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Information Gateway: As a Useful ICT Tool to Collect Information

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Abstract

The article Conway's some highlights with the electronics of scholars of an electronic fields and useful links. In short information gateway is a tool of ICT to analogy a point on the network that lead to other information resources. In the article researcher tried to express some view regarding meaning of gateway, definition of information and gateway, which clears the real picture of the topic. Than need for gateway, how it is different from portal, vortal, Internet, resource catalogue, WWW, its features and characteristics have been discussed. In the end of the topic usefulness of development gateway resources selection and maintenance of gateway and which types of evaluation services are provided by the gateway has been tried to express.

Key Words: Gateway, ICT, Information Gateway, Resource Selection

1. Introduction:

Since the Invention of printing, there has been a continuous revolution in the generation, transfer and communication of information. Information, infect has been growing at an exponential rate which is offend referred as an "Information Explosion." Now days it is very important to get pin point information from the ocean of the information across the electronic world. At present time there are so many electronic tools and techniques are available to get needed information. In such a situation information gateway is very handy and useful electronic tool to get information.

2. Meaning of Gateway:

An information gateway is by analogy a point on the networks that leads to several other information resources. It is in the form of a special purpose web site linking users to information on the Net.

As per Online Tutorials, Gateways may serve various purposes e.g. an access gateway is a gateway between the telephony network and other networks, such as the Internet. They handle the critical function of digitizing the speaker's voice.[2] A packet switching gateway, on the other hand, takes incoming packets of digital data, and packet. It may be able to packet directly to the destination or it sends the packets to another gateway for further forwarding. This forwarding is transparent to user they just specify the destination IP address and the gateway system takes care of the rest.

3. Definitions of Information Gateway:

Definitions of information and gateway are given below:

Definition of the information:

As per Tiwari, Purusotham, (2011), he describes information as data presented in readily comprehensible from to which meaning has been attributed within the context of its use.

Definition of gateway:

In the context of the Internet, a "gateway" is a word with several meanings. It generally refers to a network point that acts as an entrance to another network. On the Internet, a node or stopping point a gateway node or a host (end-point) node. Both the computers of Internet users and the computers that serve pages to users are host nodes. The computers that control traffic within a local network or at a local Internet service provider (ISP) are gateway nodes.

Koch, Traugott, (2012), defined the subject gateway that the Information gateways (or subject gateways) are well-established feature on the Internet "Subject gateways (document, objects, sites or services), predominantly accessible via a subject structure is an important feature."[3]

Other definitions highlight similar characteristics. The Australian Subject Gateways Forum defines a gateway as: "a Web-based mechanism for accessing a collection of high quality, evaluated resources identified to support research in a particular subject discipline."

The I Mesh Toolkit project provides the following definition: "A subject gateway is a web site that provides searchable and brows able access to online resources focused around a specific subject. Subject gateway resource descriptions are usually

created manually rather than being generated via automated process. Because the resource entries are generated by hand they are usually superior to those available from a conventional web search engine."[4]

4. Need for Gateways

Subject gateways are sometimes called the Internet equivalent of a library. The surfeit of information on the ease of using the search engines and finding information initially created euphoria; Internet was likened to a library. However it is now recognized that "the Internet world's largest library, as full of lies as truths ,where all the books have been dumped in a pile in the middle of the room with no catalogue, no librarian and all the title pages ripped off." (Attributed to Michael Gorman) Subject gateways have been set up as a response to this situation and help Users quality and relevant information on the Net; to help them sift "good" quality information from mediocre. They represent "How the library mediates the engagement of users and resources in a network environment."

The largest number of gateways has been developed by libraries, although some subject specialists and organizations have also done so.

5. Subject Gateways differ slightly from:

Dompsey, Lorcon,(2013), express her idea regarding how subject gateway differ from portal, vortal, some features and characteristics, are as under:

- Portals that are defined as an amalgamation of services to the patrons. They usually offer at least five features, including: web searching, news, reference tools, access to online shopping, and some communication capabilities such as free e-mail and chat.
- Vortals (vertical portals) that provide content aggregation to a more focused group.
- Internet Resource Catalogue i.e. a database of Internet resource description that is made accessible through a structured and/or unstructured network service. Sometime used synonymous with 'portal' and 'gateway'. An Internet Resource Catalogue may be just one of the services offered by a gateway or portal.
- WWW Virtual Library an early Web concept which reflects the scope of thinking in the mid 1990s, before the existence of standard metadata schemas for resource discovery. It was intended as an online catalogue of web resources. Good examples still exist,

However, the terms are not consistently used by different authors and there is considerable interchange in the use of the terms.

6. Features of the Information Gateway:

There are a number of different models for setting up and running gateways-from very simple to fairly complex system. The technology behind gateways can also vary considerable. But information gateways all have some key similarities that make then invaluable resources to their respective user communities.

7. Characteristics of the Information Gateway:

7.1 Services based on resource descriptions (i.e. an online service that describes numerous other sites or documents on the Internet and provides links them)

7.2 High level of manual creation/intervention, often by information and/or subject specialists (i.e. intellectually produced content descriptions, in the spectrum between short annotation and review; this excludes automatically extracted so-called summaries. A good but not necessary criterion is the existence of intellectually assigned keywords or controlled terms.)

