

A Decentralised Research Article Publishing and Archiving System

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ABSTRACT

Background/Purpose: *Research papers provide the path for the expansion of knowledge, allowing for the emergence of new information and the avoidance of duplication of previous research effort. Researchers use their paper to convey their findings to the rest of the world. However, owing to problems such as processing fees from journals, an inefficient review procedure, a lengthy processing time, and the closure of journals, the research community has encountered a major hurdle. In order to overcome this issue, we propose in this study a system known as the Open Platform for Research Article Sharing (OPRAS), which would allow the author to publish his or her paper utilizing a peer-to-peer (P2P) architecture.*

Objective: *To get an understanding of the research article publication process and the issues it faces, in order to propose OPRAS, a new system that will employ a peer-to-peer architecture to share research articles.*

Design/Methodology/Approach: *Data from websites, research papers, and other sources are collected, analysed and presented using ABCD analysis.*

Findings/Results: *With the help of research articles that are published in journals, researchers can tell the world about their work. But authors can't publish their findings because of different problems, which makes it hard for society to learn new things. In this paper, a method for a new system called Open Platform for Research Article Sharing (OPRAS) utilizing the P2P architecture was put forward after looking at the different steps and problems that come up when publishing an article.*

Originality/Value: *A new system has been presented based on the relevance of research articles and an understanding of the problems in publishing research papers, which will attract the attention of the research community and lead to additional improvements in the proposed technique.*

Paper Type: *Research Paper.*

Keywords: Research article, Peer to peer, Decentralized publishing, Open platform for research article sharing (OPRAS), Research document format (RDF).

1. INTRODUCTION :

One issue that researchers face is the difficulty of publishing their research article in a journal and maintaining it for an extended period of time. Certain journals offer both open and closed access, with open access typically requiring payment and closed access frequently being supplied for free, although the research paper will not be accessible to anybody who does not pay for the journal. Another issue is that the majority of renowned publications require a longer period of time to publish an article. Additionally, it is worth noting that some journals close their doors owing to financial constraints or other reasons, rendering the study article unavailable. Because of these issues, significant journal papers are never published, depriving the community of the results that a researcher wishes to disseminate to

the world. As a result, there is a pressing need to address the issue of knowledge disparity and availability in order for everyone to gain. Instead of keeping research articles in a centralized repository, the suggested technique utilizes peer-to-peer (P2P) technology to allow writers to store them in their own repository and make them available to anybody requesting access to the author's research article using P2P technology. The suggested method will also assist research article availability in the field of arts and humanities that are relevant to a local context that does not need publication in an indexed worldwide journal.

2. OBJECTIVES OF THE STUDY :

The following are the study's primary objectives:

- (1) To get an understanding of the process of publishing a journal article.
- (2) To investigate the difficulties associated with submitting an article for publication in a journal.
- (3) To determine the extent to which the gap in knowledge and availability has an influence on the research community.
- (4) To provide a new system for the publication, and storage of research publications.
- (5) Conduct ABCD analysis to determine the effectiveness of the suggested technique.

3. THE VALUE OF WRITING A RESEARCH ARTICLE :

When it comes to disseminating novel discoveries and inventions to a broad or specific audience, research papers serve as an excellent platform for doing so. Readers may be interested in replicating experiments; developing innovative applications for the outcomes as well as promoting the research and preventing repetition of the study. Research papers are the most popular method for scientists and researchers working in the same or neighbouring disciplines to communicate their knowledge and experience with one another. Writing abilities must be developed in order to demonstrate the ability to grasp, link what has been learnt, and receive critical peer review. The article one publishes will become a permanent part of the ever-increasing regime of information as they gain a vital position showcasing the achievements and communication abilities [1].

