

The Birth, Growth and Spread of Online Information Retrieval in Three Decades: the 1970s – 1990s/ Miriam

Farber

Abstract

This work investigated the history of the traditional online information industry and its main participants from the industry's emergence in the early 1970s to the mid-1990s, when it was swallowed by the next wave of the information revolution – the web. The research followed on the footsteps of the industry from the early stages when the architects of the new systems disappointed from the cold reception of online information retrieval by its original target audience – the scientists – turned to the libraries and information professionals, who enthusiastically accepted the not fully developed systems.

The first part of research discusses the technical variations in the implementations of the Boolean text retrieval principles by the different online information providers and the complexity of an early online search that entailed the emergence of a professional searcher. The inherent deviations of search results evolving from the system variations are demonstrated. The gradual maturing process and the improvements added to the basic systems with the years are discussed. It is shown that the great forward leap of the computing trade in the mid-1980s contributed to major advancements in the online industry but not in retrieval interfaces. The appearance of the first end-user systems and their very limited success at this stage is examined. One of the main findings here, points at the controversy between the rapid progress in computing and the insignificant changes in the online retrieval techniques and interfaces.

The searcher, or search analyst, the new specialist within the information profession and the way the new professional was educated and trained, in the course of the decades is the subject of the next chapter. There is a critical review of academe's slow response to the emergence of a new academic occupation. As the United States and Great Britain were the pioneers on the field the emphasis is on these countries, although other western countries are mentioned as well and

naturally the way the profession was received and developed in Israel is examined. It is argued that the great effort invested by the searcher for the purpose of mastering complicated online command languages was one of the reasons of the slow progress in new interface developments.

The pricing policies and the ways profits were allotted were chosen to mirror the relationships and the changing atmosphere within the industry. It emerges from our investigations that online prices were constantly mounting from the late 1970s to the mid-1990s while in all the other computer related fields they dropped continually. The explanation to this seemingly unnatural state of affairs was the rise in the perceived value of digital information in the eyes of the users and their ability to better exploit retrieved results. Another conclusion is that the great forward leap in computing technology and the mushrooming of new systems revealed not only the technology's strength, but its weaknesses as well. All players in the industry realized in the mid-1980s that progress is going in direction of better implementations and quicker executions of algorithms, but there would be no great developments in heuristic problem solving in the near future. Accordingly emphasis has been shifting from technology to content and the balance of powers between information producers and hosts has been revised. A share of 10%-30% of the profits that satisfied content owners in the 1970s seemed ridiculous now.

Among all the actors of the traditional information industry from the 1970s to the 1990s, the least clearly defined was the end-user. There were commercial reasons for the industry's neglect of the end-user; with the then prevailing charging policies and the considerable technical support required at the time, it was easier for information providers to handle a small number of institutional customers than a mass of private password holders, that were anyway very difficult to pinpoint. The libraries' and information centers' staff on their part enjoyed the recently established method of intermediated online searches.

The compact disk's role in the popularization and understanding of digital information is investigated as well, although it is concluded that the compact disk occupied only a short transition phase in the online industry as an unfit medium for information storage and retrieval.

The nineteen nineties, emerged as a distinct era in the history of information publishing, storage and retrieval and also as the end of the period when online

information retrieval have been the domain of a small, exclusive community. With the coming of age of the computing industry the old dream of the architects of the first information retrieval systems, the use of 'natural language' gained new ground and along with the earlier, wholly Boolean systems, others, began to flourish. Although the 'new' retrieval languages' origin and theoretical basis was already laid down in the 1960s, then an unripe computing environment prevented their surfacing. With the new client/server architecture and the appearance of Internet, technology became almost trivial and the most important phenomenon for the information industry was the content's complete re-conquest of the most prominent place in the field.

In this work a special chapter is devoted to the pioneering work in Hebrew information retrieval: the Responsa Project. The development of this unique Hebrew database and its furnishing for online retrieval, demanded creative solutions of a much greater set of problems than the creators of an English language online systems had to overcome, because of the characteristics of the Hebrew language. Accordingly some of the debates, controversies, and principles behind a computerized textual database are discussed in this chapter instead in the one dealing with command language.

System No.

529730