Public domain map database is available

A map database is being offered that can be used on most microcomputers able to read standard MS-DOS 360K 1/4-inch floppy disks. The database has been extracted and compressed from the World Data Bank II files, which are distributed by the National Technical Information Service.

This version of the database contains some 178,000 points and provides worldwide coverage for coastlines, country boundaries, state boundaries, islands, rivers, and lakes. Each line type is provided at five levels of detail. Several basic utilities, with Pascal source code, are provided to assist in customizing the files to individual needs. The distribution disks also contain basic documentation describing the files, and two programs that display the map data on Z100’s and Z150’s as well as on CGA- and EGA-based systems.

The purpose of the disks is to make map data more readily available, not to provide a tutorial on map generation and projections or the writing of graphics programs. Nevertheless, the programs reportedly provide a good starting point for building map displays.

The database and programs can be freely copied and placed in libraries, but they may not be resold. To receive the five disks holding the data, documentation, and programs, send $10 to defray shipping and handling costs to Micro Doc, 3108 Jackson St., Bellevue, NE 68005. Questions can be directed to Fred Pospeschil, (402) 291-0795 (evenings, Central time).

Artists’ work displayed at fine arts museum

The computer-generated artwork of three Genigraphics Corporation artists will be on display through August 2 at the Fine Arts Museum of Long Island, New York. The exhibition is being held in the Computer Imaging Center, a portion of the museum dedicated to computer art.

Steven Arnerich, Terry Keenan, and Nancy Paternoster created most of their images on Genigraphics workstations at the company’s Wall Street studio. Their artwork is based on the “multiple image concept,” a collaged visual impression.

The artists cite spontaneity, the ability to try many variables and sequences, and extensive flexibility as specific advantages offered by computer graphics.
Compugraphic introduces production, display ad, and slide-making systems

Compugraphic has announced several new electronic publishing and image-making products.

- The Integrator Series production systems have the base capabilities of the company's MCS and PowerView products, and can create merged text, graphics, and layouts using industry standard hardware, Unix-based software, and an optional draw package.

  The systems are composed of a generic controller, a 118-key keyboard, a mouse with an optically lined pad, and a 12", 15", or 19" monitor. Output is to the company's typesetters (MCS 8000, 8400, 8600, and CG 9600) or the new CG 308, a 300-dpi plain-paper printer.

  The controller has an 80286 microprocessor, a 20M-byte hard disk, a 1.2M-byte floppy disk drive, and 4.6M bytes of RAM. Two keyboards and two monitors can be connected to one controller when using 12" screens. All screen sizes show black copy on a white background.

  Software options include PowerPage and Composition Programming Language, which provide WYSIWYG capabilities, according to the company.

  A drawing software option allows users to create and edit drawings using the mouse, store them, and then merge them with text files. The menu-driven program draws lines, arcs, circles, rectangles, polygons, and ovals, and can fill them with patterns and tints. The graphics can be moved, resized, or rotated before final merging with the text.

  A feature available with the 19" model is AdPage, software that handles display ads, forms, and complete newspaper page layouts. The 19" screen displays an A-4 newspaper sheet size.

  Hardware options include larger hard disks, external tape streamers, and a 360K-byte floppy drive that allows the system to read and write MCS and PowerView floppy disks.

  The system with a 19" screen costs $17,995; with a 15" screen, $15,995; and with a 12" screen, $12,995 (an additional 12" monitor sharing the controller costs $4995). The CG 308 printer costs $4995.

- Dawn is a display ad system for making ads and forms and doing other composition jobs. Output is to the CG 308 laser printer or the company's typesetting equipment.

  Hardware includes an MS-DOS processor, a high-resolution monitor, an internal 40M-byte hard disk, and a 1.2M-byte floppy disk drive. Some features are codeless operation, pull-down menus, plain English commands, and a mouse and optically lined pad. With a 19" monitor the system gives WYSIWYG displays and type is shown in sizes from 6 to 72 points.

  Draw capabilities allow users to create circles, boxes, polygons, elliptical shapes, rules, drop shadows, and fill patterns directly on the screen, without returning to source files.

  System software accepts text files from the company's Intrepid II systems, as well as from MS-DOS word-processing programs.

  Three configurations and two screen sizes are available. Prices range from $8995 to $15,995.

- The company's Presentation Series consists of IBM XT- and AP-based systems that produce 35mm color slides, overhead transparencies, and related presentation materials.

  Among the devices supported are a film recorder with 4000-line resolution and output speeds to 80 slides per hour, a color thermal printer with a palette of 4000 shades, and a video controller subsystem that records images directly onto video tape for preview and presentation.

  Prices begin at $26,000.

Reader Service Number 20

Compugraphic's Integrator Series of production systems is available with a 15", 19", or 12" screen, and outputs to the company's laser printer and typesetting equipment.
Film recorder produces slides with 4096 × 2730 resolution

Lasergraphics' Rascol II/PFR personal film recorder is said to produce 4000-line color slides at 30 slides per hour, and 2000-line slides at 60 slides per hour.

The package consists of a one-slot plug-in board for IBM PCs, XT's, and AT's, and a specially configured Polaroid film recorder. The board functions as an independent coprocessor, controlling the printer and the computations necessary to generate images. Once an image is transferred to the system, the PC is free to perform other tasks.

