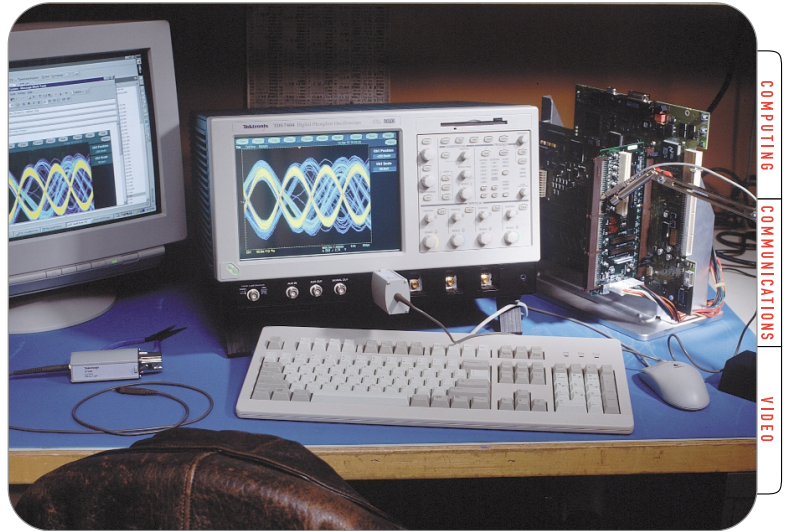


# An Introduction to the Latest Oscilloscope Analysis Functions

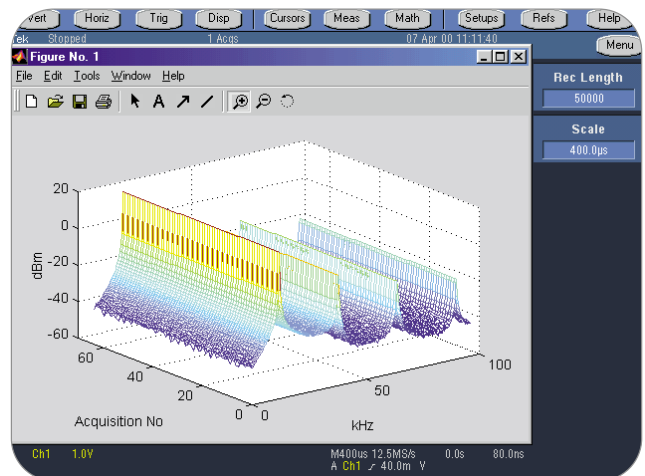


## ► TDS7000 Series Oscilloscopes

The TDS7000 Series DPO can easily perform numerical analysis and data processing with sophisticated software applications in industry-standard Windows® environments.

### Summary of Functions

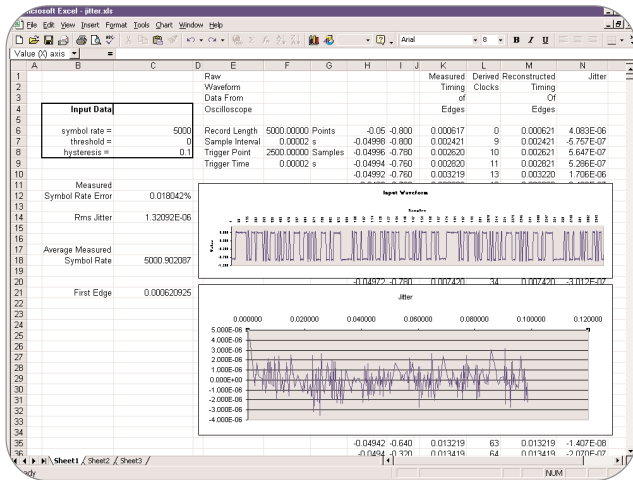
The open connectivity of the TDS7000 enables waveform data to be easily exported into application software such as MATLAB®, Mathcad® and Excel using copy/paste or import/export functions.



► Figure 1. Example of Excel.

