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IFIP – The International Federation for Information Processing

IFIP was founded in 1960 under the auspices of UNESCO, following the First World Computer Congress held in Paris the previous year. An umbrella organization for societies working in information processing, IFIP's aim is two-fold: to support information processing within its member countries and to encourage technology transfer to developing nations. As its mission statement clearly states,

IFIP's mission is to be the leading, truly international, apolitical organization which encourages and assists in the development, exploitation and application of information technology for the benefit of all people.

IFIP is a non-profitmaking organization, run almost solely by 2500 volunteers. It operates through a number of technical committees, which organize events and publications. IFIP's events range from an international congress to local seminars, but the most important are:

- The IFIP World Computer Congress, held every second year;
- Open conferences;
- Working conferences.

The flagship event is the IFIP World Computer Congress, at which both invited and contributed papers are presented. Contributed papers are rigorously refereed and the rejection rate is high.

As with the Congress, participation in the open conferences is open to all and papers may be invited or submitted. Again, submitted papers are stringently refereed.

The working conferences are structured differently. They are usually run by a working group and attendance is small and by invitation only. Their purpose is to create an atmosphere conducive to innovation and development. Refereeing is less rigorous and papers are subjected to extensive group discussion.

Publications arising from IFIP events vary. The papers presented at the IFIP World Computer Congress and at open conferences are published as conference proceedings, while the results of the working conferences are often published as collections of selected and edited papers.

Any national society whose primary activity is in information may apply to become a full member of IFIP, although full membership is restricted to one society per country. Full members are entitled to vote at the annual General Assembly. National societies preferring a less committed involvement may apply for associate or corresponding membership. Associate members enjoy the same benefits as full members, but without voting rights. Corresponding members are not represented in IFIP bodies. Affiliated membership is open to non-national societies, and individual and honorary membership schemes are also offered.

John Impagliazzo Per Lundin
Benkt Wangler (Eds.)

History of Nordic Computing 3

Third IFIP WG 9.7 Conference, HiNC 3
Stockholm, Sweden, October 18-20, 2010
Revised Selected Papers

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Dedication

We dedicate this book

*to professor emeritus **Hans Andersin** of Aalto University, who was deeply involved in the preparations for HiNC3 as well as HiNC1 and HiNC2. He was unable to participate in the HiNC3 conference due to a brief period of illness that ended his life just a few days after the conference.*

Professor Andersin was a Finnish pioneer within the applied computing field. He was a respected friend and colleague of many IT professionals and academicians throughout the Nordic countries. He played an important role in building the first Finnish computer and later he worked with computer support for newspaper production and industrial automation, areas that also became important research fields for him and the profession. In 1969, Andersin became a professor of information processing at Helsinki University of Technology, now part of Aalto University.

Hans Andersin's work bestowed upon him international recognition. Organizations often consulted with him as an expert in various scientific contexts. After his retirement in 1993, he continued to give lectures and in later years, he devoted much time to various initiatives for preserving the history of Nordic computing. Many friends at Nordic universities and throughout the world will miss his gentle wit and creative fantasy.

Preface

These proceedings derive from the Third IFIP Conference on the History of Nordic Computing, described simply as the “History of Nordic Computing 3” (HiNC3). This conference was the third of a series of conferences that has taken place under the auspices of the International Federation for Information Processing (IFIP). This volume consists of a collection of articles presented at the HiNC3 conference held during October 18–20, 2010 in Stockholm, Sweden. The papers presented cover a wide variety of historical and computing perspectives. The HiNC3 conference represents a joint effort between the Department of Computer and Systems Sciences at Stockholm University and the IFIP Working Group 9.7 on the History of Computing. The Department of Computer and Systems Sciences, Riksbankens Jubileumsfond, the Swedish Research Council, and the Swedish Computer Society sponsored the conference.

The HiNC3 conference has brought to light a broad spectrum of issues. It illustrates topics in computing as they occurred mostly in the “early days” of computing; those ramifications and overtones remain with us today. Indeed, many of the early challenges are still part of a historical tapestry woven by pioneers from the Nordic countries. Therefore, these proceedings provide additional value to the reader as they reflect the past and in so doing they provide fodder for the future Nordic development of computing.

The First Conference on the History of Nordic Computing (HiNC1) took place in Trondheim in June 2003. HiNC1 focused on the early years of computing, mostly the years from the 1940s through the 1960s. While developing hardware was a necessity for the first professionals, computer scientists as well as others became increasingly interested in programming and application software. Progress in these areas from the 1960s through the 1980s became the focus of the HiNC2 conference held in Turku, Finland, in August 2007. During the closing discussion of the HiNC2 conference, participants were already looking forward to the next HiNC event. Iceland and Sweden were possible locations; due to the successful completion of a large project on Swedish ICT history, “From Computing Machines to IT,” Sweden became the obvious choice. The first HiNC3 planning session occurred in Stockholm in February of 2009. Thereafter, members of various committees worked diligently throughout the days of the conference and beyond.

HiNC3 took place at the Department of Computer and Systems Sciences at Stockholm University. There was a great deal of interest around the conference, revealed through the large number of papers submitted. Hence, more than 50 contributions authored by more than 70 historians of science and technology, senior researchers in computing sciences and senior practitioners from the industry, are included in the conference proceedings. The conference reflected a

positive atmosphere and continued with comradely enthusiasm. Sixty-five people attended the conference.

The theme of the conference was twofold, namely:

1. The application and use of ICT
2. Ways in which technical progress affected the conditions for the development and use of ICT systems

Furthermore, the historical period at the center of attention at the conference covers the years from around 1970 until around 1995. This leads up to the beginning of the era of the Internet and global networks.

We did indeed receive many papers on applications – from computer use for music composition and for digital dating to real-time systems for control of train movements and the flow of electricity. Changes in conditions of use were reflected, for instance, in papers that dealt with networking and the Internet. Papers on software engineering and systems development mirror how the conditions for developers have changed over time. When it comes to time, one paper reflected history from 100 years ago; we chose to include this paper since it provided a very nice background to the Nordic development of digital computing that started around 1950. However, the conference in general focused on the 1970s, 1980s, and beginning of the 1990s.

The publication of the conference proceedings has given authors the opportunity to modify and improve their papers based on comments received in the conference and by reviewers. Although this effort has made the work of the editors more tedious, they believe the effort has captured Nordic computing history more accurately.

The HiNC3 Program Committee expresses its gratitude to the organizers and sponsors of the HiNC3 conference for their support. Again, participants anticipate a follow-up event. The plan is to organize the next conference on the History of Nordic Computing 4 (HiNC4) in Denmark in 2014.

September 2011

John Impagliazzo
Per Lundin
Benkt Wangler

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- Department of Computer and Systems Sciences at Stockholm University for hosting the conference and for monetary support
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- Silicon Vikings
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