4. UNDERSTANDING THE PROCESS OF PUBLISHING AN ARTICLE IN A JOURNAL :

In order to publish a paper, an author must first submit it to a journal for consideration. Before a manuscript is published, it passes through numerous phases. The first part of the procedure is an editorial review, which is used to determine the manuscript's quality and merits. The chief editor of the journal in question evaluates the submission to regulate its acceptability for peer review and relevance to the journal. Additional checks are performed by an editorial assistant at the editorial desk, including tests using similarity detection software. A piece of writing that is deemed to be extremely similar to other sources is likely to be rejected or withdrawn, with the author being given the opportunity to revise the article. There are also other checks for readability and conformity with the journal's criteria, such as word length, number of pages and the use of international reporting standards that are carried out. In order to evaluate an article and provide feedback on its quality and rigour, the managing editor appoints an editor as well as selects and assigns two to three reviewers with the necessary knowledge, skills, methodological competence, and experience to evaluate the article and provide feedback on whether or not it should be published. As a result of the opinions of peer reviewers, the editor is better able to determine if the work should be rejected, approved, or altered before publication. In any situation, the author is notified of the decision. The reviewers give ideas or seek further information from the authors when a manuscript needs suggestions for modifications and additions before accepting the work for publication. Once the article has been authorized, it moves on to the third process, which is known as production. This step ensures the construction of a readable and intelligible work that is free of spelling mistakes and given in the journal's consistent style, among other things. The author is also required to examine and finalise proof prior to the final stage, which is an administrative process, in order to ensure that the article obtains a suitable tracking number, known as a Digital Object Identifier (DOI), and that the journal is published on a consistent basis [1].

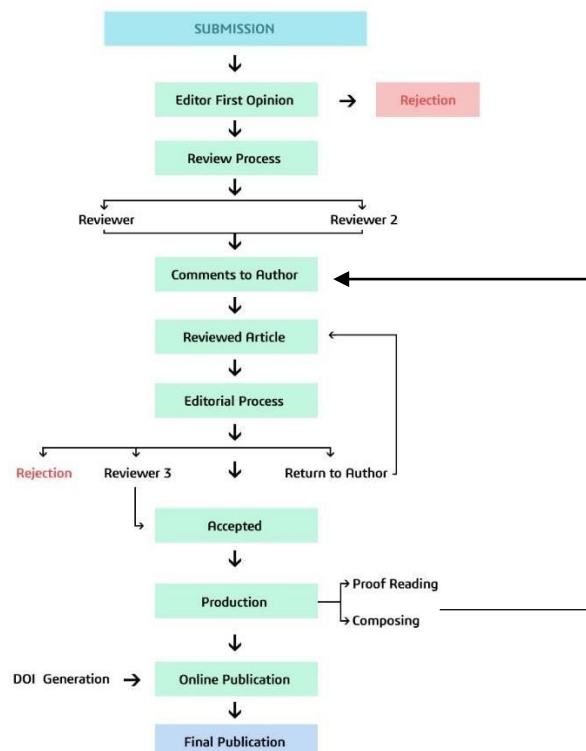


Fig. 1: Process of research article publishing in a journal [2].
(Source: <https://arccjournals.com/reviewProcessOfArticle>)

5. UNDERSTANDING JOURNAL RANKING :

Journal rankings attempt to provide a picture of the overall quality of a publication. They elevate journals to a degree of prominence that may propel them into a highly competitive environment, resulting in a large number of individuals paying attention to these publications. People are more likely to read papers in these titles when there are more eyes on a journal, and they are also more likely to utilise these resources in their own study when there are more eyes on a journal [3].

(a) Impact Factor:

The term impact factor (IF) refers to data computed by Thomson Reuters and released in Journal Citation Reports (JCR). To compute an impact factor, the overall number of references to the articles (the numerator) and the total number of articles published (the denominator) within certain time periods are required (IF) [4].

(b) Article Influence:

With the Article Influence score, we can get an indication of the average influence an article may have in five years if it were to be published in a certain journal based on the Eigen factor [5]. Increased Article Influence ratings for a journal indicate that papers published in that journal are predicted to have a greater effect [3]. Using Journal Citation Reports, one may get an idea of how influential an article is. Although Eigenfactor.org does not charge for its services, it does provide a substantial quantity of information.

(c) Eigen factor:

The Eigen factor score is a more recent development that takes into account the source of a reference in its analysis. Citations from higher-ranked journals are given a greater weighting in the evaluation. It also takes into account disciplinary variances in citation behaviour as well as a longer period of time in which to conduct the study [5].

(d) SNIP:

Source Normalized Impact per Paper, metric is weighted to take into consideration how essential receiving a citation is in a particular area of study. Calculating a score takes into account data from the

previous four years [6].

(e) SCImago Journal Rank (SJR):

Based on the concept of prestige transmission across journals via citation links, this has been implemented. When an incoming citation to a journal is received, the SJR of the citing journal is used to weight it, with the SJR of the citing journal having a greater influence on the weighting than the SJR of the entering citation. This is comparable to the Google PageRank algorithm, which is based on the assumption that significant websites are linked with other significant websites in order to rank them higher in search results. SJR, which takes into account journal size by averaging recent articles, is calculated once a year and is based on recent papers [7].

