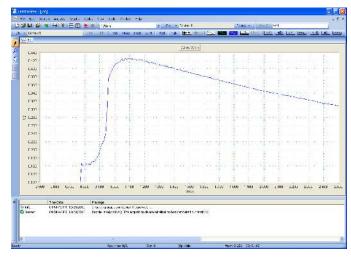


Peak, Color peak, Intensities spectrograms and waterfall graphs



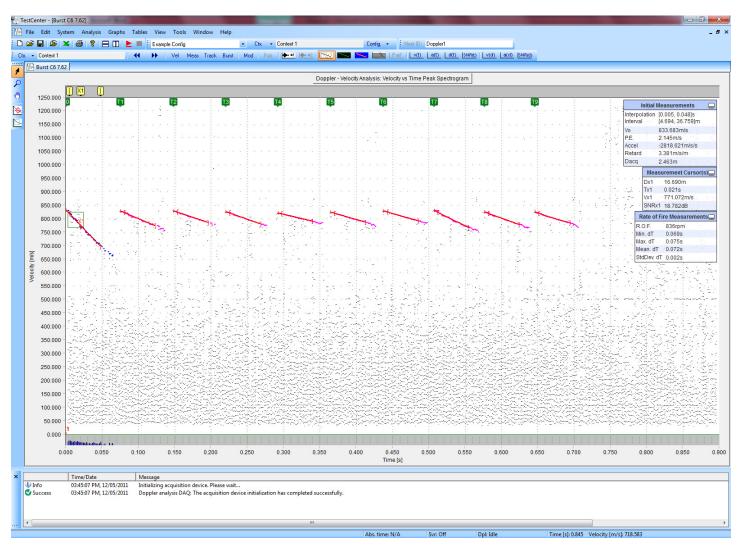
Muzzle velocity calculation and corresponding interpolation interval

- Unlimited number of velocity tracks (moving objects);
- Multi-point manual velocity tracking and automatic tracking;
- Rate of Fire (burst) measurements and results;
- Drag and Trajectory Analysis:
  - PM and MPM ballistic model;
  - Uses ground or altitude meteorological data;
  - Graphs and results:
    - Drag coefficients;
    - Velocity, distance and acceleration;
    - X, Y, Z distance;
    - Etc.;
- Trajectory Prediction:
  - PM or MPM ballistic model;
  - Uses ground or altitude meteorological data;
  - Antenna motion programming for Terma AS5000, OPOS ED1000 and all Infinition tracking head accessories for maximum tracking distance;



Drag versus Mach

- Modulation (Spin) Analysis:
  - Digital amplitude and frequency demodulation;
  - Up to 6 analysis segments with variable FFT size (no limitation);
  - Modulation graphs:
    - Peak spectrogram;
    - Color peak spectrogram (DTI);
    - Waterfall;
    - Modulation frequency as a function of time;
    - Modulation frequency differential as a function of time;
    - Modulation signal-to-noise ratio as a function of time;

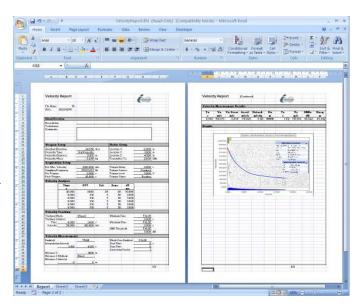


Rate of fire measurement (burst analysis)

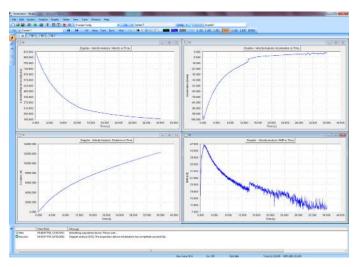
### **Report Generation**

Advanced report generation based on Microsoft Excel.

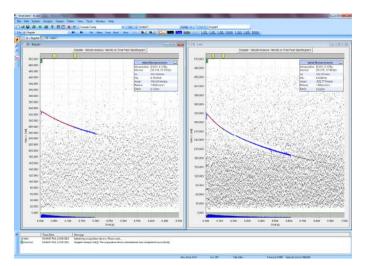
- User specified report template (highly customizable);
- Possibility to include the following in reports:
  - Parameters;
  - o Results;
  - o Tables;
  - o Graphs;
  - o Etc.;
- Integrated journal for logging all parameters and results for each round in a series;
- Velocity tracks export in ASCII;



TestCenter advanced report capability with Microsoft Excel



Velocity, acceleration, distance and signal-to-noise ratio as a function of time



Simultaneous analysis of two different antennas in the same acquisition (Context feature)

#### **Network Integration and Remote Access**

In order to provide maximum flexibility and interoperability, TestCenter comes with a library that can be linked with a third-party existing software application to provide remote access to information available in TestCenter and control of the acquisition over a TCP/IP network, a serial connection or LabVIEW. This feature allows you to integrate TestCenter in your analysis environment along with other measurement systems to centralize acquisition control and data access.

This library comes as a Dynamic Linkable Library (DLL) that can be linked with any application that can load and use a DLL.

## Licensing

Various licensing packages of TestCenter exist to fit the needs of every customer:

Modules	TestCenter Licensing Packages			
	Entry	Basic	Intermediate	Advanced
Velocity analysis	Х	X	Х	Х
Journal production	Х	X	Х	Х
Report generation	Х	X	Х	Х
Unlimited acquisition time	1 sec	X	Х	Х
In-bore analysis	Optional	Х	Х	Х
Burst analysis		X	Х	Х
Unlimited moving targets velocity tracking		X	Х	Х
Modulation (spin) analysis			Optional	Х
Drag analysis			Optional	Х
Trajectory prediction (MPM)			Optional	Х
Antenna dumping (motion)			X	Х
Network remote access	Optional	Optional	Х	Х



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