# An Introduction to the Latest Oscilloscope Analysis Functions

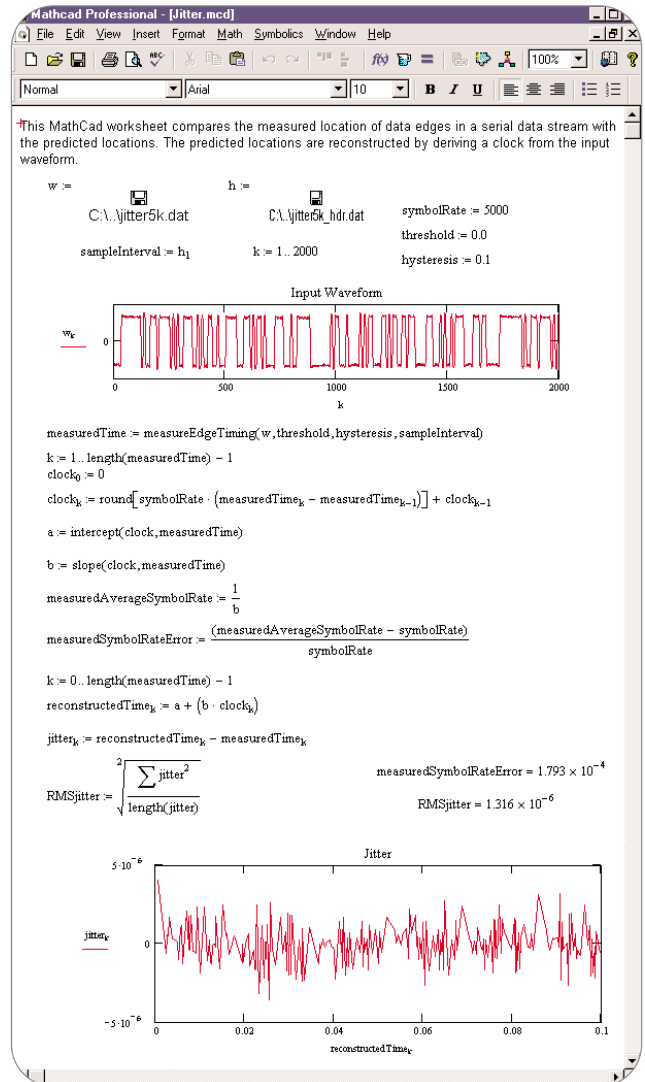
## ► Application Brief



► Figure 2. Jitter analysis in Excel.

## Jitter Analysis

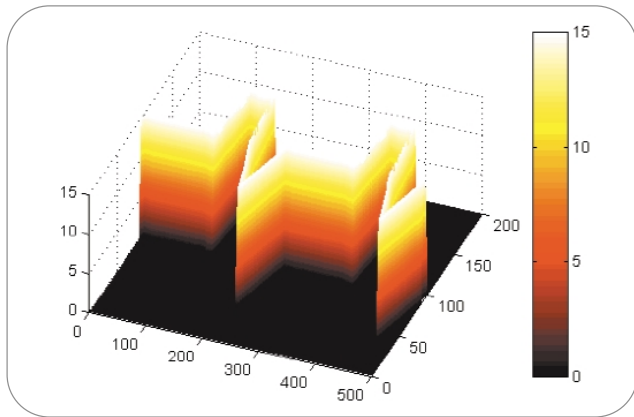
Numerical processing such as jitter analysis can be easily performed using MATLAB, Mathcad and Excel data analysis tools based on the actual waveform read by the oscilloscope.



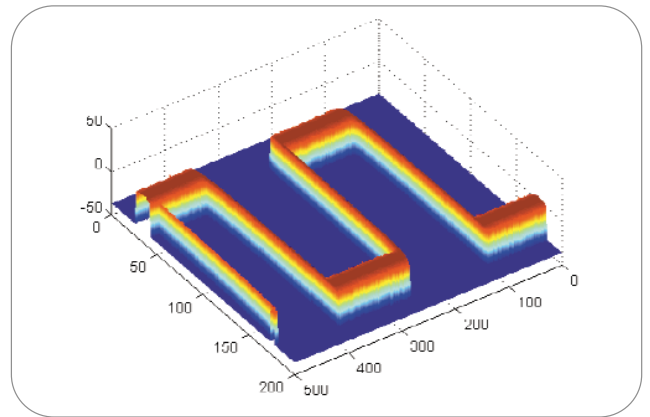
► Figure 3. Jitter analysis in Mathcad.

