

NEW PRODUCTS

The descriptions of the new products listed in this section are based on information supplied to us by the manufacturers. PHYSICS TODAY can assume no responsibility for their accuracy. To facilitate inquiries about a particular product, a Reader Service Card is attached inside the back cover of the magazine.

LAWRENCE G. RUBIN

FOCUS ON SOFTWARE

Data Analysis

StatSoft Inc has announced STATISTICA 6, a new generation of data analysis and visualization software that features a built-in Visual Basic scripting language based on an architecture similar to MS Excel. This feature allows novices to easily record logs of analyses to automate routine tasks. It also gives programmers direct access to every aspect of the program so that they can develop elaborate custom applications. Compared with STATISTICA 5, the new version provides higher speed for almost all procedures and new and enhanced statistical operations (for example, in data mining and modeling), allowing elimination of most of the existing design size limitations. Version 6 provides new ways of handling output with powerful workbooks and report editors, a new database query facility, import/export options, and, as with the company's optional STATISTICA Web server, full Web enablement of all input and output. *StatSoft Inc, 2300 East 14th Street, Tulsa, Oklahoma 74104*

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Serial Data Collection

TALtech has introduced WinWedge 32 v3.0, the 32-bit version of the company's WinWedge serial data-acquisition software, designed for interfacing RS-232 devices with any Windows application. The new version supports long file names and inserts its icon in the Windows system tray instead of the Windows taskbar. Because it is a true 32-bit Windows program, it is much faster than previous 16-bit versions of WinWedge when run under 32-bit Windows. WinWedge 32 v3.0 allows user-definable "hot keys" for controlling many serial I/O functions, supports up to 16 serial ports, provides a

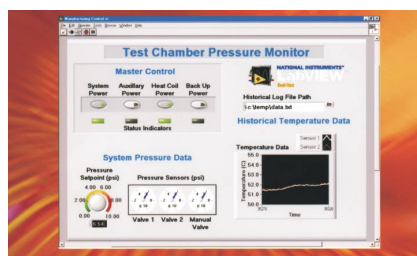
pre-input character translation table, and has additional data parsing and filtering capabilities. The program includes a new virtual instrument mode, enabling a user to test the functionality of WinWedge without requiring an actual serial instrument to be attached to the PC. *TALtech, 2027 Wallace Street, Philadelphia, Pennsylvania 19030*

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Real-Time Graphical Programming

LabVIEW Real-Time 6i software from National Instruments enables users to create custom applications in LabVIEW 6i and download them to an embedded hardware device. With added measurement integration such as the company's PXI/CompactPCI serial and motion plug-in modules, a wide spectrum of embedded, real-time systems can be built. More efficient control applications are made possible with point-by-point analysis routines whose libraries improve processing speed within control loops by using a memory of past input data and continuously adapting to new data. LabVIEW Real-Time 6i also makes networking communications transparent with the company's DataSocket, a high-level networking technology; users can easily set up an intelligent distributed network of measurement nodes. *National Instruments, 11500 North Mopac Expressway, Austin, Texas 78759-3504*

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Optics Applications

Bruker Optics has released OPUS software, version 3.0, for Windows NT and Windows 2000 with a wide range of increased functionality for the standard software package. OPUS offers spectral processing routines such as the spectrum calculator, absorbance-to-transmission conversion, automatic baseline correction, and peak-picking. A QuickPrint feature allows the printing of the contents of an active OPUS window with a single mouse click; frames can contain spectra, 3D views, reports, tables, chemical structures, and text files. Version 3.0 also includes enhancements for OPUS-specialized packages such as OPUS/SEARCH (for identifying unknown compounds by searching against a database of known spectra); OPUS/QUANT (for quantitative evaluation using full-spectrum chemometric methods); OPUS/IDENT; and OPUS/3D. *Bruker Optics Inc, 19 Fortune Drive, Billerica, Massachusetts 01821*

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Java Server Pages Support

JWAVE, version 3.5, is now available from Visual Numerics. JWAVE uses Sun Microsystems' Java components and lets users perform numerical analysis and visual interpretation of large, complex datasets. Among JWAVE 3.5's most significant new upgrades is support for Java server pages. That support provides the following benefits: little or no Java programming is required by the developer; multiple plots can be generated and displayed in a single Web page through one call to JWAVE; and it is possible to create connections to multiple JWAVE managers running on multiple servers. Another enhancement offered by JWAVE 3.5 is advanced graphics features, such as the ability to zoom in or out of a chart, profile a row or column across an image, select a point on a chart, and interactively rotate a 3D chart. *Visual Numerics Inc, 5775 Flatiron Parkway, Suite 220, Boulder, Colorado 80301*