(f) CiteScore:

These metrics are taken from Scopus, which is the world's leading abstract and reference database for peer-reviewed literature, and are referred to as CiteScore metrics. This score is computed by multiplying the number of references to documents (such as articles, reviews, papers presented at conferences or in books) by the number of similar document types indexed in Scopus and published in the same four years by the number of similar document types indexed in Scopus and published during those four years to obtain the CiteScore [7].

(g) h-index:

Despite its roots as an author-level indicator, the h-index has been applied to higher-order aggregations of research papers, such as journals, and has been widely utilized. The h-index is defined as the largest number of publications (h) for which the count of lifetime citations is more than or equal to (h). The h-index is a mix of productivity and citation impact, and it is calculated as follows: Since the h-index is only limited by total production at its utmost level, it is more favourable to older and more prolific authors and journals. In addition, since the h-index can only increase, it is unchanged by recent increases in computing speed. In addition, increasing an author's h-index doesn't really scale linearly: an author with an h-index of 2 only required to publish a third paper with all three of them cited at least 3 times to reach an h-index of 3; an author with an h-index of 44 only needs to publish the 45th paper and have it as well as all the other papers receive 45 citations to reach an h-index of 45. Because the vast majority of authors have h-indexes in the single digits, the h-index is of little help in discriminating between them [8].

6. CHALLENGES IN PUBLISHING RESEARCH ARTICLE :

Scholarly work published in peer-reviewed journals is a well-established and dependable technique of distributing research to a global audience. However, the publishing process is still evolving, and there are numerous impediments to the overall process [9]. The conservation of the scholarly record needs constant and effective effort, which starts with the issue of accountability. Environmental management, disaster preparation, storage and handling, digitalization, and maintenance of digitally stored content are some of the actions that go into ensuring the long-term accessibility and usage of original materials [10]. However, the change from analogue to digital has caused uncertainty regarding who is accountable for conserving academic articles in electronic forms, whether it is the publishers, libraries, writers, or academic organizations. Given the vulnerability of electronic resources to threats such as hardware or software failure, natural disasters, and economic collapse, this uncertainty may be detrimental. As long as there is no uniform agreement on who is essential to preserving electronic resources, nobody will be held accountable, and we run the danger of losing significant chunks of the academic record as a consequence of the inaction. The lack of data collection makes it impossible to discern how much digital journal material has already been destroyed, making it more difficult to assess the likelihood of journal articles disappearing in the future. The lack of data collection also makes it difficult to assess the magnitude of the crisis. In addition, the dynamic nature of the scientific publishing industry adds to the difficulty of such data collection initiatives. For example, new journals begin publication while others cease publication, some journals shift their focus or publisher, and others transition to open access (OA) or reverse-flip from an OA model [11].

7. LITERATURE REVIEW :

Authors are concerned about the difficulties; they have in publishing a research paper and then making it accessible for a longer period of time. A solution to this problem is clearly needed. In this branch of study, a quick literature review is conducted as follows:

Barnes, J., [12] discussed that even while it has been noted that more information is transferring from paper to electronic form making it available, this does not remove the necessity for a record forever and ongoing accessibility. While there are countless specific considerations to take into account when determining who should provide electronic journal archives and how they're being developed, the vast majority of these fall into one of four broad categories: technical proficiency, durability, location, and trustworthiness.

Hodgson, C., et al [13] in their paper emphasized some of the important areas of infrastructure that are required including institutional rules, compliance monitoring and reporting, publishing technologies, new economic models, licensing and sustainability, via, a series of interviews with specialists in the Open Access sector.

Ferguson, C., et al [14] discussed that few researchers have submitted fake reviews by exploiting flaws in the peer review mechanism. A 2014 paper published in the journal Nature, described how some writers used several generic email addresses (e.g., Gmail) to create fraudulent identities on online peer networks for both fake and real researchers. They might then volunteer to be reviewers for articles they have submitted.

Nicholas, D., et al [15] discussed about the degree to which libraries throughout the globe are suffering financial difficulties as a consequence of the global economic slump is shown. Comparative assessments are provided based on nation, sector, and institution size.

Moulaison, H. L., et al [16] in their study discussed that, looking at the current state of the library and e-publishing group, publication facilities interest in the electronic publication has recently increased significantly. When it comes to digital information preservation, the library e-publishing community on the other hand hasn't done a comprehensive enough investigation into the need of long-term preservation for the digital content they help to create.

