Electronic journals and users: the CIBER experience in Italy

CIBER is a library consortium established in 1999 to share electronic content licensing in the centre and in the south of Italy. Emeroteca Virtuale (EV) is the name of the digital platform used by CIBER to access over 3,300 licensed e-journals. After a brief description of CIBER member institutions, of their user population, and of the EV main features, the paper reports on the journal usage statistics of CIBER members during 2002 and the first six months of 2003.

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Introduction

CIBER[1] (Coordinamento Interuniversitario Basi Dati & Editoria in Rete) is the central and southern Italian library consortium founded in 1999 by five CASPUR (Consorzio Interuniversitario Applicazioni di Super Calcola Universita e Ricerca) members[2]. Presently it comprises twenty-five Italian universities and four affiliated institutions: three research centres and the International School for Advanced Studies (known as SISSA/ISAS). The main aims of CIBER are electronic content licensing and loading, preservation, promotion and dissemination of scholarly publishing, and training. CIBER is a self-funded, voluntary aggregation of academic and research institutions. Almost all universities in Italy negotiate access to e-journals and to secondary databases on a consortial basis. The consortia are regionally based. CILEA operates in the north and west, CIPE in the centre and north east, and CIBER in the centre and south. Often these three consortia conduct negotiations together.

CASPUR is an inter-university consortium for super computing applications, based in Rome and funded by the Italian Ministry of Education, Higher Education and Research (MIUR), which has played a major role in the field of digital library co-operation in Rome and in southern Italy. CASPUR provides CIBER with technical support for databases, and e-journal access and archiving. It develops tools and solutions to enhance digital library services and handles the administration of licences for participant institutions.

Emeroteca Virtuale (EV) is the name of the electronic journals library platform used by CIBER members. The EV is a CASPUR operated hardware and software site designed to aggregate licensed e-journals from multiple publishers. The EV was launched in September 1999 with 536 licensed Elsevier titles. It currently gives access to all e-journals from six publishers (American Chemical Society (ACS), Blackwell Publishing, Elsevier Science, Institute of Physics (IoP), Kluwer Academic Publishers and Nature Group Publishing) and contains a total of 3,380 titles and over 2,530,000 full text articles covering mainly scientific, technical and medical (STM) areas. 2,520 titles from Elsevier, IoP and Kluwer are available full text through the EV platform. Bibliographic metadata for Blackwell Publishing (617 titles) and the ACS (30 titles) journals are locally available with links to full text on the publisher's site. Nature titles are available directly on publisher's web site. Contracts will be finalized with Wiley and Springer in the next few months and new negotiations are about to start with other publishers and information providers

All discontinued titles and their back issues stay in the EV. Back-files go back to 1991 (IoP), 1995 (Elsevier), and 1996/97 (Kluwer). Blackwell Publishing metadata goes back to 1999. IoP and

ACS web archives are accessible through publisher's web site. The EV has title and subject search options and traditional search form options. Other available features include an article alert service and links to CrossRef, preprint servers and CIBER members' library catalogues. Links have also been activated from a locally mounted installation of Web of Science and from several secondary databases (for example, Cambridge Scientific Abstracts (CSA); Current Contents; Sci-Finder Scholar; Econlit, Medline; MLA, PsycINFO). Not all CIBER members suscribe to all contracts. Institutions also joined CIBER at different times. A large majority joined between 2000 and 2001, only very few institutions joined in 2002 and just a couple in 2003.

Most current contracts are based on the publisher's full package. The exceptions are the Nature contract which is based on a more flexible model, and the recently re-negotiated Elsevier contract. All contracts allow new members to join in later on the agreed conditions. A majority of members subscribe to the Elsevier contract - half of them (11 members) opted for the unique titles list (UTL) and have access to their subscribed titles plus a consortial list of 700 titles selected on the basis of the importance of the journals, impact factor, and usage statistics. Among the 11 universities that opted for the UTL, some (the ones with more print subscriptions) made this choice after a careful study of their usage statistics. These libraries made savings and intend to use their saved funds for new contracts. Other members (the ones with fewer print subscriptions) were obliged to pay significantly more than in previous years, because of the Elsevier pricing model which eliminated the cross access fee and became very costly for universities with few print subscriptions. This new contract has been in place for only a few weeks, therefore all statistical data provided in this article refers to a previous situation when all the Elsevier journals were accessible by CIBER members. It will be interesting in a year from now to report on the impact of the UTL on users and their information needs.

