

data collection and a larger computer for analysis, for example, the TRS-80 Model 100/TRS-80 Model 4⁸ or Epson PX-8/BBC Model B⁹. Other systems use the IBM PC as a host computer with, for example, a NEC PC-8201A, PC-8300¹⁰, or Epson HX-20¹¹ as an event recorder. Data-collection software has even been developed for HP41 and HP71 pocketcomputers¹². However, with the current short lifetime of computer models, specific programs written for a particular type of computer run the risk of soon becoming obsolete.

As most behavioural scientists lack programming expertise, there is a need for general-purpose event recording and data analysis software. Such software should (1) be very flexible with regard to hardware and experimental design, (2) be intuitively understandable and require no programming by the user, (3) be robust against user errors, and (4) produce data in a format compatible with commercially available analysis software.

The Observer (Fig. 1), a recently developed software package for observational research¹³, represents an attempt in this direction. This program runs on any IBM-type PC. The user can configure the event recorder accurately to many different experimental designs. With the information entered by the user, the PC can be used directly as an event recorder. In addition, four types of non-IBM compatible portable computers are supported as event recorders: TRS-80 Model 100, Tandy 102, Olivetti M10, and Epson PX-8. For these computers, The Observer generates event-recording programs specifically adapted to the machine and experimental design chosen by the user. As the programs contain only code essential to the current task, they remain compact and occupy a minimum amount of memory in the portable computer. The program transfers generated programs to the portable event recorder and retrieves collected data files. The Observer also analyses observational data and provides the user with statistics in printed reports.

The trend in software is towards computer-user interaction at an increasingly higher level. Ideally, the user should merely have to specify what the problem is, not how it should be solved. The development of such high-level software opens new possibilities for computer-aided behavioural research. With the arrival of computer programs that do the programming, the behavioural scientist can concentrate better on the actual research. □

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New tools for neuroscience

Exhibits at next week's American Society for Neuroscience Annual Meeting in Phoenix, Arizona include eicosanoid EIA kits and an activity monitor.

THREE NEW **eicosanoid enzyme immunoassay kits** for the measurement of prostaglandin E₂, thromboxane B₂ and 6-keto-prostaglandin F_{1α} are available from Advanced Magnetics, Inc. (*Reader Service No. 101*). These solution-phase assays are based on the competition of variable amounts of analyte with a fixed amount of alkaline phosphatase-labelled analyte for a limited number of rabbit antibody binding sites. The addition of magnetic goat anti-rabbit antibody, followed by magnetic separation or centrifugation, separates antibody-bound from unbound analyte. The resulting pellet is reacted with para-nitrophenyl phosphate substrate and the absorbance read at 405 nm: sample concentration is determined from a standard curve. AMI says, the prostaglandin E₂, thromboxane B₂ and 6-keto-prostaglandin F_{1α} can detect 0.13 pg, 4.0 pg and 0.12 pg per 0.1 ml sample, respectively. The \$295 (US) kits contain enough reagents for 100 assay tubes, including standard curves, says AMI, who will be in booth 425.

Data acquisition

HVS Image will be exhibiting, in booth 2011, their VP118 Super Track Unit activity monitor for monitoring the behavioural activity of animals, particularly rodents (*Reader Service No. 102*). The VP118 receives input from a video camera positioned over an open field, water or radial maze. Positional information from the image is extracted by the VP118 and relayed to the user's IBM PC/XT/AT. Super-Track software analyses data for path length, positional preference, and percentage time spent moving. The system can track two animals together, which is useful for studying social interaction, and can also measure rota-

tional activity. In quad mode, the VP118 can track up to four trials at once.

World Precision Instruments, Inc., exhibiting in booths 923-927, will be showing off the PolyGraf/8 data acquisition system, which provides real-time 'gapless' multichannel **data collection, display and storage** in the form of a data logger or scrolling strip chart recorder (*Reader Service No. 103*). The \$1,695 (US) PolyGraf/8 system includes a plug-in data acquisition card for a MacII, IIx or IIcx, providing eight channels of single-sided bipolar input, a BNC signal manifold, user-friendly software, and cable assembly. Special features include storage of data files and data display during acquisition and in playback mode, adjustable forward and reverse scrolling speed for visual tracking in playback mode, and multiple channel overlay. With PolyGraf/8, the user can 'mark' data points and take snapshots of points of interest for incorporation into word processing documents. □

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