Boudry, C., et al [17] discussed that if the scientific community wants to enhance the quantity and use of DOI-based services, it must work to make DOIs more widely available to everyone engaged in scientific publishing, especially publishers.

Burnhill, P., et al [18] discussed that despite the fact that a growing number of institutions are responsible for archiving e-journals, there is a general scarcity of information regarding where they are preserved and what access agreements are in place. A financed project called Piloting an E-journals Preservation Registry Service (PEPRS) was suggested through the objective of researching the provision of pilot services to solve this information vacuum.

Choi, H. N., et al [19] discussed that The Korean Electronic Site License Initiative (KESLI), which was developed by the National Digital Science Library to offer an archive of Korean electronic journals, was recognised as one of the most important outcomes of the project. The research and practical tasks were identified as, (a) The development of a system design, (b) The recommendation of journal and publisher selection criteria, (c) The choice of a set of metadata components (d) The resolution of stakeholder issues.

Björk, B. C. [20] illustrated about the first repositories that appeared in the early 1990s, and how they have become a major avenue for the dissemination of research findings in various sectors of science.

Yadav, D. [21] pointed out that the digital archives and preservation in underdeveloped nations are becoming more popular, despite the fact that they face a number of obstacles. Developing nations have a major problem in the creation and maintenance of digital archives because of a lack of funds.

Nyambi, E., et al [22] discussed that, political factors have had a significant impact on the present condition of repositories. The establishment of archives and the funding of research are made possible in large part by the formation of alliances between libraries and International Network for the Availability of Scientific Publications. Archives in Zimbabwe need a huge amount of attention and monetary help from both the state and the institutions in order to be properly addressed.

Musa, A. U., et al [23] elucidated that the financing and copyright difficulties, intermittent power supply, difficulty digitizing certain documents, technical assistance and security, continual changes in hardware and software are among the obstacles confronting digitization projects and archival process.

Ramalho Correia, A.M., et al [24] discussed that for both writers and their institutions, there are advantages of putting their work in an e-print repository. Researchers and academics may learn from this article about the duties and responsibilities of experts and how they can help their organizations and the scientific community as a whole by developing clear rules and providing assistance to authors

who want to preserve their own work.

Kitchin, R., et al [25] discussed that the Open Access data storage archives whose expenses really aren't entirely funded should be examined for possible financing sources. In spite of the fact that these archives are freely accessible, they aren't without major expenses to create and sustain, and the absence of both full core expenses and a clear financing source via payment for usage puts their survival and the electronic collections they house at danger.

Berquist, T. H. [26] discussed that subscription publications make money through membership and subscription fees, endorsements from institutions and societies, advertising, reprint sales, authorizations, supplements, and educational subsidies. The paper also discussed that most subscription journals put an economic blockade on articles for 6 to 12 months before letting people who don't pay for the publication read them.

8. RESEARCH GAP :

One of the challenges that requires a solution is making academic articles accessible to the research community without restricting access to them, via, limited access or losing the articles when journals liquidate their archival repository. This problem must be addressed as soon as possible, and a new process must be put in place to ensure that the availability of information does not impede the development of new knowledge.

9. RESEARCH AGENDA :

- (1) To comprehend the significance of research articles and journals in knowledge sharing.
- (2) To understand hurdles that writers and journals confront while publishing research articles.
- (3) To suggest a new framework for publishing, sharing, and archiving research publications.
- (4) To indicate to the suggested mechanism's future development.

10. METHODOLOGY :

To collect information and data pertaining to this case study, Journals, Conference papers, Newspaper articles, Official Websites are used.

11. UNDERSTANDING THE PEER-TO-PEER (P2P) FILE SHARING PROCESS :

The primary concept of P2P file-sharing networks is to enable users who wish to share files on their computer, to easily connect with people of similar mind without needing to know everything about how the network works or anything about other machines on the network. Every computer in a file-sharing network may be both a client and a server, and the file-sharing software handles all of the techniques for linking them into one large network [27].

