Published: December 15, 1992
Last Updated: April 5, 2013

COMPUTERS IN PERSIA

COMPUTERS, electronic data-processing equipment, in Persia.

The growth of computer use in Persia. In 1333 Š./1954 Edāra-ye āmar-e ʿomūmī (General statistics office, since renamed Markaz-e āmār-e Īrān "Iranian statistical center") imported from International Business Machines (IBM) several unit records, electromechanical systems that were among the forerunners of modern computers. These machines, along with some peripheral devices, were used to process statistical data for the 1335 Š./1956 census. Although they were slow. they remained in use in government for some years and were also imported by private institutions. First-generation computers never reached Persia. The first true computer, installed by Šerkat-e mellī-e naft-e Īrān (National Iranian Oil Company) at the beginning of 1341 Š./1962, was an IBM-1620; it was used to keep track of oil production. The second and third computers were installed in 1341-42 Š./1963. Although the office of Moʿāwanat-e anfūrmātīk (Assistant secretary for information services) in Sāzmān-e barnāma wa būdja (Plan and budget organization) attempted to manage the development of computer use, the relevant budget increased radically without corresponding increases in productivity. By 1351 Š./1972 the number of installed computers in Persia had reached more than 100, including two IBM/370s. In that year $6.5 million worth of computers were imported (O.E.C.D., 1986/1, p. 244). By 1356 Š./1977 there were more than 600 computers in Persia, including thirty IBM/370s. Mainframe computers were usually leased, and about 100 companies were in the business of leasing computers and accessories to government and private offices in 1357 Š./1978.

Most of the hardware was manufactured by major Western, usually American, computer companies like IBM and Electronic Data Systems. Software was also imported mainly from the United States. In 1357 Š./1978, according to official figures, approximately $30 million in computer equipment was imported, nearly two thirds of it from the United States (O.E.C.D., 1978, p. 691). This total is probably much too low, as computers were usually not reported separately but included in larger projects with extensive budgets for staff, support services, parts, supplies, and training. For example, the Electronic Data Systems contract to computerize the Persian social-security system alone totaled $20.5 million in a period of fourteen months in 1357–58 Š./1978–79 (*Wall Street Journal*, 20 December 1978, p. 4).

There was a temporary decline in computer use immediately after the Islamic Revolution of 1357 Š./1979, owing to disruption of government and the economy and to the withdrawal of foreign firms from Persia. Computer imports dropped to 52.3 million in 1358 Š./1979 (O.E.C.D., 1979. p. 707). The need for computers increased in both government and private offices, however, and eventually the computer business revived. Most of the new computers were purchased, rather than rented. In 1358 Š./1979 Komīsīūn-e mellī-e anfūrmātīk (Information commission, renamed Šūrā-ye ʿālī-e anfūrmātīk “Supreme council on information”) was formed within Sāzmān-e barnāma wa būdja to study government computer needs and applications, to plan and approve all computer-related activities, and to study the management-information needs of the country. In 1370 Š./1991 the Šūrā encompassed commissions on research and manufacturing, computer centers, software, human resources, and hardware. These groups sponsored seminars, administered educational programs, oversaw national information management systems, assisted in maintaining computer standards, and conducted surveys of computer practices in government and private offices.

The increasing availability of inexpensive personal computers and Persian word-processing software in the 1980s also contributed to a huge increase in imports of computer parts, which were assembled in Persia. These computers are generally used in standard applications involving payroll records, billing, accounting, banking, personnel records, and college examinations, as well as for military purposes. Industrial uses include control of power distribution, scientific calculations, control of oil drilling and refining, control of factory production, computer-aided design and manufacturing, and data bases. The Wezārat-e ʿolūm wa āmūzeš-e ʿālī (Ministry of sciences and higher education)

has began computerizing university library catalogues. In the humanities computer applications have included computerized concordances or various Persian texts by Farhangestān-e zabān (Linguistic academy), begun in 1352 Š./1973, and a concordance of variant readings of the Šāh-nāma (which was soon abandoned).

