

1979



The Iranian leader of the Shiite community, Ayatollah Khomeini, received a rapturous welcome on his return to Teheran.

1982



In the press office of the Polish trade union movement, Solidarnosc, a portrait of Lenin was used to promote the new freedom.

1983



The Japanese fashion designer, Kenzo Takada, swathed top model Iman in bright colours in the next stage of his ethnic collection.

1986



In the Ukrainian town of Chernobyl there was a catastrophic accident in block four of the nuclear power plant.

1989



The fall of the Berlin Wall was symbolic for the reunification of East and West Germany, and for the end of Communism.

## \_consolidation

In 1981 Adam Osborne completes the first portable computer.

In the 1980's corporate networks come into being. Issues of layering, co-operating processes, modularization increase in importance.

In 1990 Tim Berners-Lee, a researcher at CERN, the high-energy physics laboratory in Geneva, invents the World Wide Web.

In 1995 Sun announces its object-oriented Java programming language, designed to meet the demands of a networking environment. Object-oriented programming becomes the dominant style for implementing complex programs with large numbers of interacting components.

In 1999 MPEG (Moving Picture Experts Group) announces the object-based MPEG-4 International Standard. MPEG-4 enables the integration of digital television, synthetic content and interactive multimedia.

The three pioneers became professors of Computing Science:  
**Dahl:** Professor of Computing Science at the University of Oslo ('68), where he remained until his retirement at the age of 68 in 1999.  
**Dijkstra:** Professor of Mathematics at the Eindhoven University of Technology ('62), a Burroughs Research Fellow ('73), Professor of Computing Science at the University of Texas at Austin ('84).  
**Nygaard:** Professor of Computing Science in Aarhus, Denmark ('75), Professor in Oslo ('77 part-time, from '84 full-time).

In the mid-80's Dahl and further colleagues at the University of Oslo designed the language ABEL (Abstract Building Experimental Language), a language for specification and programming. It is primarily an aid for teaching techniques of specification and machine-aided reasoning, with imperative programming and program verification as special cases.

In 1990 Dijkstra published his book "Predicate Calculus and Program Semantics" together with Carol S. Scholten. This book discussed the logical and mathematical analysis of the weakest precondition semantics with a long prelude concerning predicate calculus. Dijkstra's view of teaching computing science, presented during the ACM Computer Science Conference in February 1989, led to a publication in the Communications of the ACM and to critical reactions of other prominent computer scientists. In particular, his opinion that an introductory course in programming should be primarily a course in formal mathematics, completely free of

programming languages, produced harsh critiques.

Nygaard, as chairman of the Informatics Committee (University of Oslo '84-'85), was active in developing research, education, computing and communication facilities at the university. He was chairman of the Scandinavian research program SYDPOL (System Development and Profession-Oriented Languages). He steered the Committee for the Cost-13 (European Common Science and Technology Commission) project on the extensions of profession-oriented languages. In the mid-90's he initiated the GOODS project, integrating ideas from the languages Simula, Delta, Beta, and from system development research. GOODS extended object-oriented programming to include a multi-layered approach to the relationship between people, computer hardware, organizational rules and programs in general distributed systems. GOODS also aimed at introducing tools for specifying the visibility of objects (scopes) and the precise dealing with the identities of objects that exist in many versions in a distributed system. In 2002 Nygaard initiated the research project COOL (Comprehensive Object-Oriented Learning) to develop teaching material on object-oriented programming.

Nygaard's interests always went beyond his profession. He had been an active member of the Labour Party since 1971, and late in his life a member of the party "Venstre". 1988 he became the Chair of the Information Committee on Norway and the EEC, which was renamed in '90 as "Nei til EU" (No to European Union Membership for Norway). In the referendum on November 28, 1994 "Nei til EU" won 52.2%.

*"We are not against Europe. We are against Norwegian membership in the European Union."*



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