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Peak Fitting Module

OriginLab has announced its Peak Fitting Module, version 6.1 (PFM 6.1), that adds peak analysis functionality to the company's Windows-based scientific graphing and analysis software. The user-friendly wizard interface of PFM 6.1 supports highly inter-



active peak fitting; data conditioning and adjustments to baseline, peak function, peak shape, or parameters can be done on the fly without having to initiate a new fitting session. The wizard is also adaptable to routine analyses, allowing the user to hide unneeded features. Other PFM 6.1 features include nonlinear least-squares fitting, automatic baseline and peak detection algorithms, and the ability to choose a separate peak function for each peak. The module is compatible with Windows 95/98, Windows ME, Windows NT, and Windows 2000. *OriginLab Corp, One Roundhouse Plaza, Northampton, Massachusetts 01060*

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Mathematical Computation

Maple 7 from Waterloo Maple is the latest version of the company's mathematical computation product line. New features include new mathematical algorithms to provide speed and stability improvements for numerical solutions of differential equations, and provide solvers for boundary value problems, initial-value problems, and systems of partial differential equations. With Maple 7, problems in engineering and science can be modeled and solved with appropriate dimensions using any modern measurement unit system. The new package offers full support for the new MathML (Mathematical Markup Language) 2.0 standard that manages both the display and the meaning of mathematics on the Web. There is also an enhanced Web connectivity through the use of TCP/IP sockets that enable access to information on other Web sites. *Waterloo Maple Inc, 57 Erb Street West, Waterloo, Ontario, Canada N2L 6C2*

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Real-Time Video Processing

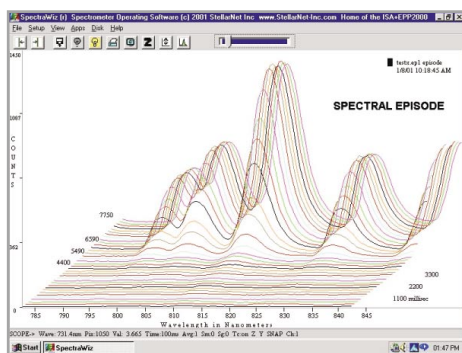
Sarnoff and its subsidiary Pyramid Vision Technologies have introduced three software development kits

(SDKs) that enable a number of real-time video-processing applications in their Acadia I vision engine. One application is video stabilization, which allows the Acadia I board to eliminate image movement from live or recorded video. With video mosaicing, the system can continuously build seamless panoramas from successive video frames, invisibly stitching individual frames into a larger view. Video fusion combines two video sources, from visible light or IR cameras, into a single moving image. A video enhancement function includes noise reduction and contrast enhancement. Motion detection and motion tracking enable automated surveillance and precision targeting applications, such as those used by surveillance professionals to create a system that finds intruders and follows them. *Sarnoff Corp., 201 Washington Street, Princeton, New Jersey 08540*

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Spectrometer Instrumentation

StellarNet has announced SpectraWiz, version 2, for use with the company's portable fiber-optic spectrometer instrumentation. The 32-bit software features episodic data capture that automatically time-stamps one of a series of saved spectra, subsequently allowing the data to be viewed and zoomed using a 3D graph with spectral time-stamp labels. Specific wavelengths can then be extracted, saved and viewed as a time



series. Toolbar functions allow data manipulation by cursor for measurement of selected object wavelength ranges and peak areas. In addition to real-time spectroscopy for absorbance, transmission, and reflectance measurements and fiber-optic spectrum analysis, SpectraWiz v. 2 has built-in applications for spectroradiometry, spectrophotometry, chemistry lab concentration analyses, and UV-level monitors. *StellarNet Inc.,*

13801 McCormick Drive, Tampa, Florida 33626

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Visualization System

The Numerical Algorithms Group (NAG) has released IRIS Explorer 5.0, a visual programming tool for developing customized visualization applications without extensive programming. NAG's version 5.0 offers new interactive demos, more example maps and templates, new search facilities, and improved data input. In addition, more than 40 new modules give users more building blocks for creating customized applications. Because of a new internal architecture, better algorithms, and the ability to combine modules, IRIS Explorer 5.0 on Windows NT is said to be between 5 and 15 times faster than the older version for some of the demo maps. *Numerical Algorithm Group Inc., 1400 Opus Place, Suite 200, Downers Grove, Illinois 60515-5702*

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Simulation Package

FEMLAB from COMSOL is a simulation package that solves coupled systems of partial differential equations through the finite element method. Its key features include solid modeling in 1D, 2D, and 3D; large model libraries with solved and documented models; solvers for linear and nonlinear stationary and time-dependent problems; and a graphical user interface that makes it easy to set up a model, run a simulation, and visualize the results. FEMLAB has applications in computational electromagnetics, fluid dynamics, transport phenomena, structural mechanics, chemical reactions, geophysics, and process control. *COMSOL Inc., 8 New England Executive Park, Suite 310, Burlington, Massachusetts 08103*

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New Literature

United Electronic Industries has announced its 2001, 74-page, full-line catalog with details of the company's data-acquisition hardware and signal-conditioning and support software. A two-page product selection chart summarizes key specifications. *United Electronic Industries, 10 Dexter Avenue, Watertown, Massachusetts 02472-4107*

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