# Guide to the Howard J. Cohen collection

**Creator**: Howard J. Cohen
**Dates:** 1978-1990
**Extent:** 5 linear feet, 9 manuscript boxes and 1 record carton
**Collection number:** X7787.2016
**Catalog number:** 102784980
**Collection processed by:** Dick Johnson and Anna van Raaphorst-Johnson, 2018. Detailed inventory created by the donor, 2016.
**Finding aid prepared by:** Sydney Gulbronson Olson, 2018

**Abstract**
The Howard J. Cohen collection contains hard copy listings of software from the 1970s and 1980s, as well as reference books, manuals, directories, and a small number of floppy disks. Ranging in date from 1978 to 1990, the collection traces Cohen's early work as a software engineer at Oceanroutes, Daisy Systems, ENSCO, and ROLM. The program listings from Oceanroutes relate to ocean wave modeling, prediction, and statistics, while the software from Daisy Systems is for electronic design automation and the placement of components on gate arrays. The collection also holds a small amount of reference books and manuals, most of which are related to IBM and Intel.

## Administrative Information

### Access Restrictions

The collection is open for research.

### Publication Rights

The Computer History Museum (CHM) can only claim physical ownership of the collection. Copyright restrictions may apply and users are responsible for satisfying any claims of the copyright holder. Requests for copying and permission to publish, quote, or reproduce any portion of the Computer History Museum's collection must be obtained jointly from both the copyright holder (if applicable) and the Computer History Museum as owner of the material.

### Languages

Collection materials entirely in English.

### Preferred Citation

[Identification of Item], [Date], Howard J. Cohen collection, Lot X7787.2016, Box [#], Folder [#], Catalog [#], Computer History Museum.

### Immediate Source of Acquisition

Gift of Howard J. Cohen, 2016.

### Repository

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## Biographical/Historical Note

Howard J. Cohen is a software engineer and developer who has worked as a consultant for over 30 years. He has experience in a broad spectrum of technologies, such as electronic design automation, ocean wave modeling, and bioinformatics and computational genomics. A native of New York, Cohen earned a BS in physics from the City College of New York in 1966 and a PhD in theoretical physics from Brandeis University in 1974. After graduating, Cohen worked for two years as a member of the technical staff at NASA Ames Research Center. He then worked as a program manager in research and development at Oceanroutes from 1976 to 1979, where he was a project leader for and designer of the company's East Coast, Australian, and "portable" spectral ocean wave models. In 1979, Cohen began working as a systems development consultant, first as a scientist at ENSCO from 1979 to 1982, where he was a lead

investigator in applying passive underwater acoustic detection and estimation procedures to multi-sensor target localization. After leaving ENSCO, Cohen joined Daisy Systems as a senior software engineer and group leader, where he created tools for the automatic and interactive layout of semi-custom and full custom VLSI chips until 1987. After Daisy Systems, Cohen continued to work as a consultant and occasionally in full time engineering and management positions for Silicon Valley businesses, such as Nortel Networks, SurroMed, Incyte Genomics, BomDiver, Canon Information Systems, WeatherNews, PetroSoft, LSI Logic, Aspect Development, Abbott Laboratories, ETAK, Engineering DataXpress, Nikon Precision, Diasonics, Rolm, Mindcraft, Integrated CMOS Systems, Tibco Inc., and Zycad Corporation. Also, he has taught courses at several San Francisco Bay Area colleges, including San Jose State University, Foothill College, College of San Mateo, and City College of San Francisco. In addition to his software development consulting, Cohen has served as an expert witness since 1997, specializing in software intellectual property litigation.

**Scope and Content of the Collection**

The Howard J. Cohen collection, ranging in date from 1978 to 1990, consists of program listings, manuals, reference books, and directories. The bulk of the collection is made up of listings from companies that Cohen worked for during the 1970s and 1980s. Cohen retained these listings, which he either created himself or worked as a contributor on, to serve as a personal archive, with each set of listings generated as a project snapshot. About half of the program listings are from Oceanroutes, a company that provided weather routing services to vessels and predicted ocean wave statistics at fixed points, typically for offshore drilling. There is also a significant amount of material from Daisy Systems, which was an early electronic design automation company. There are small amounts of listings from ROLM and ENSCO. This portion of the collection contains three 8-inch floppy disks, which hold copies of source code and are stored with their related program listing. The rest of the collection consists of manuals and reference materials, most of which are related to IBM and Intel.

**Arrangement**

The collection is arranged into 4 series:

Series 1, OceanRoutes program listings, 1978-1986
Series 2, Daisy Systems program listings, 1983-1986
Series 3, Other listings, 1979-1981
Series 4, Books and manuals, 1979-1990

**Indexing Terms**

Chip design
Electronic design automation
ENSCO
FORTRAN (Computer program language)
Gate array circuits
Ocean surface wave modeling

**Collection Contents**

**Series 1, Oceanroutes program listings, 1978-1986**

The Oceanroutes series contains program listings that reflect Cohen's work at the company. Oceanroutes specialized in knowledge of marine weather, waves, and currents, and used this information for two main services. The first was for recommending optimum ship routing to avoid bad weather and to optimize some aspect of the crossing, such as time or fuel. Oceanroutes also used the information to predict ocean wave statistics at fixed points in the ocean, usually where oil companies had or were planning to locate off shore drilling platforms. While the first models were created by hand, Cohen's team eventually developed a semiautomatic way to create a site-specific model. This series contains complete documented sets of code for the general "make model" system as well as for specific systems, such as the North Sea and the Indian Ocean off west coast of Australia. These materials were written in FORTRAN for use on Data General Nova and Eclipse minicomputers. This series is arranged alphabetically by title.

