

TO WATCH

INTERGRAPH ADDS GRAPHICS PUNCH

By teaming a second-generation Clipper C300 micro-processor with a digital-signal-processor graphics engine, Intergraph Corp. has come up with a family of Unix-based work stations that have as much clout as the firm's 3000 Series at substantially lower prices.

Machines in the new 6000 Series weigh in at 10 or 14 million instructions/s, depending on which version of the Clipper reduced-instruction-set microprocessor they use. Prices start at \$30,000, half the cost of some of the 13-mips 3000 Series units [*Electronics*, November 1988, p. 105]. The family aims at the full range of



historic Intergraph applications, including computer-aided design, mapping, and desktop publishing.

The Huntsville, Ala., CAD/CAM giant has

souped up the graphics performance of the new line by adding an Extensible Display Geometry Engine (EDGE)—a 34-mega-flops graphics processor

with drawing rates of 400,000 two-dimensional and 350,000 three-dimensional vectors/s in the most sophisticated version. That configuration is called EDGE II, and it employs three Texas Instruments Inc. DSPs delivering more than 100 megaflops of floating-point performance. EDGE II configurations can perform realistic rendering with Gouraud shading at 25,000 100-pixel shaded triangles/s.

At the low end, the 10-mips InterPro 6040 sells for \$29,900, including EDGE I graphics, 16 Mbytes of main memory, and a 355-Mbyte hard-disk drive. That performance puts it in a class with the Sun 3/30 and the HP 834. **E**

NORTHERN TELECOM'S MERIDIAN 1 PBX TALKS TO MORE COMPUTERS

The seamless coupling of telecommunications and computers has taken another step forward with Northern Telecom Corp.'s support for two more industry-standard data protocols—and more are on the way.

Its recently announced Meridian 1 digital PBX family adds IBM Corp.'s 3270 SNA and the CCITT X.25 packet-switching protocols to the previously available LAP-B protocol, says John Spindler, manager of Meridian Link products.

Meridian Link is an intelligent interface that integrates the Meridian 1's call-processing capability with the data-processing power of computers. The Nashville, Tenn., company is also developing interfaces for IBM's LU 6.2 protocol, Ethernet, Token

Ring, and both the primary and basic rates for the integrated services digital network, says Spindler.

On the business side, Northern Telecom is already shifting gears in its quest for applications software that takes advantage of Meridian Link. Although it will add a few more major strategic al-

iances with big computer vendors to supplement deals with Digital Equipment Corp. and Hewlett-Packard Co., a broader-based approach is gaining favor.

Using its Corporate Networks Organization, Northern Telecom will this year launch a tactical drive to work closely with third-party

software vendors. A major marketing investment will go into this program, says Rick Faletti, general manager of Meridian Communications Systems.

Meanwhile, negotiations for an industry-standard switch-to-computer interface are entering a critical stage and could be final by the end of 1991, says Spindler. **E**

U.S.-ITALIAN COMBO FILLS OUT ISDN LINE WITH U INTERFACE

National Semiconductor Corp. and SGS-Thomson Microelectronics have put in place the last building block of their chip sets for the integrated services digital network.

Jointly developed by the Santa Clara, Calif., and Agrate Brianza, Italy, companies, the TP3410/ST5410 U-interface transceiver combines analog

and digital technologies on the same chip. The device, which connects phone company line cards and subscriber offices, is the last to be settled by international standards bodies.

Other companies, including AT&T Microelectronics, Motorola, and Siemens have U-interface chips, but the National/SGS-Thomson en-

try is a particularly elegant solution. A technical paper describing it was presented at the 1990 International Solid-State Circuits Conference.

The chip features selectable modes for chip-to-chip interface formats including National's Microwire and the European General Circuit Interface. Samples are available now. **E**