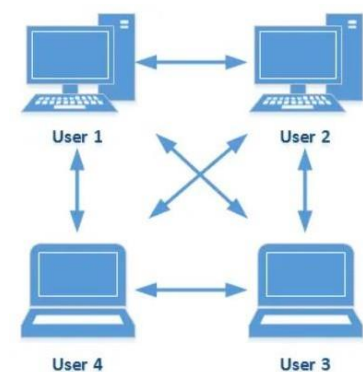


Fig. 2: P2P file sharing process [28]. (Source: askleo.com)

There are numerous advantages to adopting peer-to-peer file sharing rather than a standard file downloading. If a typical master file server goes down, it is impossible to receive the file. A client can still download a file from some other peer when one of the nodes in a peer-to-peer network continues to fail due to technical difficulties. The use of bandwidth is not restricted to a single master server, but

rather is distributed throughout all peers, which usually results in much faster downloads. Peer-to-peer protocols also have some extra improvements. The most significant difference is that, rather of downloading the file from beginning to end on a single connection, as in a standard server-based download, a peer may create connections to numerous other peers, each downloading distinct chunks of the file all at once. This often consumes much less bandwidth than a single direct download. When a portion of the file is downloaded, it may be quickly shared with additional peers who do not have it yet [28].

11.1 . Architecture for p2p file sharing:

It is possible to classify P2P file sharing applications into two separate categories based on their designs. The pure P2P and P2P through a server architecture.

(a) Pure P2P:

As seen in Figure-2, there is no central server in a pure P2P design. By transmitting and receiving digital messages, it communicates with other peers on the network. When using pure P2P architecture, no servers are required for location registration so that other peers may discover the location. In this situation, a peer could either utilize the information from the local configuration scheme to identify clients or use network broadcasting and discovery techniques such as IP multicast to find additional peers.

(b) P2P through a server:

The P2P through a server architecture functions similarly to the pure P2P design, with the exception that peer discovery and resource search are handled by a central server. At starting, as can be seen in Figure-3, the P2P file sharing programme normally informs the central server of its presence under this approach (or user login time). This server is then utilised by the application to obtain a list of more peers on its network, which is subsequently uploaded to its own server. When a program wants to locate anything particular, it contacts the central server for help instead of making requests to each peer in the network to do so. The central server then responds with a list of peers who hold the desired material, and the peer application may then contact these peers independently in order to receive the required material.

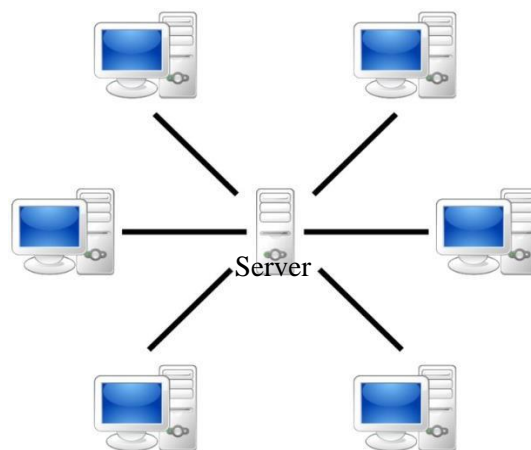


Fig. 3: Illustrates P2P architecture using server [29]. (Source: i.stack.imgur.com)

11.2 . Different types of p2p protocols:

Napster, Freenet, and Gnutella are the three most popular P2P file-sharing applications. They make use of three different protocols, each of which has its unique set of characteristics. Freenet and Gnutella are fully peer-to-peer networks, while Napster depends on a central server to provide peer discovery and content search, among other things. In the next sections, further details are discussed [30].

a) Napster:

The Napster network has a central server (Figure-4). As a result, the Napster technique is divided into two types of interactions: peer-to-peer and peer-to-server. Each message consists of three fields: length, type, and data. The length field is the longest of the three. The length and type fields each contain two bytes of data. The length field defines the message's data portion's length in bytes. The type field identifies the message type, while the data field is a simple ASCII text.

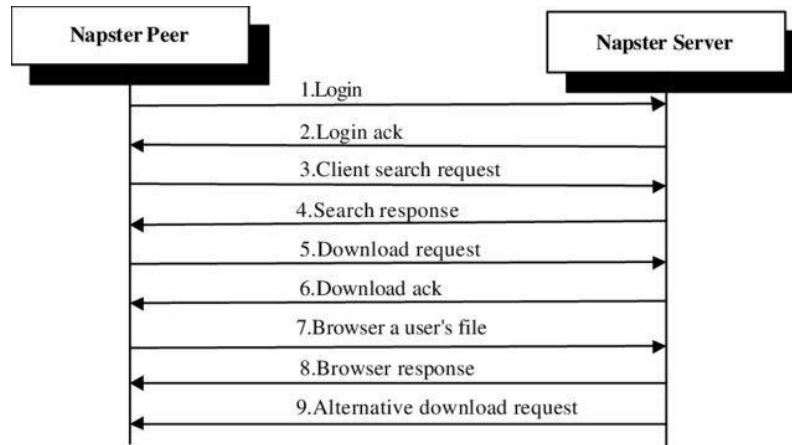


Fig. 4: Shows the process of Napster message flow [31].

