

A View From the Silicon Valley

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Silicon Valley, better known as the Santa Clara Valley (or Silicon Gulch by the more vitriolic) is located about forty miles south of San Francisco. It is the undisputed capital of the semiconductor industry in general, and microprocessor manufacture in particular, with other major outposts being located in Massachusetts and Texas. It serves as headquarters for American Micro Systems, Fairchild, Hewlett-Packard, Rolm, Intel, Intersil, Teledyne, Varian, Anderson-Jacobson, Signetics, and Four-Phase . . . just to name a few. Expanding slightly to cover the San Francisco Bay Area, we can pick up a multitude of other companies of interest to the computer hobbyist, including Godbout Electronics, and Diablo. To put it mildly, *much* is happening out here. Here are a few about-to-be's:

Call Computer, a super cheap time-sharing service well-known to and well used by the Homebrew Computer Club crowd, has recently installed a direct connection to the Los Angeles area. It is actively supporting the needs of computer hobbyists, soliciting their business, and offering significant assistance. It has contacted the Southern California Computer Society hobbyist group, offering its services to them. Among other things, one service will be to allow Bay Area hobbyists to converse with Los Angeles hobbyists, toll-free, via the computer link. This communications line can support up to six simultaneous 30 CPS (characters per second) bidirectional links, and more links at lower CPS. Their minimum connect time charge is 99 cents per hour (midnight to 6 AM). They offer Hewlett-Packard BASIC, and Data General's ECLIPSE software systems, including BASIC, FORTRAN, ALGOL and assembler languages. (Call Computer, 1961 Old Middlefield Rd, Mountain View CA 94043).

Godbout Electronics, a regular BYTE advertiser, plans announcing a new computer kit for hobbyists built about MSI (medium-scale integrated circuits). It executes the

PDP-11 instruction-set and is quite low cost (Godbout Electronics, Box 2355, Oakland Airport CA 94614).

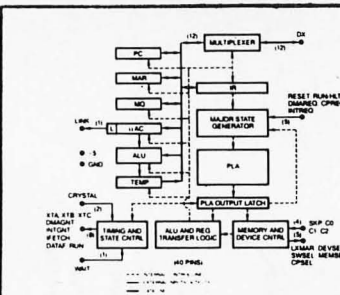
Computer Converser, Inc, a spin-off from Call Computer, plans to announce a TV based terminal for only \$595. It is assembled and ready to use, includes a good-quality acoustic coupler, is switch-selectable for 10 or 30 char/sec and full or half duplex operation. It operates with any home TV, displaying twenty six 40 character lines, and can replace a TTY (Teletype Corp. ASR33). In the latter part of January, they expect to begin marketing the acoustic coupler portion of this terminal as a separate item for \$95. They are also planning a June announcement of a complete system that will include the above terminal and coupler, plus a microprocessor, plus an 80 character line video monitor, plus BASIC software for around \$1200, assembled. Incidentally, the terminal is about the size and weight of a small typewriter, thus easily portable. All of this gear is offered with a full warranty; they are a new and small company and most eager to gain a reputation for good quality and backing their products. (Computer Converser, Inc, 1961 Old Middlefield Rd, Mountain View CA 94043).

New-goodies rumor-mongering is a favorite activity among Silicon Valley engineers and technicians at professional meetings or martini brunches. One rampant rumor is that several chip houses (semiconductor manufacturers) are on the verge of announcing the digital to video chips. Though the details are vague, the general idea is that these chips will be capable of, for instance, accepting binary coded brightness information and horizontal and vertical coordinates for a sequence of points. The chip will then buffer this information, and use it to generate video signal output acceptable to a standard TV. Another rumor is that Intel is working on a simplified controller for their 3000 series, bit sliced microprocessor. The 3000 series is

a sophisticated and powerful chip set, however, partially due to the complexity of the current controller chip organization, it is definitely not for the computer amateur.

Nybble is a term rapidly gaining popularity among digital semiconductor pros, around here. Obviously, a nybble is part of a byte. Back in the early 1960's, IBM introduced byte as the term to specify a portion of a 32 bit word; namely an 8 bit portion. Other manufacturers picked it up, some even using it to refer to a 6 bit portion. Now, with 2 bit and 4 bit bit-sliced microprocessors being developed by the dozens, nybble is becoming popular for referring to those 2 and 4 bit slices.

Who says this is the kook capital of the world? Eccentrics, maybe: Lee Felsenstein, furnishing great assistance and expert advice to Homebrew Computer Club members, heads up LGC Engineering in Berkeley. LGC stands for Loving Grace Cybernetics, of course. Bill Godbout, president of the company with the two computer kits and flashy ads in *BYTE*, has a PhD in Operations Research. George Morrow, an Associate with Godbout Electronics and project director for their MSI-11 design, is completing his doctorate in mathematics at the University of California in Berkeley. We may have some unusual ways, out here, but we sure turn out some dandy toys. ■



COMPUTER REAL-TIME CLOCK

MM5318N is time of day clock chip with output in BCD, externally multiplexed. System can address each time digit at its own rate for logging or user elapsed time measurement.

