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Electronic Information was in 1983, and still is today, subject to exponential growth, although perhaps the steepness of its growth curve may now begin to flatten out. Nothing can grow exponentially for ever. This particular issue of ISR in March 1983 will therefore be mainly of historical interest.

Here I shall begin with a description of the contribution *Integration of Computers and Communications, C + C* by Dr Koji Kobayashi, Chairman of the Board of Nippon Electric Co., Tokyo. Emphasising the impact of space technology and hence satellite telecommunications, the author developed the concept how computer terminals and the communication networks are growing and joined together in C + C. He was of course writing before Internet became dominant.

The development of *Single Chip Computers* and microprocessors was the second contribution by Dr Eric C. Hannah and J. Soreff of the Hewlett-Packard Laboratories in Palo Alto. The growth of applications began with the pocket calculator and smart instruments, and was then seen to climax with expert systems in 1983. The term 'PC' was not yet in common usage.

The emerging structure of the computer-aided managerial world in industry leading to computer-integrated systems was described by Dr Warren Mathews, Staff Vice-President, Product Effectiveness, of the Hughes Aircraft Company in El Segundo, California. As examples, he wrote about single computer control of Radar as well as of Missile Manufacture and Management Control.

Further instances were *Electronic Information for Airline Operations* (Qantas), for *Elected Government* (US Congress), for *Administrative Government* (in The Netherlands), for *Scholarship and Research* (University of New South Wales, Australia), and for *The Social Science* (Santa Monica)—followed.

Philosophically the most relevant contribution came from Professor Derek de S. Price, [Title 403] History of Science, Yale, which he entitled *End of the naked Brain*. He argued that just as Galileo's telescope signalled the end of 'the naked eye' astronomy, so the computer was the end of the unaided human brain. With a computer our mind would be extended, and we would be able to think in three-dimensional pictures and no longer be restrained to linear sequential logic. The next new generation of computers, the fifth, will have capacities for artificial intelligence exceeding our own, he argued in 1983, and we are now well on the way towards this.

My own Editorial gave a brief history of computing and of the inevitable increase in 'leisure' it brought, which I preferred to the term 'unemployment'.

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