Current Contents Service
History, Impact and Use in Scientific Communication

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INTRODUCTION

The Information Industry Association's first "Hall of Fame" Award describes Current Contents as a "landmark innovation in information industry"[1] No one could imagine that Current Contents which was once looked upon as an 'odd and dubious innovation"[2] would be recognised one day as America's great contribution to scientific communication. Today, it is the most familiar link in scientific communication and the "most heavily used information service in the world"[3]. It has gradually grown by adding new features from time to time and by interacting with its subscribers/users and critics. It has been always diagnostic about information needs of the scientists and thereby improving upon it from time to time.

Historical Background

The development of Current Contents was 'gradual, not spontaneous or explosive"[4]. It would be interesting to know, how Garfield conceived the idea of CC which is so popular among the scientific community today? He himself says that it was developed to provide "capsule account of the Welch Medical Library Indexing Project"[5]. It was based on the simple concept of reproducing the contents pages of journals to enable to scientists to keep abreast with the latest publications in their fields of interest. Such organised services were first started in areas of chemical, pharmaco-medical and life sciences. Athorton started "Current List of Medical Literature"[6] of the Army Medical Library in the form of a 20 page pamphlet giving the contents pages of the journals received in the Library of Microfilm. Garfield admits that "some might call this Current list, the predecessor of CC[7]. Garfield's "first contents page service was brought out in 1952 as a Welch Project"[8]. This service was entitled "Contents in Advance" covering Library Science and Documentation journals.

Though growth of literature had started during the 18th century no one then could have imagined the present alarming growth of periodical literature.

Although the physician Wilhelm Ploucquet was already aware in 1793 about the science information problem when he stated that "the volume of the literature in any branch of knowledge is large especially in medicine. To make matters worse, not a day passes that more articles are not thrown on to what is already a mountain of material...... There is just too little time and too much to read"[9]. The scientist today is confronted with the problem of accessing the right information. What to read and what to leave out is his main concern. Moreover, the need for the latest

scientific information is very important for the researcher. In view of this, services like Current Contents were conceived. Some random events were the genesis of this service. One of them was a contract from Bell Telephone Laboratories given to Garfield to "produce contents page service for the laboratory staff on the journal literature of management"[10]. Garfield· was already engaged in bringing out Contents in Advance. He was permitted to market his service commercially by the company. "For Bell, the service was called Survey of Current Management Literature: outside, it was sold as Management's Documentation Purview"[11]. Garfield set up a company named "Documentation Inc."[12] to produce and sell the service which subsequently changed its name to Eugene Garfield Associates. The name of the service was also changed further to Current Contents. This was briefly the evolution of Current Contents and Institute for Scientific Information (ISI).

Garfield[13] was asked by the librarian of a pharmaceutical company to produce a contents page service of the medical and pharmaceutical literature which led to the development of Current Contents/Life Sciences. This was the first current awareness service in the scientific world. The next such service appeared as Current Contents/Education[14] followed by Current Contents/Behavioural Science and Management Sciences on 14th March, 1969. Its other editions in Agricultural, Food and Veterinary Sciences, Engineering and Technology were also announced to be brought out in 1969[15], but appeared in 1970. Subsequently, the first issue of Current Contents/Clinical Practice though announced to appear in August, 1972, appeared in January, 1973[16].

Features

It is only because of the useful features of

CC, that it has acquired its present status as a valuable information source. It has continuously tried to improve itself. It's main features are discussed below.

Journal Index

This index appears in every issue of CC and refers to the journals included in the issue.

Title Word Index

This includes the Keywords from every title of the articles and books covered in the issue. Words which are commonly used in combination are indexed as such, e.g. sex pheromone, sediment water, electron-microscopy etc. This is done to bring similar concepts together according to standardised terminology. CC also covers such book titles as are brought out under editorial direction, namely conference/seminar proceedings.

Citation Classics

This refers to the highly cited publications as identified by ISI's other publications on citation indexes which are: Science Citation Index, Social Science Citation Index and Arts & Humanities Citation Index.

ISI Press Digest

This includes comments on selected articles identified as hot topics of interest to readers.

Author Index and Address Directory

To obtain reprints of articles readers can use the author index for obtaining address of authors. If the reprint is available with the second author, his address is also included in the directory. Otherwise, it is the first author's address which is included.

Publisher's Address Directory

This contains the addresses of the publishers whose journals have been covered in the issue of CC.

Weekly Subject Index

There is always need for various indexes but subject index is undoubtedly very important and useful. CC had introduced this feature in 1970. This includes significant words from all the articles, books and their chapter titles covered in the particular issue. This also serves as "Interim Index to Quarterly Permutation Subject Index"[17] of ISI.

Triannual Cumulative Journal Index

This includes the journals which have been covered during the last four months in CC.

CC on Tape

ISI has been always feeling the pulse of its clientele. It was providing very good current awareness service but retrospective search was not as easy as it should have been. The time had come when a machine readable device was required in information management, and CC on Tape was the solution to the problem to a great extent. CC on Tape started coming under two titles: **Source Tape** and **Citation Tape**. It became easier to provide Current Awareness and Selective Dissemination from CC on Tape. Its annual cumulation made it useful for a variety of searches. As the facility of running tapes was not commonly available in libraries, so the diskette format was thought of to make CC more useful.

CC on Diskette

To bring CC on diskette particularly for IBM PC/XT/AT with 100% compatibility was a very significant achievement. In September,

1988 *Current Contents on diskette* for Apple Macintosh was released[18]. Subsequently, IBM version was released in January, 1989. CC on Diskette made searching and instant browsing easier, quicker and precise. The important features of CC on Diskette are enumerated below:

* Fast search speed results of simple searches are obtained in less than two seconds.

* Automatic browsing, providing full bibliographic descriptions of all articles.

* Automatic ordering capabilities through the *Request - a Print and Genuine Articles.*

* The ability to export for word-processors and database management programme"[19]

The software programme is user-friendly and has the following facilities:

Searching

Search is possible in multiple fields, the screen print of search menu is given below:

```
-----------Agr/Bio: Issue 35   (12 Sep 91) ------ f1 = Help
Enter execute queries. Press (F5) to view results.
CC Issue     Browse     Search     Articles     Orders
```

			—————Search Session—	
: Query	Hits	Field	Search	Statement
1	1	Basic	HORTICULTURE	
				: Basic
2	4	Basic	APPLE	: Title
				: Author
3	1	Basic	PEAR	: Address
				: Journal
4	1	Basic	PEACH	: GA Page
				: Discipline
5	1	Basic	KIWI	: Document
				: Language
6	8	Set No. 1 THRU 5		: Set Number

7	4	Basic	APPLE*	

```
Alt-Fields Alt-Dictionary Alt-Print Alt-Save Alt-Clear Alt-Run Profile
```

Basic field allows search from article's record; Title Field and Keywords Plus. Keywords Plus contains significant words from titles cited in an article's bibliography. With this combination, search becomes more comprehensive and inclusive. Boolean operators are also applicable in the search ("AND", "OR", "NOT" as well as "THRU"). THRU allows search in multiple fields at a time. As shown above 1-5 fields have been searched together.

The facility of forming SET NUMBER helps in pin-pointed search. Another important feature of the package is that dictionaries of all other searchable fields are available. if the elements in the various fields are not known the choice can be made by looking up in the dictionaries. By Set No. search has been made from 5 fields simultaneously as shown above. If */ is put with the word e.g. APPLE* the search would be made on this word from Title, Author, Keywords or Keywords Plus fields. This expands the search range.

Browsing

Browsing is possible in three ways:

Entire issue can be browsed, displaying the content pages of each journal one by one. Address of the author can also be ascertained while viewing the content pages.

The issue can be browsed discipline-wise as well as journal-wise as shown below:

```
-----------Agr/Bio: Issue 35   (12 Sep 91) ------ f1 = Help
Look at content pages within a discipline and select articles.

CC Issue  Browse          Search     Articles  Orders
_____

   Browse              :     : DISCIPLINE CONTENTS
                                 _____
   : CC Issue (F2)      :     : Current Book Contents*
   : By Discipline (F3) :     · Agricultural Chemistry
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: By Journal (F4)    :      : Agriculture/Agronomy
                            : Animal Sciences
                            : Aquatic Sciences
                            : Biology
                            : Biotechnology * Applied
                              Microbiology
                            : Entomology/Pest Control
                            : Food/Nutrition
                            : Multidisciplinary
                            : Plant Sciences
                            : Veterinary Medicine/
                              Animal
```

All the above disciplines can be browsed one by one by display of the content pages of the journals falling under the purview of the particular discipline.

PIC Articles

While searching the articles, one obviously comes across both relevant and irrelevant articles out of which selection has to be made. One can select the articles of one's choice by PIC (Personal Check List) facility which when required can be exported to his personal profile/file. The following screen print shows PIC articles along with other facilities for generating **Genuine Article and Request - A Print** formats:

```
-----------Agr/Bio: Issue 35   (12 Sep 91) ------ f1 = Help
View search results & select articles. Press (F9) for search session
CC Issue   Browse     Search        Articles   Orders
_____

                              : ARTICLES :
                              _____
                              : Search results... (F5) :
                              : PIC articles...  (F6) :
                              : Genuine Article.. (F7) :
                              : Request-A-Print.. (F8) :
_____
```

(F5) **Search results** would show the records searched during the search session.

Genuine Articles

This is ISI's Document Delivery Service and order can be placed for the procurement of the copy of the article listed in CC. The order form can be automatically generated. A specimen of the same is given below:

****

THE GENUINE ARTICLE

****

9/22/91   Page 1 of 1

Account Number: a

Place order with: The Genuine Article Phone: 215-386-0100

PO Box 7649   Fax: 215-386-6362

Philadelphia

PA: 19104 U.S.A.

Mail articles to: Dr. A.S. Chandel

Librarian

UHF University

Solan (Nauni)

173230

GA: Page: Author   Title

P2484 503   G. Deyoung   Beekeeping and Horticulture

Request-A-Print

The request form for obtaining the copy of the article from the author can also be automatically generated from your own printer; the screen print of RAP is given below:

9/22/91   Dr. A.S. Chandel KKR Bhardwaj

Dear Dr Bhardwaj: Dr A S Chandel KKR Bhardwaj

Please send me a copy Librarian   Himachal Pradesh

of your article: UHF University Soil Microbial Lab

"Recycling of Crop Solan (Nauni)   Palampur 176 062

Wastes for Improving 173230   Himachal Pradesh

yields and Nitrogen   India

Use Efficiency in a

Wheat Maize System" Requested by: Card sent 9/22/91

published in   Dr A S Chandel KKR Bhardwaj

Bioresource Technol Librarian   Recycling of Crop

37/2 (1991), p. 135-139 UHF University Wastes for Improving

              Solan (Nauni)   Cr Bioresource Technol

37/2(1991).

Dr A S Chandel   173230   p. 135-139.

Printing and Exporting of Articles

While viewing records, one can select articles for G-A, R-A-P and for printing by making appropriate files for the selected articles. The selected records can also be exported in different 9 files format which are

Screen Image   (Full description of records)

R-A-P-/Comma   (Exporting to dBase)

Dialog/Medline   (Dialog print format)

NLM-MEDLINE

Sci-Cite

Pro-Cite

Reference Manager

When data are exported to the above file formats, their utility increases, e.g. if data are exported to dBase or word star/Word Perfect, the utilities of the package in which exported become applicable. Exporting date in dBase is quite useful as data so exported can be further searched on every field of the database.

CC on Diskette with Abstract

After a period of about one and a half years of CC on diskette, ISI made another improvement by adding abstracts of the articles included in CC on Diskette, enabling its readers to be sure of the relevance of the searched articles for their purpose before referring to or obtaining them. The publisher's address which is absent in CC on Diskette was made available in CC on Diskette with Abstracts. It comes in the following four editions.

Life Sciences   Clinical Medicine

Physical, Chemical & Agriculture, Biology and

Earth Sciences   Environmental Sciences

This service was started on May 1, 1991 in the above editions. **CC on Diskette With Abstracts** is almost similar to **CC on Diskette** except that the former has the added advantage of having English-language author abstracts. It has also added **Publisher Address** which was absent in earlier format. Two more export life formats have been introduced: Bibliographic and Full + Abstracts. The bibliographic format includes **Author, Title and Source** only. There are some journals without abstracts in the above versions.

. **Journal Coverage**

The number. of journals covered by **Current Contents on Diskette with Abstracts** in its various editions is given below:

Edition	Total	Unique to this edn.
"Agriculture, Biology & Environmental Sciences	930	770
Life Sciences	1230	810
Physical, Chemical and Earth Sciences	820	685
Clinical Sciences	890	600 " (20)

Impact

Today library services give more emphasis to information rather than the documents where information is contained. The emphasis is on providing access expeditiously to the desired information which may be current or retrospective. A user who wants to keep himself up to date on his subject of specialisation always looks for the latest information. There are a variety of channels

for such communication and **Current Contents Services** is one of them as discussed earlier.