MM5318N - w/data ----- \$8.40

MODEM CHIP

MC14412 contains complete FSIC MOD/DE-MODULATOR (0-600BPS). Ideal for low speed modems and acoustic couplers. Originate/answer, simplex, half, full duplex. CMOS for low power. Single power supply:

VDD = 4.75 to 15VDC FL Suffix \$28.99

VDD = 4.75 to 6VDC VL Suffix \$21.74

6 pages of data ----- \$.60

BIT RATE GENERATOR

Single chip for generating 37 different frequencies for data communications. Operates from singles 5V supply.

MC14411P ----- \$11.98

4 pages of data ----- \$.40



TRI-tek, Inc.

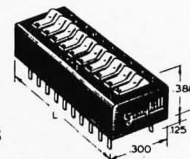
6522 N 43rd Avenue
Glendale AZ 85301

12 BIT μ CPU

IM6100 12 Bit micro processor chip. This CMOS chip recognizes PDP8/E instruction set. Operating on 4-7V at 400 μ Amp, the 6100 and its CMOS supporting chips make possible true battery/portable operation.

IM6100 ----- \$52.50

Data ----- \$ 4.00



MINIATURE ROCKER DIP SWITCHES

SPST rocker switches in arrays bit standard DIP sockets. Perfect for P.C. Board Address switching, data channeling, I.C. testers. Last 2 digits indicate number of switches per pack.

DIS-76B04 .. \$3.10 DIS-76B08 .. \$3.95

DIS-76B06 .. \$3.50 DIS-76B09 .. \$4.15

DIS-76B07 .. \$3.75 DIS-76B10 .. \$4.35

TOUCH TONE KIT

Super good buy for data terminal use or amateur radio repeater/auto-patch. Includes: 1) MC14410P CMOS encoder chip, 1) 12 character Chomerics 2.25" x 3.0" T.T. KEYPAD and 1) 1 MHZ Xtal. All for only

ACOUSTIC COUPLER

Originate only coupler. 110 BAUD half/full duplex interface between telephone and TTY. Turn your TTY into a time share terminal!

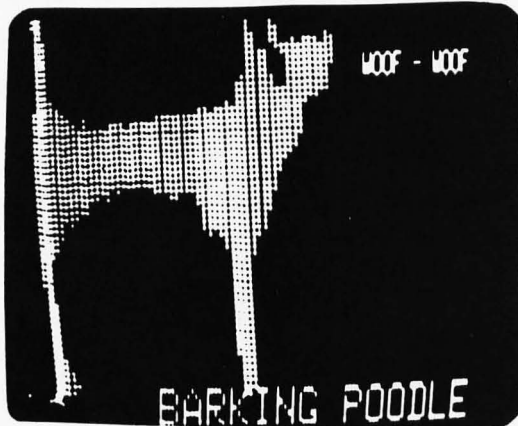
Model 501A ----- \$164.00

FOB Glendale AZ

EXCEPT WHERE NOTED, ALL ORDERS ARE POSTPAID-ADD INSURANCE. MINIMUM ORDER \$5.00 US/\$15.00 FOREIGN. STAMP FOR LAT-EST LISTS.

WARNING: Our Hardware Assemblers are DANGEROUS!

You can get hooked on the graphics display card by Jim Hogenson (Oct. *BYTE*), for example — it is so much fun that this user produced:



Or take the 4 x 8 memory matrix card — with this it is so easy and inexpensive to add static RAM to your custom system that you'll want more, and more, . . . and more. And with our prototyping card those subassemblies wire up in a snap — our card offers the most area for the price of any predrilled board now sold.

Check us out today — and watch for some exciting new products soon to be released — but beware: it COULD be habit-forming!

CEL DAT DESIGN ASSOCIATES

P.O. Box 752
Amherst, N. H. 03031

NEW from CELDAT:

Do you:

- need blueprint copies of originals which are crisp and clear?
- want to try making your own P.C. boards?
- want sepia, pressure-sensitive labels, etc.?

BUT — don't want to spend the \$300, \$500, \$1000 and up for a big copier (and the motorized ones won't do those P.C. cards anyway)

AT LAST there is a copier for YOU — the COPYDAT I and COPYDAT II. Oh, they are just a bit slower than the big machines (copies take 1-1/2 to 2-1/2 minutes from start to finish) — but you can't beat the price and it doesn't take up your whole office or lab.

The most amazing thing about the COPYDATs is the print quality. We used a very detailed engine drawing for a demonstration — and the COPYDAT print faithfully reproduced every line and shading and was the equal of an expensive professional copy. (That engineer, incidentally, now uses a COPYDAT.)

The COPYDATs are here!

Copydat I

\$149.95

for prints up to B size (12" x 18")

plus freight

Copydat II

\$199.95

for prints up to D size (24" x 36")

plus freight

Developing tube for I and II — \$20.00 plus freight

We supply paper, etc., too. Write today for details! Would you like a sample copy of your most difficult print? Send it along — or just write for a copy of that engine drawing and we'll rush one off ASAP.