

This research investigates what factors are particular to research in the area of the design history of recent technologies, and asks how those factors might be mitigated.

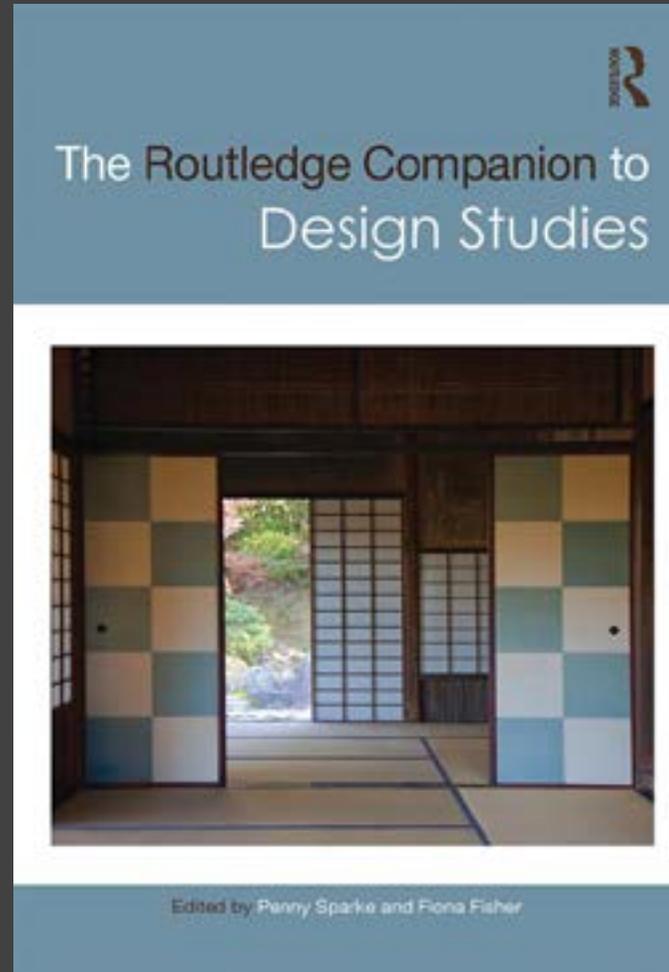
Few academics have researched and written about the design history of recent technology; even fewer about the design history of computing. This area of research has grown since Atkinson first started researching this topic and there is now a developing and growing academic interest in this particular domain of design history. This book chapter uses some new primary research using the Internet Archive to highlight the main issue, before reflecting on the advantages and shortfalls of different historical sources in constructing a design history of computing technology.

The primary research underpinning this reflection on a body of work includes interviews with entrepreneurs, businesspeople and inventors (including Douglas Engelbart (inventor of the computer mouse) and Jeff Hawkins (inventor of the Palm Pilot handheld computer)), computer scientists (Alan Kay and Stu Card, (Xerox PARC), Donna Dubinsky (Palm, Handspring), industrial designers (including Bill Moggridge (designer of the first laptop computer) and Tom Hardy (previously World Head of Design at IBM) and manufacturers (Sony, Fujitsu and others). It also includes visual

analysis of published advertising material (including the contents of the archives of IBM, The Computer History Museum in Mountain View, California and The National Archive for the History of Computing, University of Manchester) along with secondary research using published texts.



Above: Cover of *Popular Electronics* January 1975



Chapter in Book: Atkinson, P. 'Writing the Design History of Computers' in Sparke, P. & Fisher, F (Eds) *The Routledge Companion to Design Studies*, Routledge, 2016, pp. 111-122. For reasons of copyright this content cannot be made freely available at this point.

Above: Cover of *The Routledge Companion to Design Studies*

Archival research, reflective writing, primary research involving interviews with entrepreneurs, inventors, computer scientists, businesspeople, industrial designers and manufacturers, combined with visual analysis of published advertising material and secondary research using published texts.

Background

Atkinson was invited to write this chapter by the Editors, Penny Sparke and Fiona Fisher because of his extensive experience of researching and publishing in the area of the design history of computing. To date, this area of his research has resulted in two sole authored monographs, eight journal articles, three chapters in books, 14 conference papers (mostly published in proceedings), two invited keynote conference presentations and three invited research seminar presentations. Atkinson was also a member of the International Advisory Board of the Computer History Museum in California and in 2010 advised on their major permanent exhibition.

Research Question

For *The Routledge Companion to Design Studies* Atkinson set out to explain the difficulties facing anyone attempting to keep track of a fast-moving product area where obsolete artefacts are so readily discarded by addressing the research question: ‘What problems do design historians face in the writing of the design history of computing technology?’

Reflection on past primary research

To answer this question Atkinson began by reflecting on his past primary research and started to lay out and describe the different problems he had faced one by one.

The first problem area examined was the huge amount of computing products that are bought, used and then discarded. To evidence this Atkinson carried out new archival primary research using the Internet Archive (archive.org) to access manufacturer’s product portfolios from the past, showing how impossibly enormous the task would be to document all computers made, or even the whole output of some individual manufacturers.