CIBER members include only one private institution; the universities are mostly multi-disciplinary (23) except for the Polytechnic of Bari (engineering and architecture) and the University Campus Biomedico of Rome (a medical school). The research centres are in the biomedical and applied sciences areas. The size of the institutions varies enormously, from the largest university in Italy – University of Rome La Sapienza – with 5,000 teaching and research staff members and over 50,000 students, to the smallest one – the University of Campus Biomedico – with 90 teaching and research staff and 232 students. Overall, the service is available to over 270,000 students and to about 26,000 academics and researchers. Due to the Italian education system the service is mainly used by teaching and research staff and doctoral students; undergraduates are required to read professors' lectures notes and assigned reading materials, and they are not expected to do any original research until graduation.

CIBER experience and cross access

Consortia access to journals has been greatly advantageous to all institutions, especially to the small- and medium-size ones which could never afford a site licence contract by themselves. In the first Elsevier contract (1999-2001) only 780 titles subscribed to by CIBER members were accessible between 2000 and 2001. From January 2001 to December 2001, 85% of the articles downloaded by University of Rome Tre (a newly founded university with only 8% of the 780 licensed titles and with almost no back-files) were published in journals not subscribed by this institution. More interestingly 63% of the articles downloaded by the University of Rome La Sapienza (an old university with the highest number of print subscription titles from Elsevier, 65% of the 780 within the consortium) were published in journals not held at La Sapienza.

In 2002 CIBER signed a one-year contract with Elsevier before entering a new negotiation in co-operation with the Italian consortium CIPE for the years 2003-2005. For the first time all Elsevier journals - about 1500 titles (Academic Press and Harcourt Health Science titles were not included in this contract) – were accessible full text by all subscribing members. The statistical data collected showed that the additional titles were not heavily downloaded by CIBER members. This is one of the reasons why some of the large universities opted for the UTL model. However, one year's access to the titles is too short a period to evaluate users' needs and journals usage. In the next two years we will keep collecting statistical data and monitoring

the institutions which have access to the Elsevier Science journal full package and those that opted for the UTL. It will be interesting to see the impact of the two models on usage and users' behaviours.

CIBER and the big deal

Starting from 2001, all new contracts (except for the ongoing Elsevier contract) have been based on the publisher's full package. CIBER decided to adopt this approach for the next three to five years while closely monitoring usage statistics. The main reasons for embracing the big deal were: to expose the Italian academic community to a larger collection of scholarly journals; to promote and to expand the use of e-journals; and to better understand their need for information. In Italy, university libraries have traditionally not had collection development policies. Librarians rarely played an active role in the selection procedure. These activities were, and to some extent are still, considered a task for the academics. Monographs and journals are often selected and purchased by departmental library committees without any real effective planning. Until recently, there were many duplicate journal subscriptions within the same university, sometimes within the same faculty. Furthermore, journal holdings data was frequently not held centrally. The digital era and library budget constraints brought about change. An urgent need was perceived to rationalize and co-ordinate library serials expenditure, and to co-operate and share resources with other university libraries.

Given this context, access to full e-journal collections was considered a good approach to start with. Furthermore, it was decided to monitor usage regularly and to carry out user surveys, web questionaires and interviews to measure users' attitudes and behaviours toward e-journals every two to three years. The first sets of analysed data gave good indications and insights into users' needs and expectations, and will contribute to the design of new contract models. [3]

Usage statistics

The EV platform web log files are processed through scripts that allow data cleaning, eliminating dirty data (e.g. double, triple clicks) and other inconsistent users' behaviours data. A

well known commercial statistical software is used to run these operations and to aggregate data. The CASPUR statisticians working group is responsible for all these activities. Usage data from publishers, whose licensed content is not locally loaded, is not included in this report. The data reported in this paper refers to EV e-journals usage during 2002 and the first six months of 2003 and refers mainly to Elsevier and Kluwer titles, as those two packages are subscribed to by almost all institutions. Although CASPUR has collected data since the end of 1999, the EV reached a stable number of participant members at the beginning of 2002. Therefore data from this period is more consistent and comparable.

The number of articles downloaded is constantly increasing. Between January 2002 and June 2003 the EV platform has been accessed by over 19,000 single IP addresses. Access is based on IP authentication; username and password are used in case of registration for specific services. So far we have no data on access to the EV by communal workstations. Our guess is that the regular EV users connect to the service from their personal workstations.

A web questionnaire survey conducted between 5 March and 15 April 2003 confirmed that 70% of 1,130 respondents used their personal workstations to access to the EV. The survey also showed a general acceptance of e-journals and the growing preference for the electronic format in comparison to the print format. Over 58% of respondents were either researchers, associate professors or full professors. Almost 78% of respondents read the EV e-journals at least once a week. The average daily article downloads in February 2003 reached almost 2,500; by March 2003 the daily average had risen to over 4,500. The total number of articles downloaded in February 2003 was over 66,600 compared to February 2002 when it was 46,000 (Chart 1). Unsurprisingly, the EV usage is strictly related to the academic year teaching activities: it reaches its highest peak in winter and early spring, and then goes down to remarkably low use in August. It slowly returns to its normal level between September and November and then decreases again in December.

During the period July 2002-June 2003 the number of Elsevier and Kluwer titles downloaded by each institution compared to their print titles was quite amazing. Virtually all titles in the
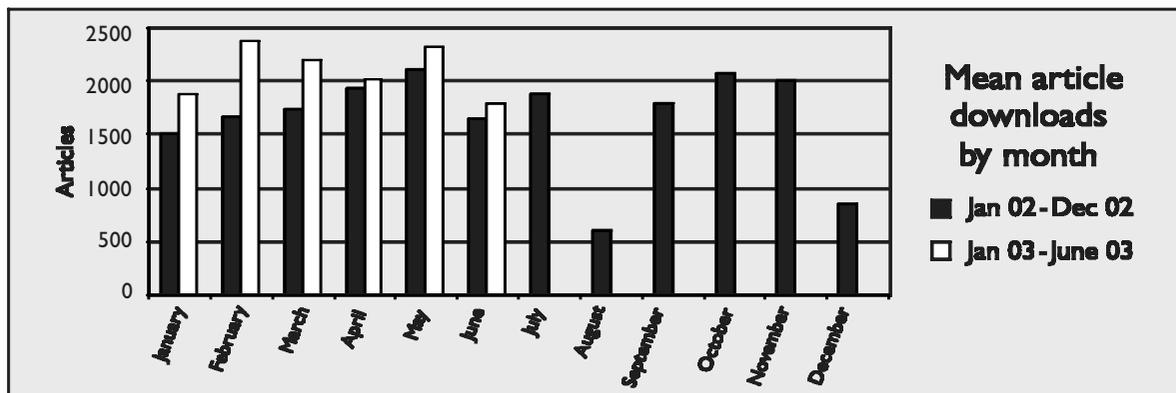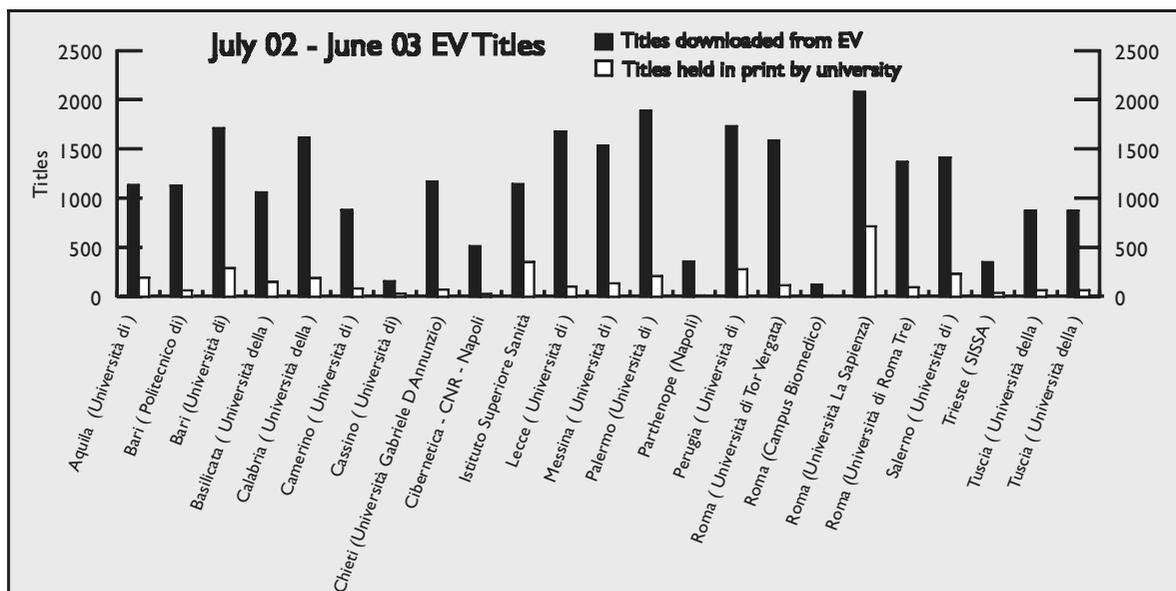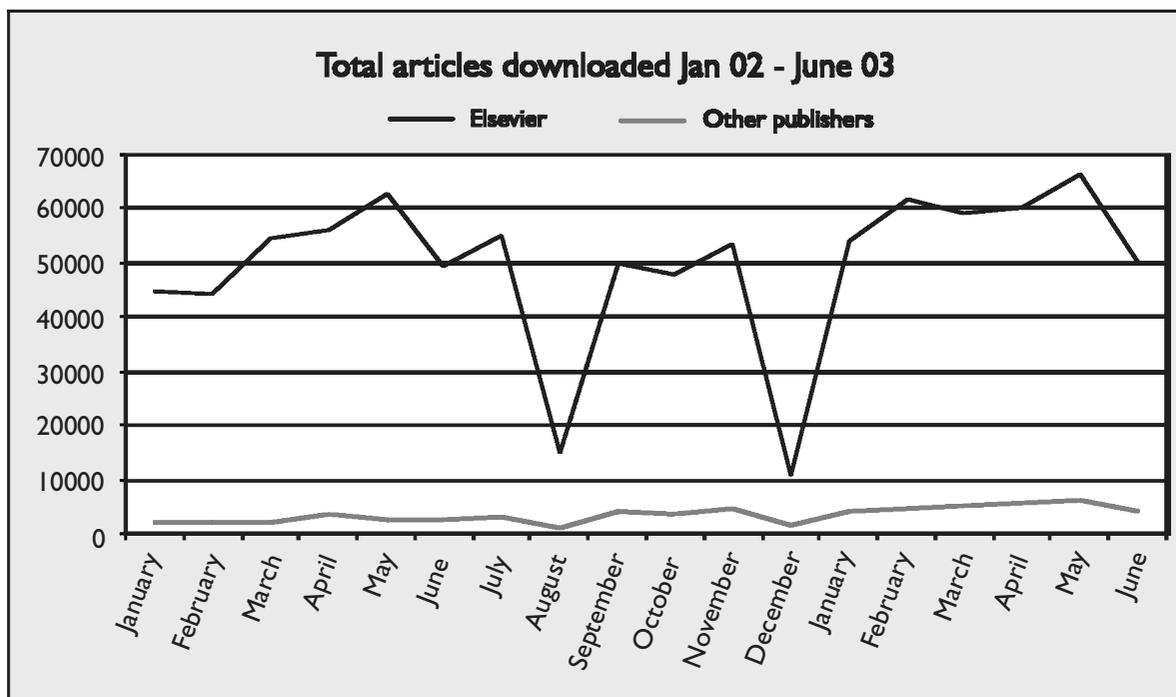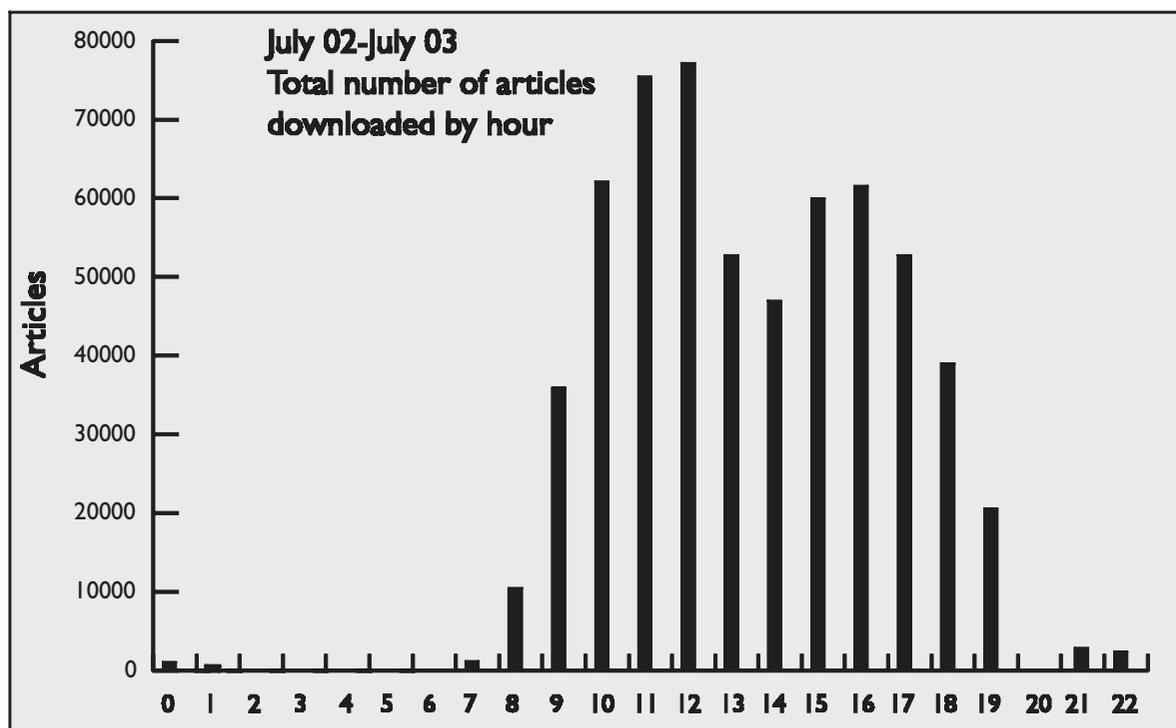
Chart 1

