

Brief Communication

The CD-ROM market in Catalonia*

Adela d'Alòs-Moner

DOC6, Tuset 21, 6è.3a, 08006 Barcelona, Spain

Abstract: *The CD-ROM market has enjoyed strong growth in recent years in Spain, similar to the experience in other countries. This article, which gathers together existing data from other studies, gives an overview of the current situation of the CD-ROM market in Catalonia specifically and in Spain as a whole. Where possible, parallels are drawn with trends of CD-ROM usage in other European countries. Points covered include the general characteristics of the market, trends in usage, titles published in Spain and comparisons with online information retrieval.*

1. Introduction

It is common knowledge that CD-ROMs enjoy the largest share (excluding CD-Audio) of the optical disc market. A decisive factor contributing to this strength has been the standardisation of physical dimensions (defined in the *Yellow Book* — the specifications which are now accepted as standards for CD-ROM discs and drives, developed jointly by Philips and Sony) as well as a logical configuration (High Sierra standard and later, ISO 9660).

Ever since the CD-ROM was first introduced in 1985, the growth in drives installed and titles available has been tremendous. Few products dedicated to the distribution of information have enjoyed such success. However, the growth has been spread somewhat unevenly across international boundaries. The United States is number one in the publication and use of discs and together with Canada produces 61% of all available titles. Europe, on the other hand, produces only 31.3% (*The CD-ROM Directory*, annual publication).

According to the same data, Spain represents 0.9% of the world market. The percentage of this figure which corresponds

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to Catalonia is quite small: after the early appearance of several discs (*Diccionario Médico Marín* and *La Luz*), no other discs were published in Catalonia until the beginning of 1992.

The growth outlook for the next few years indicates that the CD-ROM market will continue expanding and that non-commercial use of CD-ROM will increase considerably, with institutions using CD-ROM to distribute information that until recently has only been available on magnetic media to their branches. Catalonia's present situation and outlook for the future are only a reflection of what is currently happening and what is expected to happen on the international scene in the next few years, since there is very little quantitative data concerning either Spain or Catalonia and the CD-ROM market.

In September 1990, DOC6 carried out a study on the introduction of CD-ROM in the Spanish market. The results were presented in Rome at EuroInfo 90 and later published in *Revista española de documentación científica* (D'Alos-Moner & Keefer 1991) and, with some modifications, in *CD Data Report* (Keefer & d'Alos-Moner 1990).

In the same year Raitt & Chen also published an article in *Revista española de documentación científica* on the uses of CD-ROM in Spanish libraries, which was the result of another, much broader study (Chen & Raitt 1990) done on the use of optical discs in libraries throughout the European Community.

Finally, in 1991, Maria Josep Recoder, Ernest Abadal and Lluís Codina published a book (Recoder *et al.* 1991) which referred to the CD-ROM situation in Catalonia.

This paper is based on all these studies and includes an evaluation of the latest trends in the CD-ROM field. It refers to the situation of CD-ROMs in Catalonia as well as in Spain as a whole, drawing parallels with the situation in Europe where possible.

It must be kept in mind that these studies only take CD-ROM products that are marketed to the public into account, and not products specifically designed for internal use within a company. The distinction is important because it is estimated that half of all drives installed are for internal use in companies such as Apple, Hewlett Packard, Boeing, IBM and Renault, which have been using CD-ROMs to search internal technical data for many years.

2. The CD-ROM market

2.1. General characteristics

Chen & Raitt's 1990 study affirmed that 9.3% of libraries in Europe and 9.2% of libraries in Spain use CD-ROM. This suggests that Spain and Catalonia rank somewhere in the middle

among CD-ROM users. Great Britain, France and Germany use CD-ROM more than Spain, while Greece and Portugal make less use. The characteristics of the market in Spain and Catalonia are much the same as they are in the rest of Europe, but with some differences, as will be pointed out later.

The following can be considered as general characteristics common to both the European and Spanish markets:

- There is an on-going introduction of CD-ROM discs into the market and the number of users doubles each year.
- The number of drives installed is increasing. In 1989 there were 43 400 in Europe while today the figure is estimated at 120 000, 15–20% of which are in Spain. The rate of growth is 53% in Europe and 118% in the United States (Information Market Observatory 1990).
- The use of local networks for CD-ROM is also increasing. During the last few years, various local CD-ROM networks have extended their use in libraries. Two of them, CD-NET and Opti-Net, have a presence in Spain that includes Catalonia.
- The number of published discs is increasing. The number of commercial titles on CD-ROM went beyond 750 in 1989, beyond 1000 in 1990 and beyond 1500 in 1991. Infotech reckons that by the end of 1992 there will be some 6438 titles (Information Market Observatory 1991).
- There is an ever greater number of articles, studies and conferences dedicated to the topic.

2. 2. Centres which use CD-ROM

The university libraries are the greatest users of CD-ROM discs, followed (distantly) by specialised libraries. CD-ROM has not yet reached the public libraries in Spain.