# An Introduction to the Latest Oscilloscope Analysis Functions

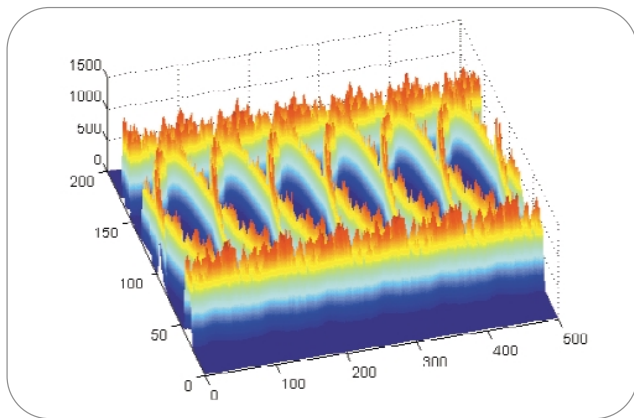
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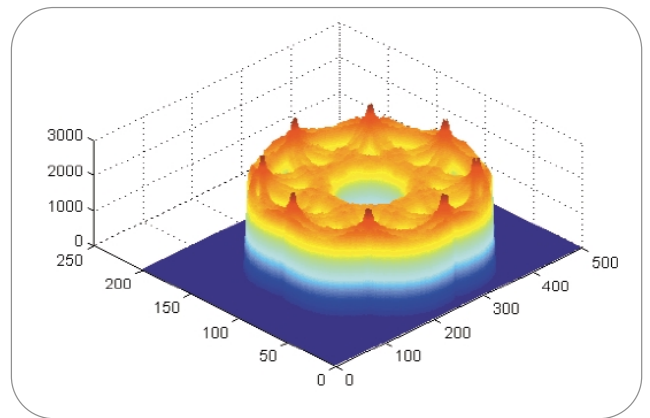
► **Figure 4.** 3-D display of DPO data in MATLAB.



► **Figure 6.** CPU clock jitter display in MATLAB.



► **Figure 5.** Communication Signal Eye diagram in MATLAB.



► **Figure 7.** DQPSK signal display in MATLAB.

### Advanced Environments Including 3-D Display

Using MATLAB, data can be represented as a 3-D plot to provide more insight to signal analysis (Figures 4-7).

### Easy-to-Use Operating Environment

The TDS7000 Series offers the option of a second display adapter and monitor that lets the user run the data analysis tool concurrently with the software.

# An Introduction to the Latest Oscilloscope Analysis Functions

▶ Application Brief



▶ TDS7054



▶ TDS7104



▶ TDS7404

## For Further Information

Tektronix maintains a comprehensive, constantly expanding collection of application notes, technical briefs and other resources to help engineers working on the cutting edge of technology.

Please visit "Resources For You" on our Web site at [www.tektronix.com](http://www.tektronix.com)

## Contact Tektronix:

ASEAN Countries (65) 356-3900

Australia & New Zealand 61 (2) 9888-0100

Austria, Central Eastern Europe,  
Greece, Turkey, Malta & Cyprus +43 2236 8092 0

Belgium +32 (2) 715 89 70

Brazil and South America 55 (11) 3741-8360

Canada 1 (800) 661-5625

Denmark +45 (44) 850 700

Finland +358 (9) 4783 400

France & North Africa +33 1 69 86 81 81

Germany + 49 (221) 94 77 400

Hong Kong (852) 2585-6688

India (91) 80-2275577

Italy +39 (2) 25086 501

Japan (Sony/Tektronix Corporation) 81 (3) 3448-3111

Mexico, Central America, & Caribbean 52 (5) 666-6333

The Netherlands +31 23 56 95555

Norway +47 22 07 07 00

People's Republic of China 86 (10) 6235 1230

Poland (48) 22 521 5340

Republic of Korea 82 (2) 528-5299

South Africa (27 11) 651-5222

Spain & Portugal +34 91 372 6000

Sweden +46 8 477 65 00

Switzerland +41 (41) 729 36 40

Taiwan 886 (2) 2722-9622

United Kingdom & Eire +44 (0)1344 392000

USA 1 (800) 426-2200

For other areas, contact: Tektronix, Inc.  
1 (503) 627-1924



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