

Chapter 21. Boomtimes

The Quest for Artificial Intelligence, Nilsson, N. J., 2009.

Lecture Notes on Artificial Intelligence, Spring 2012

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Overview of Chapter 21

- Boomtimes for AI: roughly 1975-1985
 - 1970s: difficulties for AI basic research caused by the **Mansfield Amendment** and the **Lighthill report**
 - The promise of important applications sustained overall funding levels
 - Mid 1980s: peak of excitement about **expert systems**
- Foundation of AAI
- Expert systems as the main issue in trade shows and projects
- Late 1980s: a period of retrenchment (AI Winter)

Foundation of AAAI

- 1980: founding of AAAI (American Association for Artificial Intelligence, now called the Association for the Advancement of Artificial Intelligence)
- Annual conferences, workshops, and symposia
- Trade shows

Peak of AAAI membership in 1987 – with curiosity from industry and government agencies



Figure 21.1: Scene from one of the AAAI trade shows during the 1980s.

Boom of LISP and PROLOG

- **LISP: predominant programming language for both AI research and applications (in USA)**
 - INTERLISP: various versions of LISP coalesced into this
 - **Lisp Machines**, Inc. and **Symbolics**: companies that built and sold workstation-style computers for LISP
 - Initial success but gradually lost out to other providers of workstations
 - Many other AI companies joined the expert systems companies and the Lisp machine companies
 - Ex) Machine Intelligence Company, Franz, Inc. (FranzLISP)
- **PROLOG: popular competitor of LISP in Europe, Canada, and Japan**
 - Company in the boomtime: Quintus, Inc.

Atmosphere Report in the Boomtime

“We've built a better brain,” exclaimed a brochure for [an expert system called] TIMM, The Intelligent Machine Model: “Expert systems reduce waiting time, staffing requirements and bottlenecks caused by the limited availability of experts. Also, expert systems don't get sick, resign, or take early retirement.” Other companies, such as IBM, Xerox, Texas Instruments, and Digital Equipment Corporation, were more conservative in their pronouncements. But the amplified voices of their salesmen, demonstrating various wares [in the 1984 AAAI exhibit hall], sounded at times like carnival barkers, or prophets proclaiming a new age.

- George Johnson (science writer), 1984

Incited Projects

- Japan: “Fifth Generation Computer Systems” project
- DARPA of USA: Strategic Computing Initiative
- American industrial consortia
- Europe
 - ALVEY in United Kingdom
 - European ESPRIT programme

AI Winter

- Assessments of some of AI's difficulties and achievements, compared to some of its promises, led to the end of the boom in the late 1980s
 - 1987: the collapse of the Lisp machine market,
 - 1988: the cancellation of new spending on AI by the Strategic Computing Initiative,
 - 1993: expert systems slowly reaching the bottom,
 - 1990s: the quiet disappearance of the fifth-generation computer project's original goals

