

# **CYBERHISTORY**

**by**

**Keith Falloon, B.A. (Hons, W.Aust.)**

**This thesis is presented for the degree of  
Master of Science of  
The University of Western Australia**

**Department of Computer Science & Software  
Engineering**

**2001**

# Cyberhistory: Outline

## Cyberhistory: Abstract

## Cyberhistory: Introduction

### 1.0 Spread of Mechanical Computing

- 1.1 Introduction
- 1.2 Manchester a City on the Periphery
- 1.3 Changing the Work Culture of Science within Britain
- 1.4 Commercial Calculating Machine Industry in America and Britain
  - 1.41 America
  - 1.42 Britain
- 1.5 Conclusion

### 2.0 World War Two and the Birth of the Electronic Digital Computer

- 2.1 Introduction
- 2.2 Bletchley Park and the Enigmatic Alan Turing
- 2.3 The Colossus
- 2.4 Zuse
- 2.5 The Moore School and the ENIAC
- 2.6 John von Neumann
- 2.7 Conclusion

### 3.0 Computing Moves Out from the Laboratory

- 3.1 Introduction
- 3.2 Manchester Computing
- 3.3 The Link with Industry
  - 3.31 Lyons and the Cambridge Connection
  - 3.32 EDSAC at Cambridge
  - 3.33 Lyons' LEO
- 3.4 Computer Perceptions
  - 3.41 Nimrod
- 3.5 Computing Goes Global
  - 3.51 CSIRAC
- 3.6 Conclusion

### 4.0 Early Computing at the University of Western Australia

- 4.1 Introduction
- 4.2 Big Blue
- 4.3 Access
- 4.4 New research on the 1620
- 4.5 Impact of the Individual
- 4.6 The "Little" DEC
- 4.7 Computer Culture
- 4.8 Innovation
  - 4.81 Latin Inscription Concordance Project
  - 4.82 Flight Simulation on the PDP-6
- 4.9 Conclusion

### 5.0 Western Australian Regional Computing Centre

- 5.1 Introduction
- 5.2 Need for a Regional Centre
- 5.3 Formation of WARCC
- 5.4 Computer Shopping
- 5.5 CDC CYBER 72
- 5.6 Knowledge Transfer

- 5.7 Women at WARCC
- 5.8 Growth of WARCC
- 5.9 Mini-computing
- 5.10 Western Australian Regional Network
- 5.11 Microcomputing
- 5.12 Conclusion

## **6.0 Gender and Computing**

- 6.1 Introduction
- 6.2 The Room
- 6.3 The Weave
- 6.4 Ada and the Engine
- 6.5 Hard Master – Soft Master
  - 6.51 Roberta Williams and the Apple II
- 6.6 Women on the Machines
  - 6.61 Mathematical Tables Project
  - 6.62 Programming the ENIAC
  - 6.63 Hopper and the Bug
- 6.7 The Turing Test
  - 6.71 Women at Bletchley Park
  - 6.72 Trotsky of Computer History
- 6.8 *Machina*: the Gendered Computer
  - 6.81 Games
  - 6.82 *Neuromancer*
- 6.9 Cyberspace: Gender Online
  - 6.91 A New Jerusalem?
  - 6.92 *Femme Hackers*
  - 6.93 Sanctuary
- 6.10 Conclusion

## **Cyberhistory: Conclusion**

### **References**

### **Bibliography**

### **Acknowledgments**

### **Appendix 1 A Note on Oral History**

### **Appendix 2 WARCC Analysis**

### **Appendix 3 Literature Review**

Section 1: Books

Section 2: Papers

Section 3: Archive Resources

## Cyberhistory: Abstract

**Cyberhistory** is a thesis presented at The University of Western Australia for the Degree of Master of Science. Computer history is its prime field of focus. **Cyberhistory** pursues four key themes in computer history. These are, gender, the notion of the periphery, access and the role of the proselytiser. **Cyberhistory** argues that, gender issues are significant to computer history, culture ascribes gender to computing, and culture has driven computer development as much as technological progress. **Cyberhistory** identifies significant factors in the progress of computer technology in the 20<sup>th</sup> century. **Cyberhistory** finds that, innovation can occur on the periphery, access to computers can liberate and lead to progress, key proselytisers have impacted the development of computing and computing has become decentralised due to a need for greater access to the information machine. **Cyberhistory** traces a symbolic journey from the industrial periphery to the centres of computing development during WWII, then out to a marginal computer centre and into the personal space of the room. From the room, **Cyberhistory** connects into cyberspace. **Cyberhistory** finds that, despite its chaos, the Internet can act like a sanctuary for those seeking to bring imagination and creativity to computing.

# Cyberhistory: Introduction

The history of computing is currently a small field of research dwelling on the fringe of historical inquiry. **Cyberhistory** is the first thesis to be presented at The University of Western Australia for the Degree of Master of Science with computer history as its prime area of research. **Cyberhistory** seeks to place computer history on the main agenda of modern historical discourse. **Cyberhistory** does this through the pursuit of four themes. These are, gender, the notion of periphery, access and the role of the proselytiser.

If computing is a cultural space then what defines computing is that which occurs on its frontier. **Cyberhistory** considers the periphery in relation to the development of computing. It looks at peripheral cities, individuals and computer centres and identifies the impact they have made on computer history. **Cyberhistory** aims to identify significant factors in the progress of computer technology. **Cyberhistory** seeks to highlight how innovation frequently occurs on the computing periphery. Gender is woven into computer history. **Cyberhistory** argues that computing is inseparable from gendered culture. **Cyberhistory** shows that, in specific cases, proselytisers have accelerated the spread of computers and their use. **Cyberhistory** asserts that access to computing is an imperative if imagination and creativity are to be brought to the information machine.

**Cyberhistory** traces a symbolic journey from the periphery to the centre. It moves from Manchester, the cradle of the

industrial revolution, to the routes of the pedlar and textile mills in the rural hinterlands of NorthEast America [Chapter 1]. **Cyberhistory** then sojourns in the computational centres of World War II [Chapter 2], before tracing the spread of computing into industry [Chapter 3]. **Cyberhistory** shifts to regional computing, focusing on the Computer Centre at The University of Western Australia between 1960 and 1980 [Chapters 4 and 5]. Through microcomputing, **Cyberhistory** arrives in the very personal space of the room. Cyberhistory then hyperlinks to a myriad of other spaces via the metaphor of the communications “super highway”. Gender is examined in relation to computing [Chapter 6]. Cyberhistory seeks to analyse the role of women in computing and notes their contributions to the development of computing. Like the street plan of a medieval city, the Internet is depicted as a distopia [Chapter 6]. Despite this, the voyage of **Cyberhistory** ends in a sanctuary amid the chaos of cyberspace. Here, in an electronic “room of one’s own”, **Cyberhistory** argues that, imagination can be expressed and creativity can flourish, through the instrument of the computer.