A position paper—Electronic point-of-sale terminals

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The electronic point-of-sale terminal is the newest form of computer technology being introduced into the retail industry. Industry interest in the terminal is focused on its potentially great advantages for retailers in improving their productivity and performance in merchandise control and credit customer control. The electronic point-of-sale terminal’s appeal over the standard cash register lies in its potential for impacting the total merchandise system through increasing the speed and accuracy of transactions and providing a method of capturing greater quantities of data essential to the effective management of the merchandise system. At the check-out counter, the terminal equipped with an automatic reading device and credit verification equipment will permit the rapid completion of the sales transaction and, at the same time, capture and enter into the central system all the data necessary for closer, more effective control of the merchandise system.

The full potential of the electronic point-of-sale terminal cannot be realized by simply trying to insert it into the retail environment as a replacement for the electromechanical cash register. The terminal must be effectively integrated into an overall systems approach to the entire merchandising system. The terminal equipped with an automatic capability to read merchandise tickets and labels; this, in turn, requires the adoption by the retail industry of merchandise identification standards and either a single technology or compatible technologies for marking merchandise and automatically reading the tickets and labels. Further, the terminal must be effectively integrated with supporting computer systems, which raises still other needs related to data communications interconnections, network design and optimization, data standards, and software performance standards and interchangeability criteria. Without a thorough systems approach encompassing the entire merchandising system, the great promise of the electronic point-of-sale terminal may never be realized; indeed, the terminal could become the costly instrument of chaos and widespread disruption in the retail industry.

The National Retail Merchants Association is taking steps to insure that the proper preparations are made to smooth the introduction of the electronic point-of-sale terminal on a broad scale. The Association’s first major objective is to develop merchandise identification standards by the end of 1973. At the request of the NRMA, the National Bureau of Standards is providing technical assistance to this effort. Equipment manufacturers, other retailers, merchandise manufacturers, tag and label makers, and other interested groups are also involved.

Given the merchandise identification standards, the emphasis will shift to the implementation of the standards in operational systems where primary effort will be focused on network design, data communications and interfacing terminals with computers, and software development.