The major developments in information transfer during recent times have been the growing application of computers in information and knowledge management. **Computer based Current Awareness and Selective Dissemination of Information** services play an important role in scientific communication. Current awareness developments today have assumed importance equal to, if not more than, retrospective retrieval. Speedier communication particularly in sciences is the requirement of the day. Computerised matching of **content profile** of an information/database with the **subject/interest profile** of user individuals as well as groups with right information. There has been rapid growth in the number of bibliographical databases with or without abstracts being brought out by information centres and industries. **CC.....** service is one of them which has the potential to serve a large number of information seekers.

Information Needs

The common information needs of the user may be listed as under:

a. He may need generic or specific information.

b. His preference is for filtered and the most relevant information. Much noise in search is a cause of displeasure and sometimes irritation.

c. He is impatient for the information and wants to spend minimum time waiting for it.

d. He wants to be sure about the exact content of the original text of the documents, and therefore expects proper

indexing and abstracting of each record so that he does not miss anything important. This envisages indexing of every sought term.

e. Some users sometimes want to conduct a comprehensive search and expect selective retrieval performance from large databases (CC... does not fulfill this requirement of retrospective search).

f. To keep himself up-to-date he needs to know what has been recently published in particular journal(s) of his interest or the latest in his area of specialisation.

g. He appreciates receiving information on a regular basis according to his search profile, which he may wish to change or modify with his changing needs.

h. After selective retrieval, he either notes down the bibliographical details or takes out the print-out and proceeds to the next step of obtaining original documents which may or may not be available in the information centre/library. This requires an efficient, rapid and economical **Document Delivery Service**. This coordinates primary and secondary information sources and services and completes the search. It has been found that information about non-available documents is more important and valuable than about available ones which the user may access without much help of library staff.

If the services being provided by **Current Contents on Diskette with Abstracts** are compared with the above listed information needs of a user, most of the needs are seen to be satisfied. **Computerised current awareness service and selective dissemination of information service** are very valuable and can be generated in various ways.

The limitation is that it takes time if many diskettes are to be scanned. The annual cumulation of this database which is yet to be done, may overcome this limitation to a certain extent. Therefore, retrospective search is not economical and effective as compared to search on CD-ROM databases

Use in the Library of UHF

(Dr. Y.S. Parmar, University of Horticulture and Forestry)

The university library has been subscribing to **Current Contents, Agriculture, Biology and Environmental Sciences** on diskettes for over two years. Earlier, it was coming without abstracts but later abstracts were included. Elementary training in the use this package and its software was given to some students and teachers/scientists to enable them to carry out independent searches. However, a majority of the users expect this service from the library staff. Some of the teachers were seen taking keen interest in browsing the new issue on multiple approaches. However, another group still prefers to consult the hard copy of this service. The use increased when they were educated about the SDI services which can be generated from each issue. Many scientists gave their interest profile in the form of keywords, journals etc. They were initially provided **SDI service** at their tables which received a good response. There are still a number of teachers/scientists who do not regularly/frequently visit the library. For such category of users, it provided good initiation to the service. Students whose requirement of information is usually specific to their research topic at M.Sc. and Ph.D. levels were found least interested in CAS and SDI. The searching of a few issues does not meet their requirements. However, they quite often would like to scan all the available issues of CC... according to profile. Such comprehensive search is time consuming in comparison to search on CD-ROM. However, repetitive search formulation

for each diskette can be avoided by creating a search profile for a user. Therefore, they were mostly found giving their preferences for search on CD-ROM based databases. This service is particularly useful for **Current Search** to keep up-to-date information in the subject concerned. Since the students' searches are need-based, rather than for general awareness, this service is not of much significance to them.

Our observations with regard to the use of **CC on diskette with abstracts** in our library would be true of many university libraries in this country, and may be summed up as under:

a. Undergraduate students do not refer to this service. Their studies are mainly confined to textbooks or a few periodical articles which are recommended by teachers.

b. Postgraduate students (M.Sc. & Ph.D.) use the service mainly for writing their dissertations and preparing for seminars. For their course work, they mainly depend upon the references given in the classrooms. This trend will continue till library-oriented teaching is given due importance by the teacher community.

c. The information required by all categories of users is mission-oriented and need-based. Teachers/scientists search for material mainly for their research projects and writing of papers. Unfortunately, reading general current awareness is less. The service is still under utilized. Though diskette version has advantages, yet users still prefer a printed version, in spite of the availability of the former.