**Series 2, Daisy systems program listings, 1983-1986**

Founded in 1980, Daisy Systems was a computer-aided engineering company that specialized in electronic design automation (EDA). The company manufactured software for EDA used by chip designers to design and analyze semiconductor chips. From 1982 to 1987, Cohen worked in the physical layout division on products that facilitated the placement and routing of gate arrays and later for the creation of full custom integrated circuits. Daisy Systems ran the software on the company's proprietary workstations, which were based on the Intel 8086 family of chips. They used PL/M as their language for most projects, but towards the end of Cohen's work at Daisy Systems, they began using C. The program listings in this series date from 1983 to 1986, and contain a number of complete listings of various systems that Cohen worked on over the years. A small number of folders also hold related 8-inch floppy disks. This series is arranged alphabetically by title.

**Series 3, Other program listings, 1979-1981**

The other listings series contains small amounts of program listings from ENSCO and ROLM. The ENSCO software was a research project for a DARPA contract, where they developed statistical analysis software to determine real sources of sounds in the ocean, such as ships or submarines, as opposed to random noise. This series also contains program listings of Fortran testing code as well as code to have an IEC plasma display device emulate a Calcomp plotter, both of which are likely from when Cohen consulted for ROLM. This series is arranged alphabetically by title.

**Series 4, Books and manuals, 1979-1990**

The books and manuals series holds manuals, standards, reference books, and directories. Included are two IBM manuals from the early 1980s, a draft of the ANSI standards for the programming language C, a reference book about parallel processing, and Intel service and product directories from 1989 and 1990. This series is arranged chronologically.

## Folder List

| | Catalog Number | Title | Date |
|---|---|---|---|
| **Oceanroutes program listings** | | | |
| ***Box 01*** | 102784539 | Australian model and generation code and documentation | 1980-07 |
| ***Box 02; 03*** | 102784546 | Australian model code | 1980-1981 |
| ***Box 02*** | 102784542 | Canadian (Nova Scotia) model listings and maps | 1985-11 |
| ***Box 01; 02*** | 102784541 | Canadian 24-direction model | 1985-09 |
| ***Box 01*** | 102784537 | CLI and utility scripts | 1978 |
| ***Box 05*** | 102784545 | Grid generation code and documentation | 1980 |
| ***Box 01*** | 102784540 | Make Model documentation and code | 1982-1986 |
| ***Box 06*** | 102784548 | North Sea model code and documentation | 1981-1982 |
| ***Box 02*** | 102784543 | North Sea model data tables and code | 1985-12 |
| ***Box 03; 04*** | 102784547 | Various OceanRoutes projects | 1982 |
| ***Box 01*** | 102784538 | VESSIM code and CLI scripts | 1979 |

| | Catalog Number | Title | Date |
|---|---|---|---|
| | | **Daisy Systems program listings** | |
| ***Box 10*** | 102784573 | Daisy Systems documentation and manuals | 1983-1985 |
| ***Box 08*** | 102784575 | Design rule checker (DRC)/Electrical rules checker (ERC) listings | 1986-11-17 |
| ***Box 07*** | 102784574 | Elite database system (EDS) listings | 1986-01-21 |
| ***Box 10*** | 102785200 | GGO system | 1985-08-01 |
| ***Box 10*** | 102784572 | Mega place and route (MPR) project | 1985-07-31 |
| ***Box 10*** | 102785201 | MKMOTO, version 4.0.0 | 1983-08-03 |
| ***Box 10*** | 102784571 | PIM system | 1985-01-17 |
| ***Box 10*** | 102785199 | PINUP, version 4.0.0 | 1983-08-03 |
| ***Box 04*** | 102784544 | PLACE auto/interactive placement system modules | 1983 |
| ***Box 10*** | 102784570 | PLACE system, version 4.01.00.01 | 1984-01-19 |
| ***Box 10*** | 102785198 | PLACE system, version 4.01.03 | 1983-10-19 |

| | Catalog Number | Title | Date |
|---|---|---|---|
| | | **Other program listings** | |
| ***Box 09*** | 102784576 | ENSCO M-out-of-N software project | 1981 |
| ***Box 09*** | 102784577 | ROLM Fortran testing code | 1979 |
| | | **Books and manuals** | |
| ***Box 09*** | 102784579 | IBM virtual machine/system product : system product editor user's guide | 1980-07 |
| ***Box 09*** | 102784578 | IBM virtual machine/system product : system product editor command and macro reference | 1982-03 |
| ***Box 09*** | 102784580 | Draft of proposed American National Standard for Information Systems programming language C | 1986-10-10 |
| ***Box 09*** | 102784581 | Parallel processing : a primer | 1987 |
| ***Box 09*** | 102784584 | Intel directory of consultants' services | 1989 |
| ***Box 09*** | 102784583 | Intel literature guide, 3rd quarter 1989 | 1989 |
| ***Box 09*** | 102784585 | Intel directory of consultants' services | 1990 |
| ***Box 09*** | 102784582 | Intel product guide | 1990 |