Compared with Europe, Spanish university libraries are above the European average (77.3% as compared to 57.6%). There is, however, less use in Spain among specialised libraries (13.5% compared to 18.5% in Europe). The number of governmental libraries is virtually the same (9.1% in Spain, 9.8% in Europe). In the case of the public libraries, the difference is enormous: 12.8% of European public libraries use CD-ROM, compared with only 2% of Spanish libraries. Europe has already begun the process of introducing CD-ROM into the public libraries; Spain has not.

These are the data reported by surveys sent to various libraries. It must be kept in mind, though, that in many cases CD-ROMs are used outside of library settings. This is very much the case of Medline and *Excerpta Medica*, which apart from being used in hospital libraries are also used in specific hospital departments and laboratories. This has particular importance since Medline is the database most frequently cited by libraries. If we add Medline's other non-library users to these, its position as market leader is considerably strengthened.

The legal databases *Aranzadi* and *Compuley*, which are widely used in Spanish law firms, present a similar case.

2. 3. Most frequently cited products

As far as the most frequently cited products are concerned, there is an appreciable difference between the situation in Catalonia and Spain and that of Europe.

One similarity which does exist is that Medline is the most frequently cited product. In Europe, however, Medline is followed closely by other CD-ROM reference works such as *Ulrich Plus*, *BLIBN Pilot* and *Bookbank*, while in Spain and Catalonia these are ranked much lower.

The reference works cited next most often in Spain are *Books in Print* in second place and *Serials Directory* in third. *Books in Print* is also one of the most frequently cited references in Europe, but *Serials Directory* is not even among the top fifteen in Europe. Its position in Spain is due to the strong marketing push that EBSCO gave it when it was introduced to the Spanish market four years ago. This marketing campaign is responsible for the tremendous success of both *Serials Directory* and Medline (also marketed by EBSCO).

It should also be pointed out that *BibliopFile*, one of the CD-ROMs cited here among the top four, is ranked eleventh in Europe. This could be the result of weak distribution of other cataloguing aids.

There is a clear relationship between use of *Eric* and of *Science Citation Index*, which are among the top seven in Europe and the top five in Spain. On the other hand, *ABI Inform* and *Perinorm* are more frequently cited in Spain than in other European countries.

Spanish-produced CD-ROMs are another story, since no parallel with Europe can be drawn. In this category, the three main titles are *Aranzadi*, *Compuley* and *Base de datos del CSIC*. One more difference is that, in Spain, the *Bibliografía Latinoamericana* from Mexico is among the top eight titles.

Language is an important factor in broadening CD-ROM distribution, since 80% of all discs are in English. One clear difference between Spain and Europe is the language problem: while in Europe 53.7% of the cases report that language is no problem (the figure increases to 62.7% in northern Europe), in Spain only 28.6% indicate they have no problem with language.

2. 3. 1. Products most frequently cited in Catalonia. In Catalonia, as in Spain, the CD-ROM market is dominated by discs from the biomedical field.

The most frequently cited product, well ahead of all others, is Medline. Still in the biomedical field, the products which follow are *Healthplan*, *Excerpta Medica* and *Drug Information Source*.

The other five most frequently cited products are *Books in Print*, *CSIC*, *Aranzadi*, *Compuley* and *Ulrich's Plus*.

The most important foreign publishers are the same ones which figure prominently in Spain: Bowker, Dialog, Compact Cambridge and SilverPlatter. EBSCO's Medline is not as

widely distributed in Catalonia as in the rest of Spain, especially when compared with SilverPlatter and Compact Cambridge. The fact that Compact Cambridge has been sold in Catalonia since 1985 and that the company which spearheaded the distribution of EBSCO products is located in Zaragoza are possible reasons for the discrepancy.

The situation of CD-ROM in Europe is reflected in Catalonia: university libraries are, percentage-wise, the main users of CD-ROM, followed by specialized libraries and, in last place, public libraries.

Hospital centres and pharmaceutical and chemical laboratories are the main users of discs within the category of specialized libraries. In the case of hospitals, many have Medline and *Excerpta Medica* in different departments, giving medical personnel direct access.

The firm foothold that CD-ROM has gained in the biomedical field is also a response to the high rate of uncompleted or interrupted connection during online searches. A study published by l'Institut d'Estadística de Catalunya (Institut d'Estadística de Catalunya 1991) reports that, in 1991, 34% of online searches in Barcelona were unsuccessful. If we add that, on average, a CD-ROM like Medline pays for itself with two hours of searching per month (compared to online searching), this explains the rapid growth of CD-ROM in a field where databases are frequently consulted.

3. Equipment and networks

In July 1990, the CD-ROM drive market in Spain was estimated at 1000. Now that figure has doubled and there are 400 drives in Catalonia alone.

Hitachi continues to be the most widely-used drive, with 51.6% of the market in Europe and 38% in Spain. Other brands in Europe are Philips, Pioneer, Sony and Toshiba. Spain has NEC, Sanyo and Amdek as well. Towards the end of 1991, Investronica and Philips began marketing computers with built-in CD-ROM drives.

