"We have many applications for computer graphics in our engineering curricula," Dowling continued. "In electrical engineering, for instance, students write programs in Fortran to simulate fields surrounding electrical charges. A graphical display is the result of the program, so the student knows immediately whether his program has worked.

"This feedback is a great advantage to computer-based work. Nearly all errors are detected and corrected by the students before submission, so the faculty, in addition, assesses correct solutions for quality. As an instructor, I grade student projects on-line, Students know I'm doing this and that their programs need to work in ways I may order them to. So they are compelled to learn more than they would if these interactive graphics capabilities did not exist, and they enjoy the process more, too!"

Conversion of the Lear Siegler ADM-3As through the Retro/Graphics terminal enhancement involves the plugging in of a printed-circuit board containing graphics logic. Iowa State purchased its first conversion module—RG512s—in 1979 to upgrade four ADM-3A displays.

Digital Engineering's enhancement boards, containing 8- or 16-bit microprocessor and a dynamic RAM in one, two, or three planes, provide monochromatic, gray-scale, or color raster scan display. Retro/Graphics enhancements can be supplied in noninterlaced video formats for standard resolutions, for example, 640 x 240 pixels, or interlaced video formats of 800 x 480 or 640 x 480 pixels. The resolution desired depends upon the terminal to be upgraded.

Without affecting the terminal's native operating mode, the Retro/Graphics enhancements enable alphanumerics to emulate the Tektronix 4010 and to emulate the graphics functions of the 4027 color graphics terminals.

Graphics capabilities are available to more students at Iowa State since the university converted Lear Siegler ADM-3A terminals with Retro/Graphics enhancements. These enhancements enable the terminals to emulate the Tektronix 4010.

Senior Software Engineer
3-D Graphics

Tektronix has been long recognized for its Graphics Technology and its professional work environment. We currently have an exciting opportunity available to join the team responsible for the design and implementation of 3-D graphic terminals.

The individual we seek, a senior software engineer, should have in depth knowledge of 3-D Application Programming. Experience with transformations, hidden line/surface techniques and shading/lighting models desirable.

As a team member, the senior software engineer will participate in developing functional specifications, design and code reviews, work within a complex operating system environment, use in-circuit emulation for program debugging, program in assembly language and specify/develop microcode.

If you are interested in joining a company committed to state-of-the-art technologies and computer graphics, this may well be the opportunity you've been seeking. In addition to a competitive salary, Tektronix offers profit sharing for all employees so they can share in the fruits of their work, a comprehensive employee benefits program and an ideal geographical location (Portland, Oregon has been described as one of the most desirable from a quality of life point of view).

For further consideration, forward your resume including salary history to Tektronix Inc., Information Display Division, Wilsonville Industrial Park, P.O. Box 1000 M/S 63-658, Wilsonville, Oregon 97070.

We are an equal opportunity employer m/f/h.