7.3 At least partly, manually generate(bibliographic)metadata for the individual resources

7.4 Search and browse access(i.e. intellectually constructed browsing structure/classification is created; this excludes completely unstructured lists of links)

7.5 Collection development policy, supported by selection and quality criteria (i.e. selection of resources has to be an intellectual process according to published quality and scope criteria; this excludes e.g. selection according to automatically measured popularity)

7.6 Collection management policy, supported by maintenance and updating procedures.

8. Developing Gateways:

Since information gateways are quality controlled information services developed by human expert intervention the activities involved are basically

8.1 Selection of appropriate and quality materials, and maintenance of the collection;

8.2 Providing resource description to help users identify with limited resource and of use, and establishing an appropriate browsing and searching structure…

8.3 In both these activities, a simple could be developed with limited resources and skills while complex and large model would require an extensive toolkit of software tools.

9. Resource Selection and Maintenance:

Vizeir- Goaetz, D, (2013), highlights regarding resources selection that the resources on a gateway are selected for a particular group in main; hence they have a shared focus. Besides a subject focus, other selection criteria such as language or geographic coverage may also apply. Within this scope, resources are usually selected for their quality, authority, accessibility and currency. To adhere to the criteria, it is necessary to develop a clearly written selection policy that defines the scope of the material to be included as well as the criteria for selection. These can address issues such as coverage, access, metadata etc.

Decisions on types of data to be included will also need to be made. Some gateways only include fully electronic information resources; others are hybrid and in addition to resources also include resource discovery tools for both print and electronic information resources. Gateways man include resource discovery tools for the following types of resources

- Electronic Journals
- Software
- Datasets
- Electronic Books
- Mailing Lists/Discussion Groups(and their activities)
- Articles/Papers/Reports
- Bibliographic Databases
- Bibliographies
- Organizational Homepages
- Educational Materials
- News
- Resource Guides

Regular maintenance of the collection will be required. The regular addition of new resources keeps the gateway fresh and useful to the readers. The collection will need to be regularly updated and new resources added. The work of searching the Net, following Links, checking discussion lists, etc. is time consuming but necessary for updating the resource collection. The works may be assigned to staff, or undertaken by volunteers. An online registration form may also be used to collect data.

There are various tasks involved in making sure that an information gateway's collection maintains its currency and integrity:

- Validating records(spell checking, etc.) to ensure that the record is accurate
- Link checking records to ensure that record still physically available and removal of resources that are no longer appropriate, are superseded or not accessible).
- Updating resources descriptions to ensure that the record still adequately reflects content of the resource or Web site (i.e. updating the resource description or associated metadata).

10. Toolkit

While in most of the gateways the resource selection is usually done by a human intermediary who selects appropriate, relevant and quality items, the potential for automated approaches is also being explored. Software services and programs for evaluating Internet resources, locating new resources and checking links are available.

11. Evaluation Services

Lynch, C (2011), suggests about the evaluation services through internet that PICS and RDF both aim to provide a technological infrastructure to support machine-readable quality ratings. PICS (platform for Internet Content Selection) has been approved by the W3C (World Wide Web consortium) as an agreed standard for associating labels (metadata) with Web sites or Web pages. Essentially, these labels refer to the information about aspects of their quality. PICS have most famously been used to support the development of services that aim to protect children from X-rated sites on the Internet.

RDF (Resource Description Framework) is a standard approved by the W3C that has emerged as a successor to PCIS. It offers a broader infrastructure for assigning metadata labels to Internet sites and pages.

11.1 **URL Minders**

Some low cost web services and software exist that help in monitoring changes made to Internet resources or to inform one of new sites that might internet (e.g. Puma Tech's mind-it). The URL of the sites one wishes to monitor of search queries one would like to have done can be registered and the service informs via an email whenever a change is made to these resources or the search yields new results.

11.2 **Link Checkers**

These programs run through all the URLs listed on the site and checks whether they still exist and contains the same data. For example SOSIG uses the link checking software that is supplied as part of the ROADS system. The program is scheduled to run automatically just after midnight on Sunday when the network traffic is generally low. The program runs through each of the URLs in the SOSIG database (over 7,000) and for each it requests the HEAD file from the page. If the

request is successful the software moves on to the next RL; if it file. Once the link checker has processed all the URLs, the problem resources are sorted and presented according to the error codes.

Conclusion:

The success of information gateways on Net seems to indicate that users find them an important tool. Gateways represent the librarians' response to the Internet. They are attempts to add value –by LIS professionals-to the wealth of information available on the Net. Selecting quality resources for a particular user group, organizing them for easy and efficient retrieval and browsing are the main activities.

Development of electronic libraries is taking place at different levels and in different ways. Progress in gateways is an important component of this process.

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Abbreviations:

ISP: Internet Service Provider, 6
LIS: Library & Information Science, 3
PICS: Platform Inter. Content Selection, 5
RDF: Resource Description Framework,5
WWW: World Wide Web, 3
W3C: World Wide Web Consortia, 5

Institutions:

Australian Subject Gateway Forum, 2
I Mesh Toolkit Project, 2
World Wide Web, 3

Author Index:

Key Word Index: