Voice Search Paradigm Shift in Content Searching in Libraries – A Study

[1]Jeevitha,V., [2]Kavitha, E. S.
Department of Library & Information Science
Periyar University
Salem - 11, Tamil Nadu, India
{pinckjeevi@gmail.com} {kavithaesk@gmail.com}

ABSTRACT: *This paper evaluates and analyses the features and drawbacks of various major searching methodologies deployed in libraries. This paper also provides an in-depth analysis of the difficulties encountered by the users in effectively using them and the resultant fallouts arising out of the complexities of their usage. This paper introduces Voice based searching solutions as the enhanced and viable alternative to the existing systems addressing all the constraints of the current search methodologies enabled applications for in build the current system.*

Key words: Voice Search, Text Based Searches, OPAC, Traditional Searching

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1. Introduction

Searching the exact resource required in the vast and multitude collection resources of the library has always been challenging task cataloging coupled with modern tools like OPAC greatly eased the searching process and there by allowed increased usages of the library resources. Both OPAC and traditional cataloguing have inherent drawbacks which are apparently invisible. This article discusses the drawbacks of the existing search systems and also discusses how the emerging technology of voice based searching greatly overcomes all those drawbacks.

2. Traditional Searching of Library Resources an Overview

Searching and finding the required resource in a library has always been an intricate task. It is more or less a strategical accomplishment. This holes greater significance in adapting manual catalogue based searching in libraries. The end user has to wade through the huge volumes of library catalogues manually just to ascertain the presence/absences of the required resource. Not only does it dissuade the user, but also scares him from ever visiting the library again. In fact most resources of the library go unused because of this constraint and thereby hampering the growth of the civil society. Huge financial resources are

deployed on a continual basis in establishing and continuing a well stocked library. In the context of third world countries, under-utilization of library resources is simply money gone down the drain which could have instead been deployed for better civic purposes.

Archiving the catalogue in database systems in electronic formats greatly nullified this constraint. Coupled with modern technologies like OPAC eased catalogue searching and made library resource usages easier, user-friendly and a rewarding experience. In searching through an electronic catalogue, the user locates the resource of his/her choice either choosing the predefined parameters like title, publication, author, edition etc., or through keywords. This proved to be a giant leap in resources searching and greatly improved faster, precise and better usages of the library resources.

3. Drawbacks of Text Based Searches

We discuss briefly the problems encountered by different user groups in adapting text based searches.

3.1 People with Learning Disabilities

Some people have difficulty reading text due to dyslexia and other learning disabilities Due to deficiencies; they become marginalized section of the society, often depriving better quality of life. Traditional libraries, though treasure of knowledge, are least equipped to serve these special categories of people. Even assuming they make it to the library, searching for the resources in it is practically getting out of a complex maze. Due to these reasons, they often tend to stay away from the library. Offering them an easier option for utilizing the library resources is a great way to engage them. This will also pave way for inclusive growth for sections traditionally ignored by the libraries.

3.2 People with Lesser Literacy Levels

Some people have inadequate literary levels. They may still the able to search for the resource of their choice, if the intricate aspect of minimum literacy required is somehow done away with. They often get frustrated trying to browse the manual/ electronic catalogue of the libraries because of its textual form. One way to serve them could be a tool which takes their voice as input and converts this into machine understandable format. By offering them this option to interface with the electronic format library resources store through their voice instead of manual typing, they can get valuable information in a way that is more comfortable for them.

3.3 People with Difficulty in using

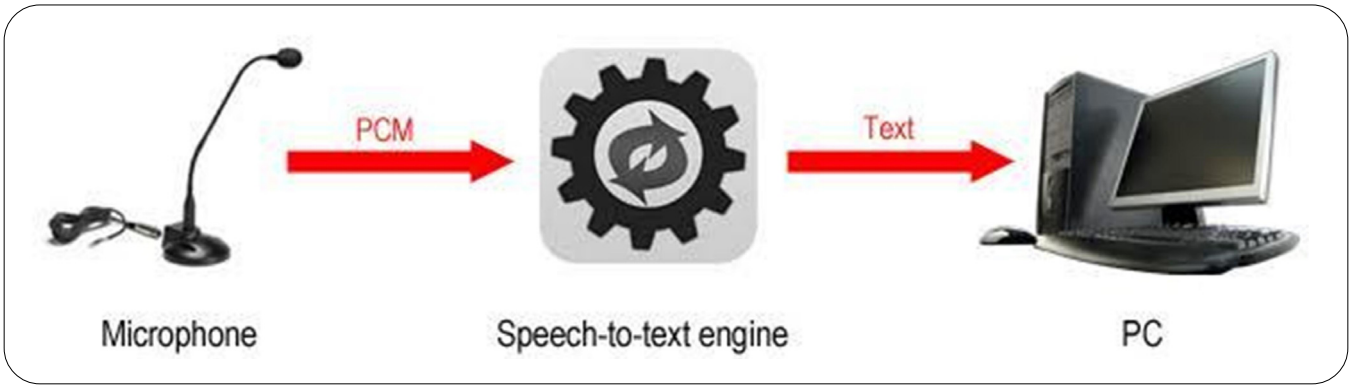
English is the de facto language used by most of the library automation tools. One must have a comprehensive understanding of the English language to interface with them. However this is not an easy task. Since English is a foreign language in most parts of the globe, most students especially are not familiar with it. This is more significant in third world countries. Even in third world countries, there are distinct parameters like, parental education, income group, environment in their living habitats, environment prevailing in their schools, stream of education undergone by them etc., largely influence and determine the ease of use of English by them. This implicitly implies that people with lesser comfort levels in English have to adopt stressful methods to use the electronic tools of the library pertaining tool digitized information of its repertoires or stay away. This creates a wedge prioritizing somebody and sidelining others. Voice based services of the library greatly overcome this problem since the task of spelling etc. is handled by the solution, the user can indeed be relieved of the burden of accurate spelling etc.,

Having a speech option for the non native, less formally educated with below par spelling abilities, opens up library audience to this under-served population. Many people from the under privileged, deprived, malnourished sessions of the society though strive hard to spell, speak and understand the English language effectively, but may still have difficulty texting with correct spelling the foreign language.

4. Voice Based Services – The Emerging Shift

Voice Search is easily one of the most significant technologies that the digital age has blessed us with. In this the user "Speaks" to the computer instead of traditional keyboard inputs there is an underlying software which understands what the user has spoken and converts it into textual format and treasons it to the target application.

A sign of the times, this feature allows us to get instant and optimized solutions with just the sound of our voices. They are easy, fast, and personalized they also provide an improved user experience distinctly different from the textual searches. Voice search



truly is a remarkable technology that will reshape the way libraries are effectively used.

5. Major Benefits of Voice Based Search Solutions

The following are the major beneficial characteristics of the voice based searching methodologies:

• Increase the accessibility of library content for those with visual impairments or reading difficulties.

• Reach a larger percentage of the user population, including those whose native language is different from the language of library solution.

• Present the library content in a way that increases comprehension.

• Make it easier for people to access library content on different devices.

• Provide seniors with a more comfortable way to access library content.

• Diminish the digital divide, increase citizen engagement, and strengthen Corporate Social Responsibility by ensuring that information is available in both textual and audio format.

Automatically redistribute library textual content in audio format thereby providing another distribution channel for it.

6. Conclusion

Traditional text based searches lack the ability to address the entire spectrum of potential library users. They have failed to spread library usage among physically and mentally impaired users and thus limiting themselves only to serve the interests of specific segments of the society Technology enabled voice based searching methodologies address and overcome all these constraints spreading their usage in a more effective way. They represent the future of library catalogue searches.

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