(Source: https://www.researchgate.net/publication/220553583_Interoperability_of_peer-to-peer_file_sharing_protocols)

b) Freenet:

Freenet, a free software effort founded by Ian Clarke of the University of Edinburgh, was established in 1998. This adaptable peer-to-peer network of peers is intended to request one another in order to store and retrieve data files identifiable by location-independent keys (Figure-5). Freenet is a free software project. It is possible for the network to read and write to each peer's local data store. Each peer also maintains a customizable routing table, which includes information such as the host names of other peers and the keys they hold. In addition to a 64-bit transaction ID created at random, a hops-to-live limit, and a depth counter are included in all messages conducted between Freenet peers. The hops-to-live value is set by the message's originator, and it is deactivated at each hop in order to prevent the message from being sent indefinitely after it is sent. The depth of the network increases with each hop, and a replying node may use this depth to set hops-to-live high enough just to examine a requestor [32].

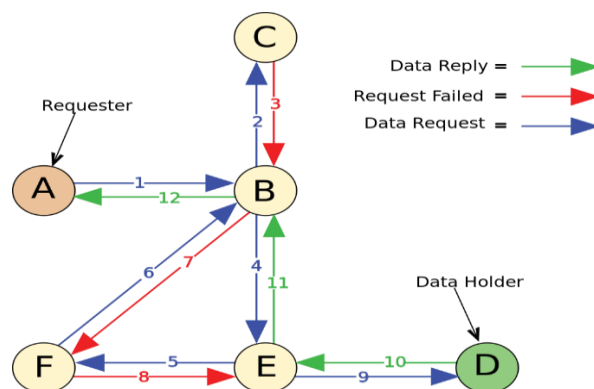


Fig. 5: Shows the process of the request travels around the network from node to node, avoiding dead ends (steps 3) and loops (steps 7) until finding the necessary file [33].

(Source: www.wikiwand.com/en/Freenet)

c) Gnutella:

Gnutella is part of a new generation of P2Papps that enable distributed resource discovery and sharing via the Internet. Gnutella is differentiated by its anonymity support and decentralised design. A Gnutella network is made up of a constantly shifting group of peers linked through TCP/IP. Each peer serves as

a client, a server, and a router. The Gnutella network is made up of a collection of connecting peers and the Gnutella protocol specifies P2P communication. Descriptors are used to transport data between peers, and rules regulate the exchange of descriptors between servers in a distributed system. A Gnutella P2P communication flow is shown in Figure-6. Peers utilize Ping and Pong communications to find one another. Requesting and downloading files from a Gnutella peer has three phases. To begin, send a Query message to see what's going on. The message also includes a string containing the user's requested files. Each peer that receives the message uses this string to identify which files, if any, match the query. To access the file in the second stage, the peer sends QueryHit messages when its query matches another peer's query. After that, the querying peer creates a direct connection with the responder peer and requests the file using http.

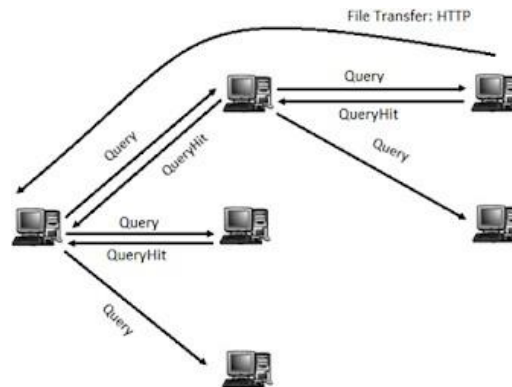


Fig. 6: Illustrates searching and retrieving process of Gnutella [34].
(www.thetechleaf.com/Gnutella)

12. INCORPORATING P2P-BASED IMPLEMENTATION OF THE SUGGESTED RESEARCH ARTICLE SHARING MODEL :

In this proposed system, we name it as Open Platform for Research Article Sharing (OPRAS), it is recommended that the system be managed by several data repositories rather than a single repository as a solution to the issue of research articles being accessible at a time when journals are being phased out. When an author wishes to publish his or her work in order to reach a larger audience, the work is submitted to an independent team of reviewers who are experts in the same field as the author. In lieu of submitting the article to a journal, once it has been vetted and approved by the peer review process, the article should be made available through a P2P based system, in which the author will store and share using his or her own computer, in accordance with the suggested model of research article sharing using P2P application (Figure-7). As a result, each author will host his or her own articles as well as any other articles that may be of interest in his or her computer-based P2P software, which anybody connected to the same network will be able to read at any time. The paper may be accessed from other repositories of writers or readers who have downloaded the study article once it has been widely shared over the P2P network, even if a node is not active at the time. In this way, the research piece may be made accessible to the public without relying on the publication of a journal article.