The great majority of CD-ROM discs are connected to PC compatibles, whereas the market for Apple is still quite limited. Apple has 10% of the world market but only 5% in Spain, although it would seem that the trend points toward an increase in market share.

Throughout 1991, CD-ROM networks acquired an ever greater importance. The networks permit several users to access the same disc simultaneously, as well as allowing for the possibility of accessing several discs at any point within the network. This makes for an efficient use of resources and eliminates the queues of people waiting to use the discs, which had been a problem in some centres. At the same time, networks enable discs to be kept physically apart from the user. Many publishers charge a supplementary licensing fee for using the network software; the overall cost increase is figured at approximately 17% (Fairman 1991).

The introduction of networks has truly opened up the growth outlooks for CD-ROM. It seems particularly important when we keep in mind that in many studies done in the

United States on the advantages and disadvantages of CD-ROM, the two most frequently cited disadvantages have been (1) the cost of the equipment (drive, computer) and (2) the access to the disc being limited to only one user. The first aspect grows less and less important as the cost of equipment keeps going down and the second has now been resolved with the introduction of specific CD-ROM networks.

4. Distribution of discs

In terms of CD-ROM distribution, Catalonia was a pioneer, not only in Spain but also in the rest of Europe. In 1985, when CD-ROMs had just appeared in the United States, a company in Barcelona began marketing Medline. Since then, other companies in Spain and Catalonia have become involved in the distribution of discs. Micronet, Logitec, LUA and DOC6 have had the most active roles.

After Medline, the market opened up to include other CD-ROM discs and now discs from the main publishers — Bowker, Compact Cambridge, Dialog, SilverPlatter, UMI, H.W. Wilson, etc. — are all available in Spain through local distributors.

In 1991, a growing interest was noted on the part of publishers in breaking into the Spanish market and making themselves better known through their distributors. This can be attributed to the extreme competitiveness of the market in the United States, which is where most publishers are based, and to the fact that the US market became saturated within a very short period of time. In an internal report dated December 1991, a major publisher indicated that the US market had begun to be saturated and that the two European countries with the highest growth potential in CD-ROM installations were first Germany, then Spain. This information contradicts the Raitt & Chen report (1990), which stated that Spain was one of the countries which had the most negative responses to the question of whether the libraries intended to introduce CD-ROM discs in the near future.

In general, the distributors are doing more than just giving out product information: they also give demonstrations, handle subscriptions and renewals, and deal with customer problems. Other services offered by these companies are the option of paying in local currency, thereby sparing the client the usual administrative and bank transactions; giving telephone support on installation and operation problems; and translating summaries of user manuals for some of the more popular databases available to clients.

5. CD-ROM publishing

The same company which first marketed Medline in Catalonia was also a pioneer in publishing CD-ROM discs in Spain and Catalonia. 1986 saw the release of the *Diccionario Médico Marín*, the first disc published in Spain and one of the first few done in Europe.

This company put out a full force effort to promote CD-ROM and to offer their services to various institutions. Unfor-

unately, the effort failed. Six years later, it seems apparent that the market was at that time not sufficiently mature.

The titles currently published in Spain are *Aranzadi*, *BOE*, *Colex*, *Compuley-Legislación*, *Compuley-Jurisprudencia*, *CSIS*, *Documentación de Medios*, *Jurisley-Fiscal*, *La Luz* and *IBSN*. Within a few months the list of published titles will have increased considerably, so that by the time this article is printed, other titles will undoubtedly have come out.

In Catalonia, DOC6 began editing discs in 1991 and is the only such company in Catalonia today to offer this service to third parties.

6. Online vs. CD-ROM

One true fact for all markets in all countries is that the introduction of CD-ROM to centres which use online data acquisition greatly increases the overall number of searches, while at the same time reducing the number of online searches. In Europe, online searches after the introduction of CD-ROM were reduced by 76.3% (Chen & Raitt 1990). A study done on the effects of the installation of CD-ROM in online research systems in Catalonia confirms this situation (Ripoll 1990-91).

7. Outlook for the future

Some predictions, especially those having to do with market growth, are quite easy to make. Others, which concern the publishing world or the influence and extent of market penetration of the Apple or Windows environments, are more complex. It goes without saying that the growth in the market will follow the rhythm of the last few years.

The author



Adela d'Alòs-Moner

Adela d'Alòs-Moner is an active member of the Barcelona library community and over the past 16 years has held positions of responsibility in academic, specialised and governmental libraries. Since 1988 she has been the Technical Director of DOC6, SA, a consultancy firm dealing with library automation and technologies of information management. She is the author of many professional articles and co-author of a book on CD-ROMs.

Other characteristics which will define the years to come are — apart from wider distribution of discs — the extension of local networks, an increase in titles published, an increase in the capacity and storage of data and the progressive standardisation of retrieval programs.

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