Profiles in Computing... Architecture's Kevin Matthews

Tucked away in an obscure corner of a drafting studio in 204 Pacific is a modest little office bathed in north light. Its friendly clutter looks unassuming, but in fact it is a hotbed of research and invention, the center for computing innovation for the UO Department of Architecture. Visitors are warmly greeted by Rusty, the affable dog-in-residence, and his friend Kevin Matthews, Assistant Professor and Coordinator of Architectural Computing.

Professor Matthews is the wizard who brings blueprints to life, integrating computers into the architecture curriculum as teaching tools and dramatic 3-D imaging devices. He is presently entering his third year of involvement in the architecture department's Macintosh-based design program, teaching a course in 3-D modeling and continuing to research ways to supplement traditional drafting techniques with high-tech capabilities. Matthews sees his job as a combination of problem-solving, developing, then sharing the essence of what he's learned about the role of computing in all aspects of architecture—especially as it can function in design, but also in other subject areas, such as computer graphics. He views computers as tools that can make it easier to do better work, not as total replacements of traditional drafting techniques. "Computers," as he puts it, "should be a part of the woodwork, not some oddball special thing." His approach is to ask, "What's the best tool for the job?" with the thought

Kevin and Rusty take a break from problem-solving

that sometimes, but not always, a computer might be the best tool.

Matthews' architectural design course, an introduction to Macintosh-based design often referred to simply as "Mac studio," is a uniquely intensive three-term sequence that begins by introducing basic computing and architectural media skills and develops them to a level of sophistication far beyond the norm for first-year students. He recently obtained a grant from Apple to aid his projects, and is in the midst of negotiations to publish his "Great Buildings Collection," a remarkable CD-ROM database with images of, and information about, more than 1000 of the world's most significant buildings. With this database at their fingertips, designers can quickly find the building they're seeking by using a HyperCard-like menu that lets them search by building name, architect, building

materials, or location, to name but a few options. Many views of each building are accessible, from scanned still images to video clips that allow the viewer to move *through* the building, pausing at will to note structural detail, color, or the effects of light.

The ebullient Matthews seems so much in his element here that it is easy to suppose he always intended a career in architectural design. But in fact his path to the UO Department of Architecture has been full of detours. Without ever really intending to, Matthews has come full circle: back to Eugene, the town where he was born 32 years ago, after a unique odyssey that, despite its twists and turns, has its own satisfying symmetry.

Although he grew up near the headquarters of the Digital Equipment Corporation in Massachusetts and had early exposure to computers, Matthews' earliest passion

involved a far more primitive technology: blacksmithing. Blacksmithing was appealing because he "enjoys the interplay between technical extremes," in this case, an ancient craft that can have very modern applications. The craft perfectly met his penchant for uniting utility and beauty, an interest which eventually led him to architectural studies.

Continuing to follow his bent for combining idealism with practicality, Matthews attended the unorthodox Deep Springs College in Deep Springs Valley, California—a tiny, self-contained community that incorporates traditional academic training with developing the practical skills essential to everyday life. While there, Matthews

> *"Computers should be a part of the woodwork, not some oddball special thing."*

revived an abandoned blacksmith shop and continued to hone his skills. A Desert Springs professor inspired him to continue his education at UC Santa Cruz, and after graduation and a "starving artist" period as a blacksmith, designing and forging architectural ornaments, Matthews was eventually led to the study of architecture itself, going on to earn a Master's degree from UC Berkeley.

It was at Berkeley that computers began to play a more significant role in his

...Matthews (continued)

evolution. While there, he helped to install the university's new micro/VAX CAD system and was one of the first three people to learn to use it and to instruct others in its use. And although his degree was in architectural design, his thesis was on a technical topic, "Improved Interfaces for 3-D Modeling," which explored potential uses for Macintosh computers in aiding the visualization of architectural designs. After graduation, he continued to pursue this theme, both as a private consultant and as the instructor of UC Berkeley's first advanced class in applying 3-D modeling techniques to architecture. His focus became increasingly technical when he accepted an invitation to consult in developing an integrated computing system for the new Superconducting Super Collider Laboratory being built in Dallas, Texas. The challenge was exhilarating, but after about a year, Matthews found himself missing architectural design.

Enter Charles Rusch, UO architecture professor, whom Matthews met at an educator's forum in 1989. Professor Rusch was already engaged in pioneering the use of Macintosh modeling in the UO design studio, and encouraged Matthews to join his effort. And that is how Matthews came to be among us, exploring the technological frontiers of architectural design. Although his path has led him full circle, no one who has met him and felt his energy and excitement of discovery could suppose that Matthews' journey has ended. On the contrary, it is just beginning.