OPRAS will be a free programme that will be made accessible for download by everyone, regardless of whether they are an author, a reviewer, or a reader. Once the programme has been downloaded to the computer or laptop, it will ask the user for permission to provide access to a shared folder, in which the article that has been downloaded or generated will be made accessible utilising a P2P network inside the same OPRAS application throughout the workflow. To ensure that the platform is not abused and that it is safeguarded from threats, it is recommended that OPRAS employ a new extension for research documents named as RDF (Research Document Format), to ensure that files of this kind may only be exchanged via the OPRAS platform. The new file format will also ensure the integrity of the source document generated by the OPRAS platform, as well as smooth indexing and discovery. The following are some of the characteristics of the proposed application.

RESEARCH ARTICLE - PROPOSED P2P APPLICATION

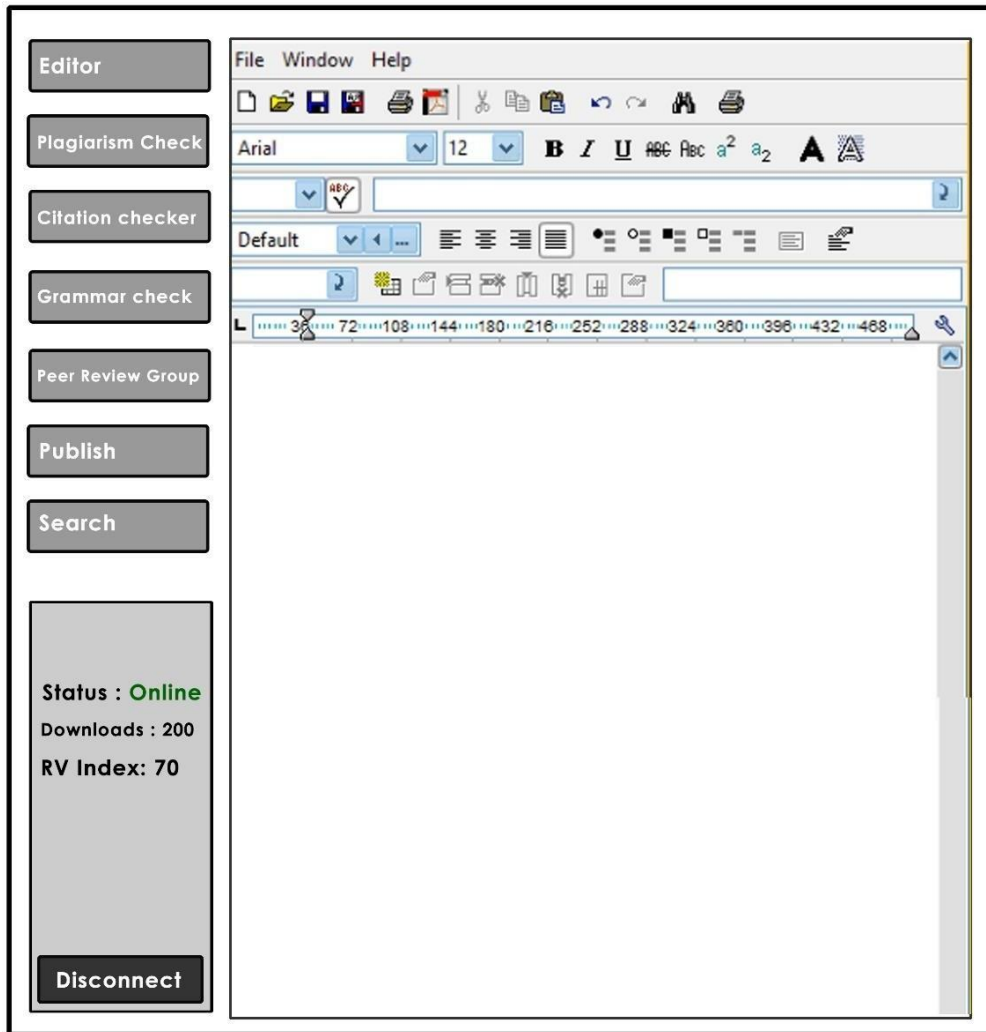


Fig. 7: Proposed P2P application user interface of OPRAS [35].

