

## Collective Intelligence in Library & Information Service

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**Abstract:** - *Human-machine partnership will not only help automate and coordinate our lives, but it will also transform how Knowledge Repository products and services will support professional development. Collective Intelligence is the process which integrates Machine Learning, Cloud Computing and Big Data to generate truly “explainable AI” products and services. Collective intelligence is thus an efficient way to enhance library operations by improving existing services and finding new potential innovative ideas. The technologies like AI are changing fundamental of knowledge domain, we need to prepare ourselves and institution / organization to leverage the advantages. This paper discusses how collective intelligence can be considered for the delivery of SDI services in the library.*

**Keywords:** Collective Intelligence, Robot, Artificial Intelligence, SDI Service, Google Alerts

### Introduction

We are in the age of digital era, where most of our needs are being met by a simple app. Digital technologies are the 4<sup>th</sup> need of our everyday lives. These connect people when they are need in of a particular service, e.g. we can book a movie ticket or train tickets easily with the help of various apps. We live in times where technology has already started to work as an extension of users’ needs.

Several innovations are possible today because of advances in AI – not just in algorithms, but because data and computing power are both growing exponentially. Particularly exciting are the ways in which AI is impacting various domains.

Human-machine partnership will not only help automate and coordinate our lives, but it will also transform how Knowledge Repository products and services will support professional development.

## Human Amalgamation with Robot



There should be meaningful collaboration between intelligent machines and professionals with both bringing their superior skills to the partnership. Technology is escorting in a new age of automation. The technologies like AI are changing the fundamentals of knowledge domain; we need to prepare ourselves and the institution / organisation to leverage the advantages.

### Collective Intelligence

From the last couple of decades we are talking about collective intelligence; new communication technologies—particularly the Internet—now allow huge numbers of people all over the planet to work together in new ways. The successes of systems like Google and Wikipedia suggest that the time is now ripe for many more such systems, and the goal of the smart librarian is to understand how to take advantage of these possibilities. Collective Intelligence is the process which integrates Machine Learning, Cloud Computing and Big Data to generate truly “explainable AI” products and services. It will build human-in-the-

loop, machine learning workflow that can scale quickly and robustly. It will be a more self-directed intelligence far enhanced than one with less independence. It is more likely to see facts for what they are, interpret accurately, create usefully or remember sharply.

Collectively intelligence is smartly used by many companies, countries and many other domains intelligently. Most exciting examples of collective intelligence take the idea of humans and computers working together a step further; they examine how machines are making us smarter than we have ever been, and how this newfound knowledge is going to impact the world.

### Collective Intelligence or Collecting Intelligence

The ‘Open Data’, ‘Open Knowledge’ and ‘Open Access’ movements endorse the dissemination of information for societal advantage. Sharing information can help experts in a particular endeavour, and facilitate discovery and improve value through data mining.

On-going developments in Artificial Intelligence (AI) are quickening the development of invention machines to which few individual information donors have access, this movement can be termed as open information. The open information promotes collective intelligence, or collection of information but it provides you better results with efficiency.

## **Collective Intelligence @ Library & Information Service**

### *Knowledge sharing and collaboration*

Library reference services are one of the important services of the library, the quality depends on interaction between library staff member & users. It should be based on teamwork and shared knowledge.

Most of the today's library & information centers are offering a number of new documentation & information services, out of that two important services offered by library & information centers are

- Current Awareness Services (CAS)
- Selective Dissemination of Information (SDI)

In this paper we will discuss how collective intelligence can be considered for the delivery of SDI services in the library.

### ***Selective Dissemination of Information (SDI)***

Basically it is a part of current awareness service which is to keep users abreast with the latest developments in the field of his interest. It can be also termed as personalized service for an individual or a group of users having matching information need. It is the rapid service which provides the identified & in-depth information to the user.

### ***Definition of Selective Dissemination of Information (SDI)***

According to Routledge International Encyclopaedia of Information and Library Science, "active distribution and the spreading of information of all kinds" are called dissemination of information.

H.P. Luhn of IBM is believed to have used this SDI for the first time. "The Selective Dissemination of Information is the service within an organization which concerns itself with the channelling of new items of information, from whatever sources, to those points within the organization where the probability of usefulness in connection with current work or interest is high. On the other hand, the service endeavours to withhold such information from the points where this probability is low (Luhn, 1961, p. 135)."