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Mac Network Users:
New MacTCP Release Ready to Use

If you've installed System 7 on your Mac, you'll be glad to know that the latest version of MacTCP (1.1) is now available. MacTCP is a key component of network software that is required to run Telnet, Eudora, and many other TCP/IP-based programs commonly used at the UO.

Until the advent of version 1.1, installing MacTCP software was a bit tricky for System 7 users. Now, however, you'll find its installation simple and direct. To install the upgrade, open the Network Software folder on the Computing Center's Public Domain Software volume. Then, open the *MacTCP 1.1* subfolder and follow the installation instructions in the *README* file.

(The new MacTCP version also works with System 6.0, and is installed in the same way.)

Note: MacTCP works fine with NCSA/BYU Telnet versions 2.3.4 and 2.4.6, but some problems have been reported with other versions. If you use NCSA/BYU Telnet, now would be a good time to upgrade to version 2.4.6 to avoid possible problems, and to cure an existing bug in VT100 emulation when using the EVE editor on a VAX system. We are not aware of problems with other TCP/IP-based software, but if you encounter any, please report them to the Computing Center's Network Services group (ext. 6-4395).

More Fall Workshops

Each term the Computing Center offers short introductory workshops on a variety of computer topics. These non-credit workshops are offered free of charge to University faculty, staff, and students. *Unless otherwise noted, pre-registration is required for most courses. To pre-register, call 346-1700.*

Pick up a flyer at either of the Center's reception counters for brief descriptions of the workshops and final scheduling information. If you have further questions, call Howard Loewinger at 346-1718.

Introduction to OS/2 (version 2) - 245 Computing Center
(a vendor presentation)
        Monday, Nov. 11   3 - 4:30pm

Introduction to Electronic Mail - 165 Computing Center
        Tuesday, Nov. 12   3 - 4:30pm

DOS 5 and Windows - 165 Computing Center
  Repeated twice: Wednesday, Nov. 13
                Wednesday, Nov. 20
       4 - 6:00pm both days

Introduction to System 7 - 245 Computing Center
(a two-part workshop)

    Part 1 - Thursday, Nov. 21   Upgrade and installation, and new Finder and System Folder features, such as menu changes, aliasing, enhanced ease-of-use, and customization.

    Part 2 - Friday, Nov. 22   Memory options, working with applications, and network features (including publish and subscribe, linking, and file sharing).

    1:30 - 3:30pm both days

Introduction to NeXT™ Computers - 245 Computing Center
(a vendor presentation)
Times to be announced

WHAT'S NEW ON THE VAX ?

VNEWS Supplants NEWS

VNEWS, a USEnet news reader, is now available to VAX/VMS users, replacing the NEWS facility that's served this function for the past few years. VNEWS offers a familiar UNIX®-like interface and should be more reliable, utilize less resources, and provide access to more newsgroups than its predecessor.

VNEWS is introduced in the new Fall edition of *E-Com on the VAXcluster*, the Center's electronic communication resources guide. An online document provides complete information on the program, including a description of how to use it, available commands, helpful hints, and a glossary. You can display this document or print out a copy by typing

    $ type (or print) sys$document:vnews.doc

While running VNEWS, you can type a ? (question mark) or the letter h (for help) in response to any prompt to generate a display of valid commands that you may issue at that prompt.

At the end of Fall Term, the old NEWS reader will be removed from the VAXcluster.

Learn VMS, SAS Online

Want to learn more about VAX/VMS or the SAS statistics package without turning a page? If you have a VAX account, you can access online tutorials and learn at your own pace from your keyboard.

Start the VAX/VMS tutorial by typing

    $ vms_tutor

To run the SAS tutorial, type

    $ cbtsas

Type y in response to the "Do you want to continue?" prompt, and press Return in response to the "identifier" prompt. A subdirectory named CBT is automatically created. Then identify your device type as a VT100.

If you have further questions about these tutorials, call Howard Loewinger at 346-1718, or send him an e-mail message (username HOWARDL).

STAT CORNER

This month the Computing Center staff installed a smorgasbord of new statistics packages and software updates on OREGON, including SHAZAM, a long-awaited econometrics package from the University of British Columbia, and new releases of SPSS, the Exponent Graphics Library, SCA, and RATS.