Chart 2

Chart 3

July 02-July 03
Total number of articles
downloaded by hour

Chart 4

e-collections were downloaded by the University of Rome La Sapienza (2078 out of 2520 titles). On average the institutions held about 150 print titles; with access to the e-journal services they downloaded slightly over 1,150 titles each. This data might reflect a lack of a good serials acquisition policy on the part of the libraries, but above all it indicates that users take serious advantage of high quality e-journals, at least in the first years of access (Chart 2).

The Elsevier titles were by far the most downloaded titles during the period January 2002-June 2003. Articles downloads from Elsevier were 850,890 compared to 66,622 for Kluwer (Chart 3). The chart shows an increase in dowloading for all publishers. However, it should be noted that users have dual access to Kluwer and IoP e-journals – both through the EV platform *and* the publisher's web site, whereas they have only one access to Elsevier journals: the EV. Usage data provided by Kluwer and IoP was not added to EV datasets, as our study was limited to the EV platform. Therefore, the *actual* Kluwer and IoP usage data is higher than the number reported in Chart 3. Users tend to use the EV platform rather than the publishers' web site, as they take advantage of searching articles from different publishers using the same interface and often using federated searches. Users generally connect to the publishers'

web site in the case of incomplete issues or to look up other services offered on the publishers' web site. In future, Kluwer and IoP usage data will be included in our analysis and we look forward to having better statistical data from publishers, that it is hoped will be COUNTER-compliant.

The EV is a '24x7' service. As Chart 4 shows, EV users read and download journals during office hours between 9 am and 7 pm, with a peak time between 11 am and 12 pm (26 %). Many professors and researchers have remote access to the EV from their homes through the university network via a modem. Most CIBER universities do not use secure proxy servers, therefore they do not allow users to access the EV through private internet providers. Having said that, the majority of researchers and professors in the STM areas tend to go to their offices or laboratories every day, whereas professors and researchers in the humanities and social sciences tend to work at home or in libraries. It seems that scientists do not use the EV at home because they do not need to do so, although some of them would appreciate having better connectivity from their homes. Social scientists and humanists differ in their behaviour. Generally speaking they are less enthusiastic about e-journals, although they would use e-resources more if a secure and fast access was available from home. Scientists would appreciate secure remote

access when they are abroad and therefore cannot use the EV service. Remote access has not been perceived as a strong need so far, but it will be addressed in the near future when more journals in the humanities and social sciences are available through the EV platform.

Our web questionnaire confirmed the results of the web log analysis. Scientists increasingly connect to the EV from their offices and personal workstations and use the physical library less and less, especially scholars from the biomedical areas.

Conclusions

CIBER statistical data confirms that e-journals usage is constantly increasing and if new journal titles from other publishers are made available through the EV platform, the use of e-journals will increase more. The big deal approach definitely seems to be a right choice to make at an early stage. In the case of CIBER it attracted more universities and more users to the EV. The new Elsevier contract will give CIBER the opportunity to study the effect of the UTL model in 11 universities and to monitor the big deal approach in the other 11 institutions.

There are still a lot of *potential* users and there is still some cultural resistance to e-journals especially among humanities and social sciences scholars. More outreach and marketing activities need to be carried out by CIBER librarians in order to promote and disseminate use of licensed and open-access journals. More social sciences and humanities journals need to be included, possibly in languages other than English, preferably in Italian.

More in-depth studies will be conducted in the future when more data covering a longer period of time will be available. Furthermore, when usage

statistics showing downloads from publishers' web sites are improved and become comparable to the EV data, they will be used in future reports.

Usage monitoring, together with studies on the EV users' behaviours, including attitudes towards e-journals and e-content resources in general and how users search, browse, read and communicate in the different subject areas, will help CIBER make better decisions on electronic access licensing and better serve its academic and research community.

We are only just at the beginning of the process of collecting and analysing different types of datasets; this report is the first step.

References

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