SDI service to outstations

The university has many regional research

stations situated in different climatic zones of the state. Other agriculture universities have such research stations/centres and sub-stations in different parts of the country. SDI service to such stations can be generated by preparing the profile of an individual scientist or group of scientists (group SDI profile). Research profiles of centres/individual scientist were prepared based on **keywords, names of journals** etc. and relevant information is being disseminated on regular basis from each issue of **CC....** received in central library. A backup service of supply of original documents is also being provided from the central library if the documents are available, otherwise such material is obtained from other sources and supplied. This service has been meeting the current information needs of scientists working in these out-stations/centres and thus subscription to journals has been reduced to a great extent.

CONCLUSION

Libraries all over the world are today in financial difficulties. Their budgets either remain the same or are being reduced from year to year while the cost of books and subscriptions to journals are soaring every year. New journals in every field are also coming up. Libraries will have to be content with subscribing to information sources such as **CC on diskette with Abstracts** and some other indexing and abstracting journals along with a small number of core journals. International, National and Regional Centres will have to be set up for various disciplines/subjects which would acquire maximum number of journals in the subjects/disciplines concerned so as to provide **Document Delivery Service** to all libraries in the country. This would ultimately prove economical and effective to meet the requirements. It is also a common observation that quite a good number of journals subscribed to by libraries are rarely consulted.

Thus, basic requirements of the academic community are:

The researcher is faced with the problem of finding out what **has been published in his area of research interest**? This includes both current and retrospective literature. When he finds the answer to "WHAT", the next step to find, **where the material he is searching for is available**? It does not much matter to him if the desired literature is not readily available, if it can be procured quickly. For this, **Document Delivery Service** must be as quick as possible. ISI's **Document Delivery Service** is one of the important and useful features of CC in this regards.

Application of CD-ROM technology and networking and services such as **CC on Diskette with Abstracts** are the only means in the present context of financial crisis of meeting the information needs of the scientific community. For providing CURRENT AWARENESS SERVICE AND SELECTIVE DISSEMINATION OF INFORMATION. CC on Diskette with Abstracts has a important role in the information industry, with hardly any competitors.

REFERENCES

1. ... Current Comments: Current Contents receives first Information Industry Hall Fame Award and publishes its 700th consecutive issue. CC June 9, 1971. 182p.
2. Garfield, (E). Current Comments: What can history of CC tell us about future of the Social Sciences? CC.... (5), De. 12, 1973, 516p.
3. ... Current Comments: Some kudos for CC on its 650th consecutive issue. CC, 108(22), June 3, 1970, p. 108.
4. Ibid.
5. Ibid.
6. Garfield, (E). Current Comments: Origin of Current Contents. ISI, and Computer-aided information retrieval. How it all began at Welch Medical Library Indexing Project. CC.. (34), August 26, 1985, p. 3.
7. Ibid.
8. Ibid.
9. Plocquet, (W.G.). Initia bibilo-thecae medici-Practica et Chirurgica realis siva repertorii medicinae practicaer et Chirurgical. Jubingen; Cotta, 1793-1797 8 Vol. quoted by Eugene Garfield In Current Contents: Current Contents/Clinical Practice: A tool for optimum selection ... Dated Dec. 6, 1972.
10. Lazerow, (Samuel). Institute for Scientific Information. In *Encyclopedia of Library and Information Sciences*/Edited by Ellen Kent, Harold Lancour and Jay E. Daily, N.Y.: Marcel Dekker, 1974. v. 12, p. 91.
11. Ibid.
12. Ibid.
13. Ibid.
14. ... Current Comments. new Editions of CC mark continuing growth of ISI. CC ... March 25, 1969, p. 32.
15. ... Current Comments. CC/Agricultural, Food and Veterinary Sciences Part of growing of ISI program. CC..., January 7, 1970, p. 68.
16. Garfield, (E). Current Comments: CC/Clinical Practice-A new tool. CC... Dec. 6, 1972, 49, p. 385.
17. ... Current Comments. ISI Announces Availability of Weekly Subject Index to CC/Life Sciences. CC... August 25, 1971, p. 231.
18. Garfield, (Eugene). Current Contents on diskette for IBM PC; on a screen near you... CC... 19(49), December 5, 1988.
19. User Guide Current Contents on diskette for IBM PC/XT/AT and compatibles .... *ISI*, 1990.
20. Current Contents on Diskette with Abstracts: Journal coverage, April 1991. Philadelphia: ISI, 1991.