Resolution is 4096 × 2730 or 2048 × 1366 pixels. The color range is one million colors per slide.

Software products compatible with the board via Lasergraphics language include Lotus 1-2-3 and Symphony; Zenographics, Mirage, Autumn, and Ego; Time Arts, Lumena; ECC's Image; Execucom's Impressionist; Westend Film's Artwork; and Bell & Howell's Graphics Express.

Software products compatible via Hewlett-Packard graphics language include Harvard Presentation Graphics, Chartmaster, Signmaster, Mapmaster, GSS, Graphwriter, AutoCAD, and VersaCAD.

The system costs $4995.

Reader Service Number 21

System offers RISC architecture and numeric processing

Celery's new configuration of its C1230 super-minicomputer is designed for the computing requirements of commercial graphics image rendering. Called the Image Maker/1, the system combines RISC architecture and numeric processing capabilities, including single- and double-precision floating-point operations, as well as trigonometric and scaling operations.

The system accepts input from graphics workstations using an Ethernet LAN and is compatible with Ethernet TCP/IP networks. Also, DR11/W, IEEE 488, Ethernet, and RS-232 interfaces can be used to connect the system with such devices as frame buffers, camera controllers, and display stations.

The standard configuration consists of the C1230 computational system with floating-point processor, 12M bytes of system memory, one 337M-byte Winchester disk drive, a 1/4" cartridge tape drive for disk backup, Unix software for two users, an Ethernet interface kit and software, and a C language compiler. This configuration costs $81,950. Other disk and tape options are available.

Reader Service Number 22

Parallel computer displays computation status in real time

Thinking Machines Corporation has introduced the Connection Machine Model CM-2, a data parallel system that associates elements of processing power directly with elements of data.

A Connection Machine with 64,000 processors supports eight I/O channels operating at 40M bytes per second per channel. Total system memory is 512M bytes.

Single- and double-precision floating-point options are offered. According to the manufacturer, the single-precision unit operates at 3500 MFLOPS, the double-precision unit at 2500 MFLOPS (performing multiplication of two 4096 × 4096 matrices).

The system allows information about the current status of a computation to be viewed in real time. The information is transmitted directly and in parallel to a high-resolution color display, where the user can watch the intermediate steps toward the solution.

Prices range from $1 million to $5 million.

Reader Service Number 23

New graphics display hardware announced by Ramtek

Ramtek has announced the first products in two new lines.

• The 4660 is the first product in the company's new 466X series of graphics/imaging display peripherals.

Available in a rack-mount chassis requiring 8 3/4 inches of vertical rack space or in a desktop cabinet, the 4660 is designed around a Motorola 68020 microprocessor (a Motorola 68881 floating-point coprocessor is optional). Memory to 4.5M bytes is available for storage of display lists, programmable fonts, local functions, and print buffers.

The peripheral can be configured with a computation accelerator designed around four NEC 7281 DataFlow processors, providing 20 MIPS. The accelerator allows high-speed parallel processing of repetitive display computations. It performs arithmetic and logical imaging operations, as well as high-speed pixel formatting, entity detection, and scale, rotate, and translate operations.

Two lookup tables are provided. The main video lookup table has 12-bit input and 28-bit output: 24 bits for RGB and 4 bits for blink attributes. The table can be programmed to create animation and select levels of depth for viewing. The overlay lookup table has 10-bit input and 8-bit output: 6 bits for RGB, one bit for visibility control, and one bit for 110 percent color boost.

As many as seven 4-bit refresh memory groups are supported. Each group can be panned in increments of one pixel or more and independently zoomed in the x- and y-axes from one to 36 times in integer steps. Film looping and bank switching under software control permit multiple and independent window size, shape, priority, pan and zoom, and scrolling.

Hardware and software interfaces offered by the company link the peripheral to host computers. Interfaces include CGI to GKS and a Fortran interface. Also available are a VAX/VMS device driver and alphanumeric terminal emulators. The peripheral can be configured with serial, parallel, or network interfaces. A DEC VT220-style keyboard allows the unit to function as an alphanumeric terminal on a host system.

The 4660 peripheral is downwardly compatible with Ramtek's 946X series.

The base price is $18,700.

• The 4327, a display processor, is the first product in the company's 432X series of graphics products designed for applications requiring high-resolution color 2D display. It is controlled by a Motorola 68010 microprocessor.

The unit provides 1280 × 1024 resolution and can display 256 simultaneous colors from a palette of 16.7 million. It can be configured with 10 planes of 1280 × 1024 bits of refresh memory. As many as eight planes can be used for color definition, and two can be used for cursor data and alphanumeric and graphic overlays.

Memory is expandable to 4.4M bytes; the base unit provides 400K bytes of user-available display list memory.

An optional accelerator based on four NEC 7281 DataFlow coprocessors enables the unit to perform very high speed clipping, transformation, and drawing of graphics primitives: 96,000 vectors per second and 70,000 transformed vectors per second, according to the company.

Interface options include parallel bidirectional DMA interfaces, serial interfaces, and an Ethernet interface to the VAX/VMS DECnet environment. GKS, Tektronix 4110, and Ramtek 2-D Graphic software packages are available, as is a Ramtek-supported host software package for VAX/VMS.

Prices start at $15,995.

Reader Service Number 24

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