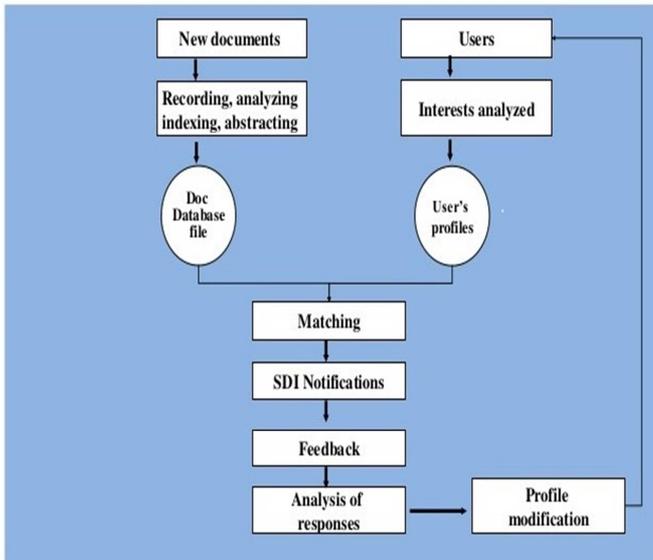
### ***Characteristics of SDI Services***

- Tailored Information Service
- It is also a CAS Service
- Exact information identical service required by the users
- It can be improved by successful feedback
- Largely used by profiled researchers

### ***Components of SDI Services***

- User Profile
- Document or Database Profile

*Operational Chart @ SDI Service*



*Collective Intelligence in Selective Dissemination of Services*

*SDI Services @ Traditional Way*

Earlier for SDI service we created the User Profile & Literature Profile, then with the help of with these two profiles we are providing the SDI Service manually to the users.

*SDI Services @ Machine Age*

*RSS Feeds @ SDI Service*



RSS (Rich Site Summary often called Really Simple Syndication) is a type of web feed which permits users to access updates to online content in a standardized, computer-readable format. These feeds can, for example, allow a user to keep track of many different websites in a single news aggregator.

The news aggregator will mechanically check the RSS feed for new content, allowing the content to be robotically passed from website to website or from website to user. This passing of content is called web syndication.

Creating an RSS feed is very modest and hundreds of thousands of Web sites now offer this feature, including major news organizations such as the New York Times, the BBC, and Reuters, as well as many weblogs.

*Google Alerts @ SDI Service*



Google Alerts is a content change detection and notification service, offered by the search engine company Google. The service sends emails to the user when it finds new results—such as web pages, newspaper articles, blogs, or scientific research—that match the user's search term(s).

*Tips for Creating Alerts are*

- Try to be as precise as possible.
- Use quotes around a group of words, For example, "White house".
- Use a minus sign (-) in front of words that you want to leave out. For example, Paris - Texas.
- Use the site: operator to limit your search to specific sites. For example, congress site:nytimes.com.

### *How do I set up Google Alerts?*

1. Setting up Google Alerts is a simple process. Go to <http://www.google.com/alerts/> where you'll see this page:
2. Sign in if you have a Gmail account.
3. Enter the search terms you want the Google Alert to track, separated by commas.

### *Google Alerts @ How do I set up Google Alerts?*

4. Choose the Type of results you want Google Alerts to find and share with you.
5. Choose how often you'd like to receive your Google Alerts.
6. Choose how many results you want to get.
7. Choose where you'd like the Google Alerts delivered.
8. Click the Create Alert button and finish.

### *Options Available @ Google Alerts:*

- How Often
- Sources
- Language
- Region
- How Many
- Deliver to

Some professionals may be want to use some alternatives for Google Alerts. The following options can be used instead of Google Alerts.

- Mention
- SocialMention
- Talkwalker Alerts
- Topsy

- Meltwater News

### **Conclusion**

With the help of Internet / Web we can solve some complex problems, with its openness & scale make it possible to aggregate the knowledge of people of diverse domain & opinions which is crucial for collective intelligence.

The web makes it easier to aggregate information from different sources, the beauty of the web is that information can come from anywhere, even from that source you didn't realize that you will get it from there. There is always trouble to find useful information but with help of web the LIS professionals will find their way to get the right & useful information. The true potential of collective intelligence of Web is greater than its reality.

To conclude, over the next decade, emerging technologies will underpin the formation of new human-machine partnerships that make the most of their respective complementary strengths. These partnerships will enhance people's daily activities, coordination of resources and in-the-moment learning, which will reset expectations for work and require corporate structures to adapt to the expanding capabilities of human-machine teams.

Collective intelligence is thus an efficient way to enhance library operations by improving existing

services and finding new potential innovative ideas.

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