SPSS 4.1

Here are but a few of the features available on this newly-installed release:

- improved performance and response time
- new FLIP procedure, for transposing rows and columns
- new EXAMINE procedure, which allows exploration of data via stem-and-leaf plots, boxplots, tests of normality, and other descriptive statistics
- new MATRIX procedure, which enables you to perform matrix operations on data, much like SAS's PROC IML
- the ability to retrieve ORACLE data directly
- the ability to compute kappa and risk statistics using CROSSTABS

For detailed information about all the new SPSS procedures, run the following SPSS job:

    $ eve info.sps
    info all since 3.3
    Ctrl/Z
    $ spss/out info
    $ print info.sps+info.lis

SHAZAM!

SHAZAM, the University of British Columbia's popular econometrics package, is now available to VAX users. Of all the stat packages currently installed on OREGON, SHAZAM arguably offers the best assortment of diagnostic tests and the best access to advanced econometric methods. The package performs bootstrapping and jackknifing, logit/probit/tobit models, 2SLS and GLS, Goldfeld-Quandt and Chow tests, and tests for unit roots and cointegration, as well as estimating models corrected for heteroskedastic errors.

To run SHAZAM interactively, type

    $ shazam

at the VMS prompt. For a quasi-interactive demonstration of SHAZAM's capabilities, type DEMO in response to the program's TYPE COMMAND prompts. If you need online help while testing the package, type HELP at any TYPE COMMAND prompt.

A typical SHAZAM regression job in batch mode (with output to a file named SAMPLE.LIS) might look like this:

    $ eve sample.shaz
    file 11 my.dat
    sample 1 200
    read (11) cigs age stress frndsmok
    ols cigs age stress frndsmok
    stop
    Ctrl/Z
    $ shazam sample.shaz sample.lis

For further details on the package, you may order the

SHAZAM User's Reference Manual directly from McGraw-Hill (13311 Monterey Ave., Blue Ridge Summit, PA 17294; ISBN 0-07-069587-3). Send an e-mail message to username JOE for more information, or for help with any SHAZAM question.

Exponent Graphics 1.1

This new release fixes a number of problems noted in Release 1.0. For more information on using the Exponent Graphics Library, send an e-mail message to username JOE.

SCA IV.3

Although procedural commands are identical to those in the earlier version, this version of SCA offers several enhancements, notably:

- the extended UTS module has been adapted to address missing data in a time series
- a new MISSING option for ACF and PACF plots that identifies time series models with missing data

New documentation for most modules will be available this month, with the exception of documentation for the Time Series module, which will arrive in early 1992

RATS 3.11

Some of the new features of this release are
- a MAXIMIZE instruction to estimate single equations via maximum likelihood methods
- MVFRACTILE and MVSTAT to estimate fractiles and statistics for a moving window of data
- an ICORR function to compute inverse autocorrelations
- support for panel data

If you've made special arrangements to run BIGRATS, a customized large version of RATS, and wish to upgrade it for the new release, send an e-mail message to username JOE.

Stat Packs for NeXT Users

Two popular stat packs, SAS and SHAZAM, are now available to users of NeXT™ computers.

SAS for the NeXT is a full-fledged implementation of the SAS system that employs conventional "batch mode," and also exploits the NeXT's unique point-and-click interface. If you're interested in purchasing the package, call the SAS Institute at 919-677-80000.

SHAZAM, the same package just installed on OREGON, may be ordered through UCB Economics (telephone 604-822-5062). The price is $395 per copy, the same as for the OS/2, Windows, and SPARC versions of SHAZAM.

Reading SPSS System Files from Within SAS

If you have data in SPSS system files or in export ("transport") files, you can now access that data using the SPSS engine provided with SAS 6.06.

For example, to import the SPSS system file SUMM76.SYS, you'd use statements like

```
libname myspsfil  spss 'summ76.sys';
libname mysaslib  base '[ ]';

data mysaslib.newsum76;
  set mysaslib._first_;
```

You can then do whatever you wish with the SAS dataset NEWSUM76, which would be in your default directory.

For more information on this feature, see page 148 in the *SAS Companion for the VMS Environment, Version 6, First Edition.*

New SAS Manual

SAS Institute recently released the second (and last) volume of the *SAS Version 6 Language and Procedures Usage Guide.* This guide is filled with tips and examples to help you learn to perform some of the trickier SAS maneuvers, such as

- reshaping data
- taking random samples
- reading hierarchical files
- performing table lookups
- generating different types of reports

To order the guide, call the SAS Institute Book Sales Department at 919-677-8000, or write them at SAS Campus Drive, Cary, NC 27513. The guide's order number is ISBN 1-55544-445-8.

A Note to Networkers

If you missed the Computing Center's recent talk on "Accessing and Using Network Resources," you may purchase printed copies of the overheads from that talk at the Computing Center Documents Room (205) for a nominal charge.

- Joe St Sauver