Controller lets 16 TRS-80 Model IIs use a host's disk drives

Radio Shack’s Network 3 Controller permits up to 16 TRS-80 Model III computers to access a host Model III’s disks drives and printer.

The controller allows each of 16 work stations (which are diskless Model IIIIs) to function as if it were an independent, disk-equipped computer able to execute disk load and store commands. Each work station can select any program from a menu of programs available on the host, and perform independently of other work stations.

Offering each station the capability of printing either on its own printer or on the host’s, the controller queues print requests to the host’s printer at the host unit until it is free to handle the material. Work in progress at the individual stations is not interrupted during this process.

Classroom, office, and small business are expected to be the areas in which this networking capability will be used, says Radio Shack.

The TRS-80 Network 3 Controller requires as a host a TRS-80 Model III with a minimum of 32K of RAM, one disk drive, and an RS-232C interface. Individual work stations require TRS-80 Model III computers with 16K of memory, Model III Basic, and an RS-232C interface.

The Network 3 Controller (Radio Shack Part 26-1212) is $599 from Radio Shack stores and participating dealers.

Reader Service Number 25

All-digital voice systems feature on-line programmability

Two new all-digital voice systems have been announced by Votan. The V5000 integrates three major speech technologies—voice response, voice store-and-forward, and speaker-dependent voice recognition. The V4000 combines voice response and voice store-and-forward only.

With the V5000, spoken words can be digitized, compressed, and stored, and immediately played back. Speech does not have to be programmed in advance—according to Votan, the V5000 can be programmed on line, allowing the user to record or update the vocabulary without delay. Such user-programmability is important in many applications and has been available only in vocoder and phoneme-based systems. According to Votan, it is the first company to offer on-line programmability in a moderate-cost, all-digital environment.

Votan’s voice store-and-forward technology digitizes, compresses, buffers, and transmits spoken words. The two most common applications of this technology are remote transmission of digitized voice from one node in a communications network to another, for purposes of decoding back to analog and playing back to a listener; and local transmission to a mass storage device, such as a large disk drive, for later retrieval and playback. (This application is often referred to as voice mail or messaging.)

When digitized voice is played back via the V5000, the speaker’s identity and intonations are clearly identifiable at all but the lowest bit rates, says Votan. The units offer bit rates ranging from 1200 to 9600 bps, and the user, in selecting the rate, must balance reproduction quality with storage requirements. At 4800 bps and above, for example, the voice reproduction is of communications quality and is, according to Votan, approximately equal to the sound of the human voice over a telephone line. At 2400 bps, the speaker’s identity, mood, and emphasis are still discernable. At 1200 bps, the speech remains understandable and speaker identification is possible.

The V5000’s speaker-dependent voice recognition capability enables the unit to recognize individual words, phrases, or commands in any language by comparing the spoken words to stored vocabulary templates. The system may be used to enter data, activate machines, or control remote processes.

The V5000 provides greater than 99-percent accuracy after one or two training trials for each vocabulary entry, says Votan. The system’s noise immunity prevents inexpensive microphones, variable telephone conditions, and noisy backgrounds from having an adverse impact on performance.

Designed to be a stand-alone development system, the V5000 contains its own processor, logic, and memory. It contains 1M bits of RAM and includes an 11 × 18-inch top control panel with 80 word buttons and 18 control keys. It may be used as a self-contained system or may be interfaced with a host processor for applications requiring large vocabularies and extensive voice response.

A maximum of 256 double-trained words can be serviced for recognition. This number of words exhausts the unit’s logic capacity, but not its memory. When the system is functioning at its recognition limit, approximately 70 seconds remain available for voice response, assuming a bit rate of 4800 bps. If the system is used for voice response only and not for recognition, 200 seconds are available at 4800 bps.

Votan has implemented all three speech technologies—voice response, voice store-and-forward, and speaker-dependent voice recognition—on OEM boards. Standard boards are available that incorporate all three, or recognition only, or voice response only, or voice store-and-forward only. In addition, Votan is developing custom LSIs chips to support the three technologies. These chip sets will be economical for users with requirements of 25,000 units or more, says the company.

The V5000 is priced at $5000; the V4000 at $4000. OEM boards are available for less than $2000. Delivery is 30 days after receipt of order and warranty terms are 90 days labor and material.

Reader Service Number 26

Modem has 16K RAM memory for data prep and collection

Featuring automatic dialing of prestored telephone numbers, dual terminal ports, and a 16K memory supporting full editing capabilities, Backus Data Systems’ microprocessor-based Merlin modem is functionally compatible with the Bell 212A modem at 1200 and 300 bps in both originate and auto-answer modes.

The Merlin autodialer remembers up to five frequently called numbers. Numbers not stored in memory can be keyed directly from the user’s terminal; no telephone is needed. The dual-port design permits modem sharing of dissimilar terminal devices operating at different baud rates. This permits existing slower-speed terminals to operate with 1200-baud systems, says Backus.

Features such as replotting of last number, and dialing of number until connected, are provided; messages such as “busy,” “no answer,” and “on line” are displayed. Set-up and operating instructions are provided by means of a built-in operator-assistance program.

Merlin’s 16K RAM memory features a text editor for off-line data preparation; the memory can also be used for on-line data collection.

Backus’s Merlin modem is $1450.

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