Computer education in Persia. At first brief training courses were offered by computer-leasing agencies. In 1348 Š./1969 Anstītū teknūlūžī-e tahwīa wa tabrīd wa barnāma-nevīsī (Institute of ventilation, refrigeration, and programming technology), later Anstītū teknūlūžī-e Tehran (Tehran institute of technology) admitted ninety-six secondary-school graduates into a course on computer programming. In 1350 Š./1971 Dānešgāh-e ṣanʿatī Āryāmehr (now Dānešgah-e ṣanʿatī-e Šarīf "Šarīf University of industrial arts") introduced the first graduate computer-science program in Persia, with seventeen students. By 1370 Š./1991 most Persian universities offered degrees in computer science, with courses on three levels: computer use (junior college), computer hardware and software (B.S. and M.S. degrees), and computer design (M.S. degree). Computer use had also become part of the undergraduate mathematics program, and computer courses were offered in most scientific and technical programs. Although plans to teach computer use in secondary schools were adopted as early as 1350 Š./1971, instruction at that level never became common. It gradually became more common for private institutions throughout the country also to offer instruction in the use of computers.

Research and manufacturing. The first domestically produced Persian computer hardware consisted of terminals manufactured in 1354–57 Š./1975–78 by Šerkat-e ṣanāyeʿ-e kāmpīūter-sāzī-e Īrān (Iran computer manufacturing industries), aa affiliate of Ṣanāyeʿ-e electronīk-e Īrān (Iran electronics industries). In laboratories at various technical colleges and industrial-training institutes mini- and microcomputers were also built. For example, in 1359 Š./1980 the M-1 minicomputer was manufactured at the Madrasa-ye ʿālī-e barnāma-rīzī wa kārbord-e kāmpīūter (College of computer programming and application). In 1363 Š./1984 Moʾassasa taḥqīqāt-e moḵābarāt (Institute for research in communications) introduced the Lāla microcomputer, which was later mass-produced. Some electronics firms have made plans for mass production of microcomputers and peripheral devices. Finally, telephone (and, less commonly, microwave) computer networks have been expanded.

A major stimulus to the development of a Persian computer industry was the

incompatibility of the alphabet with hardware and software designed for the Roman alphabet. In order to display and process Persian text on a terminal or monitor, special software is required. Persian software had already begun to come into use for mainframe applications before the Revolution of 1357 Š./1978–79. The earliest such software for microcomputers was developed in the West, mainly the United States, for business and academic use and was exported to or copied in Persia. By 1370 Š./1991 Persian-text software had been developed in Persia and was being marketed.

BIBLIOGRAPHY

Periodicals. Anjoman-e anfūrmātīk-e Īrān, *Māh-nāma-ye gozāreš-e kāmpīūter* (Tehran). Dānešgāh-e ṣanʿatī-e Šarīf, Dāneškada-ye rīāzμī wa ʿolūm-e kāmpīūter, *Algūrītm* (Tehran). Organization of Economic Cooperation and Development (O.E.C.D.), Department of Economics and Statistics, *Trade by Commodities. Market Summaries. Exports.*

Other sources. Daftar-e hamāhengī wa tarwīj, *Gozāreš-e saḵtafzārhā-ye mawjūd dar marākez-e kāmpīūterī kešvar*, Tehran, 1359 Š./1980.

Komīsīūn-e mellī-e anfūrmātīk, *Barrasī-e moqaddamātī-e anfūrmātīk-e kešvar*, Tehran, 1359 Š./1980.

Markaz-e āmār-e Īrān, *Kāmpīūter dar Īrān*, Tehran, 1350 Š./1971.

Sāzmān-e barnāma wa būdja, *Gozāreš-e nehāʾī-e anfūrmātīk dar barnāma-ye šešom-e ʿomrānī-e kešvar*, Tehran, 1355 Š./1976.

Idem, *Kāmpīūter dar Īrān. Goḏašta, ḥāl, āyanda*, Tehran, 1363 Š./1984.

Šūrā-ye ʿālī-e anfūrmātīk, *Gozāreš-e awwalīn semīnār-e pažūheš wa saḵt*, Tehran, 1361 Š./1982.

Wezārat-e ʿolūm wa āmūzeš-e ʿālī, Moʾassasa-ye taḥqīqāt wa barnāma-rīzī-e ʿelmī wa āmūzešī, *Āmār-e āmūzeš-e ʿālī-e Īrān* 1–11, 1348–59 Š./1969–80.

Ḥ. Zīrak-Nežād et al., *Māšīnhā-ye edārī wa kāmpīūter*, Tehran, 1354 Š./1977.

See also computer-related publications of Sāzmān-e pāžūheš-e ʿelmī wa ṣanʿatī, Farhangestān-e zabān, and Moʾassasa-ye estāndārd wa taḥqīqāt-e ṣanʿatī-e Īrān.

(Moḥammad-Reżā Moḥammadīfar)