Atkinson then reflected on and described the previous research methods he had developed to construct histories of computing products. He noted some of the more valuable repositories of physical computing equipment, as well as various archives of visual imagery and computer sales literature held by museums, universities and manufacturers (surprisingly few in number) including of the archives of IBM,

The Computer History Museum in Mountain View, California and The National Archive for the History of Computing, University of Manchester) along with secondary research using published texts. He also noted particular problems of computing literature, firstly in that staged images of computers being used in sales literature are not the same as documentary evidence of their actual use, and secondly, there is sometimes no evidence of a physical product featured in the sales literature actually ever being manufactured: a problem he had uncovered and which had led to a whole book on the subject of ‘vapourware’¹.

Finally, Atkinson reflected on some of the problems he had encountered in carrying out semi-structured, in-depth interviews with entrepreneurs, businesspeople and inventors (including Douglas Engelbart (inventor of the computer mouse) and Jeff Hawkins (inventor of the Palm Pilot handheld computer)), computer scientists (Alan Kay and Stu Card, (Xerox PARC), Donna Dubinsky (Palm, Handspring), industrial designers (including Bill Moggridge (designer of the first laptop computer) and Tom Hardy

(previously World Head of Design at IBM) and manufacturers (Sony, Fujitsu and others), The amount of contradictory evidence resulting from these interviews pointed to the potential pitfalls in taking the human memory as a reliable historical source.

Secondary Texts

Wherever possible in computer history research, Atkinson tried to forefront the primary research he had carried out. However, this was in some cases impossible, and reliance had to be made on secondary texts. This is because often the manufacturers involved have long since gone out of business, or have been taken over numerous times by bigger concerns and all corporate information has disappeared in the process. The only records that remain are the accounts of the historians of technology or economics who had access to the information at the time.

1: Atkinson, P (2013) *Delete: A Design History of Computer Vapourware*. London: Bloomsbury.

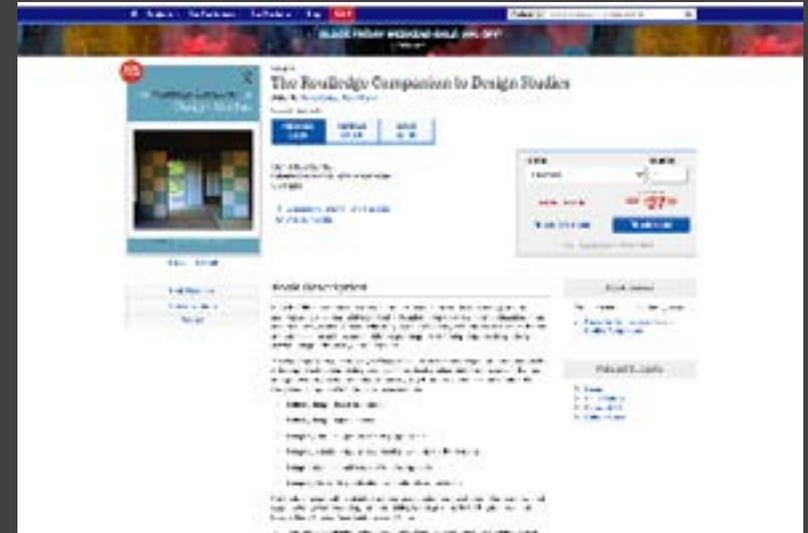
Publisher’s website and Reviews

The Routledge Companion to Design Studies is promoted through the publisher’s (Taylor and Francis) and the Imprint’s (Routledge) websites. It is available as a hardback, and since 2019 as a paperback and ebook.

Reviews of the book have been written by:

- 1) Jonathan Bean, *Journal of Design History*, 30 (2) 2017, pp. 243–245, <https://doi.org/10.1093/jdh/epx010>
- 2) Anne Massey, *Design Journal*, 21(1) 2018, pp. 177-180 <https://doi.org/10.1080/14606925.2018.1395660>

This second review specifically refers to Atkinson’s chapter: “One of the most successful chapters is by Paul Atkinson, who reflects with honesty about his work on the history of the computer. He includes his frustrations in the account as well as his successes, ruing the very ephemerality of the computer as a physical entity. Perhaps his chapter, ‘Writing the Design History of Computers’ fits this volume so perfectly because the author has experience as both a designer and an historian.”



Above: Publisher’s website



Above: Review of Book in the Design Journal

A related conference paper (expanded and published), which addresses the same research question as the output ‘Writing the Design History of Computers’.

Another research output that falls within the REF assessment period and include elements addressing the same research question is:

Atkinson, P (2018) The Role of Design History in the Museology of Computing Technology. In Moret, Oriol, (ed.) *“Back to the Future: The Future in the Past.”*, 11th International Conference on Design History & Design Studies, Barcelona, Spain, 31st Oct. 2018. ISBN 9788491681564.

This conference paper highlights the different narratives that museums typically employ in representing the history of computing technology, and discusses their shortcomings.

A PDF of this expanded conference paper can be found [here](#)..



Above: [ICDHS 2018 Conference Website](#)