(Source: <https://listoffreeware.com/free-open-source-word-processor-software-windows>)

Table. 1: Features of proposed application OPRAS.

| Sl. No | Feature | Description |
|--------|--------------------|--|
| 1. | Editor. | Built in word editor using open-source application that can be used to draft the research article using different style and formats. |
| 2. | Plagiarism Check | This feature will check plagiarism in real time and alert author. The plagiarism check application programming interface (API) can be integrated with OPRAS. |
| 3. | Citation Checker. | This will enable the user to cross verify the citation style such as APA, MLA, etc. |
| 4. | Grammar Check. | Grammar check will correct grammatical mistake in real time. |
| 5. | Peer review group. | Using this feature, the author will be able to browse available peer review groups (without having access to their personal information), with access restricted to the topic area only, allowing the author to submit the work for the peer review process. |
| 6. | Publish. | Once the paper has been approved by peer review group and |

| | | |
|-----|-------------|--|
| | | provided with DOI, a unique authentication code will be generated and the author can immediately publish the paper through OPRAS and will be available to all OPRAS users along with Google Scholar, Research Gate, DBLP, Semantic Scholar, etc. |
| 7. | Search. | OPRAS can also search and get alerts from published papers from other OPRAS users. |
| 8. | Status. | This will show the status of OPRAS once it's connected to the P2P Network. |
| 9. | Downloads. | Number of downloads of particular research article from the host machine. |
| 10. | RV Index. | The review index (RV) is a suggested point-based mechanism for indicating how many reviews have been completed by the reviewer of the OPRAS account in a certain period of time. This will also assist in giving credit to the reviewer for the time and effort that they have put in. |
| 11. | Disconnect. | This option will enable the user to disconnect OPRAS system from P2P network. |

13. ABCD ANALYSIS :

The ABCD model can be used to assess individual qualities, system characteristics, the efficacy of a concept or idea, the efficacy of a strategy, and the business value in the society while examining the value of the company in society [36-40]. The ABCD analysis is carried out by listing the Advantages, Benefits, Constraints, and Disadvantages of proposed Open Platform for Research Article Sharing (OPRAS) system (Table 2).

Table. 2: ABCD Analysis of the proposed Open Platform for Research Article Sharing (OPRAS) system.

| | |
|--------------------------|---|
| Advantages (A) | <ul style="list-style-type: none"> • Distribution of research articles in a decentralised manner. • There is no dependency on publishers. • Quality peer review process. • Easy search for research articles. • Promote research work. • Faster publication of research articles. • Affordable for researchers from under developed countries. |
| Benefits (B) | <ul style="list-style-type: none"> • Point based system for good reviewers. • Easy access of research articles. • New information will spur the advancement of sound research at a higher rate than before. |
| Constraints (C) | <ul style="list-style-type: none"> • New technology will be challenging to adopt. • Require a greater number of users to be part of this system. • More Internet data will be utilized. • Registering OPRAS as publishing organization to be able to obtain DOI. |
| Disadvantages (D) | <ul style="list-style-type: none"> • Requires good computer skills. • OPRAS should be ON in order to activate RDF sharing. • Established journals might go against this concept. |

14. FUTURE WORK :

The suggested method makes use of current technology in the form of peer-to-peer networking to handle the issue of a decentralised framework for research article production, publication, and archiving. Future work will pave the way for identifying the gaps in this technique and addressing the constraints and disadvantages that have been identified, via, the ABCD analysis in order to make it even better and finally implementing this proposed method to a fully functional application.

15. CONCLUSION :

As information is gained and a progressive society is developed, research articles are never intended to be confined to a certain group of people. Instead, they are intended to facilitate further research in every field of study, therefore benefiting everyone. However, owing to financial and resource constraints imposed by the publishers, research articles that are no longer available after a few years after publication provide a significant challenge to the field. Additionally, the lack of skilled reviewers from specialised fields who do not get any recognition for their review efforts is expanding and posing a problem to the review process as a whole. Consequently, it is urgently necessary to establish a system to solve this problem and fill all loopholes, so that research effort may be given top priority in the future. Using peer-to-peer (P2P) technology, this study suggested the development of system known as the Open Platform for Research Article Sharing (OPRAS) that would solve these difficulties.

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