Information Source in Internet Age

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What is information?

Information (shortened as info or info.) is that which informs, i.e. an answer to a question, as well as that from which knowledge and data can be derived (as data represents values attributed to parameters, and knowledge signifies understanding of real things or abstract concepts). As it regards data, the information's existence is not necessarily coupled to an observer (it exists beyond an event horizon, for example), while in the case of knowledge, information requires a cognitive observer. At its most fundamental, information is any propagation of cause and effect within a system. Information is conveyed either as the content of a message or through direct or indirect observation of something. That which is perceived can be construed as a message in its own right, and in that sense, information is always conveyed as the content of a message.

Information can be encoded into various forms for transmission and interpretation (for example, information may be encoded into signs, and transmitted via signals). It can also be encrypted for safe storage and communication.

The concept that information is the message has different meanings in different contexts. Thus the concept of information becomes closely related to notions of constraint, communication, control, data, form, education, knowledge, meaning, understanding, mental stimuli, pattern, perception, representation, and entropy.

Information is valuable because it can affect behavior, a decision, or an outcome. For example, if a manager is told his/her company'snet profit decreased in the past month, he/she may use this information as a reason to cut financialspending for the next month. A piece of information is considered valueless if, after receiving it, things remain unchanged. For a technical definition of information see information theory.

Difference between Data, Information, Knowledge and Wisdom

We frequently hear the words **Data, Information** and **Knowledge** used as if they are the same thing. You hear people talking about the Internet as a "vast network of human knowledge" or that they'll "e-mail through the data."

By defining what we mean by **data, information and knowledge** – and how they **interact** with one another – it should be much easier

Data

Data is a fact that alone is not significant, as is doesn't relate to other data. Data may answer a very basic what question; such as a glossary definition, directory entry, or code listing. However, a definition or code may require knowledge, if the definition or code is complex.

Information

Information is data that is related and is therefore in context. It can then be transformed into a Process or Procedure, making it useful. Information is data that relates who, what, where and when to each other, providing a baseline for a Process (i.e. control point, cycle time) or a Procedure (i.e. date, code, screen description).

While information may become input for a Process or Procedure, the level of understanding may limit that Process or Procedure to an individual or department level. Enterprise and more complex Processes and Procedures require Knowledge.

Knowledge

Knowledge is the application of information. Knowledge addresses how and why, in addition to who, what, where and when. The knowledge links all the information together to produce a comprehensive Policy, Process or Procedure.

Knowledge allows management to gain an accurate and complete picture of the enterprise Policies, Processes, and Procedures. The Policies, Processes, and Procedures become transformed into an enterprise asset.

Wisdom

Wisdom is complete understanding of the effects and outcomes of Knowledge. Wisdom addresses how and why, in addition to who, what, where and when at the Enterprise level. Enterprise Policies, Processes, and Procedures must be at this understanding level to be considered permanent, otherwise the Policy and Process may be considered Conditional.

Having clear, concise, complete, and correct™ Policies, Processes, and Procedures, an enterprise may now assess best practices and compliance issues. Wisdom allows for Policies, Processes, and Procedures to be modified so they reflect the strategic vision, functional alignment, best practices and operational objectives of the enterprise. Management is able to standardize Policies, Processes, and Procedures across enterprise locations, business units and departments. Policies, Processes, and Procedures become a tool for others within the enterprise for remodeling and initiatives; in that they reflect the As-Is guidelines and functions of the enterprise. They can also be referred to as a map to the organization.

Understanding

Understanding is what increases and supports the transition from data, to information, to knowledge, and to wisdom.

Type of Information source

A) Primary sources

Primary sources are original materials. They are from the time period involved and have not been filtered through interpretation or evaluation. Primary sources are original materials on which other research is based. They are usually the first formal appearance of results in physical, print or electronic format. They present original thinking, report a discovery, or share new information.

Strengths and weaknesses of primary sources

In many fields and contexts, such as historical writing, it is almost always advisable to use primary sources if possible, and that "if none are available, it is only with great caution that [the author] may proceed to make use of secondary sources." In addition, primary sources avoid the problem inherent in secondary sources, where each new author may distort and put their own spin on the findings of prior cited authors. However, a primary source is not necessarily more of an authority or better than a

secondary source. There can be bias and other tactic used to twist historical information. These errors may be corrected in secondary sources, which are often subjected to peer review, can be well documented, and are often written by historians working in institutions where methodological accuracy is important to the future of the author's career and reputation. Historians consider the accuracy and objectiveness of the primary sources they are using and historians subject both primary and secondary sources to a high level of scrutiny. A primary source such as a journal entry (or the online version, a blog), at best, may only reflect one individual's opinion on events, which may or may not be truthful, accurate, or complete. Participants and eyewitnesses may misunderstand events or distort their reports (deliberately or unconsciously) to enhance their own image or importance. Such effects can increase over time, as people create a narrative that may not be accurate. For any source, primary or secondary, it is important for the researcher to evaluate the amount and direction of bias. As an example, a government report may be an accurate and unbiased description of events, but it can be censored or altered for propaganda or cover-up purposes. The facts can be distorted to present the opposing sides in a negative light. Barristers are taught that evidence in a court case may be truthful, but it may be distorted to support (or oppose) the position of one of the parties.

Examples include

- Artifacts (e.g. coins, plant specimens, fossils, furniture, tools, clothing, all from the time under study);
- Audio recordings (e.g. radio programs)
- Diaries;
- Internet communications on email, listservs;
- Interviews (e.g., oral histories, telephone, e-mail);
- Journal articles published in peer-reviewed publications;
- Letters;
- Newspaper articles written at the time;
- Original Documents (i.e. birth certificate, will, marriage license, trial transcript);
- Patents;
- Photographs
- Proceedings of Meetings, conferences and symposia;
- Records of organizations, government agencies (e.g. annual report, treaty, constitution, government document);
- Speeches;
- Survey Research (e.g., market surveys, public opinion polls);
- Video recordings (e.g. television programs);
- Works of art, architecture, literature, and music (e.g., paintings, sculptures, musical scores, buildings, novels, poems).
- Web site.

B) Secondary sources

Secondary sources are less easily defined than primary sources. Generally, they are accounts written after the fact with the benefit of hindsight. They are interpretations and evaluations of primary sources. Secondary sources are not evidence, but rather commentary on and discussion of evidence. However, what some define as a secondary source, others define as a tertiary source. Context is everything.

Examples include:

- Bibliographies (also considered tertiary);
- Biographical works;
- Commentaries, criticisms;
- Dictionaries, Encyclopedias (also considered tertiary);
- Histories;
- Journal articles (depending on the disciple can be primary);

- Magazine and newspaper articles (this distinction varies by discipline);
- Monographs, other than fiction and autobiography;
- Textbooks (also considered tertiary);
- Web site (also considered primary).

C) Tertiary sources

Tertiary sources consist of information which is a distillation and collection of primary and secondary sources. A **tertiary source** presents summaries or condensed versions of materials, usually with references back to the primary and/or secondary sources. They can be a good place to look up facts or get a general overview of a subject, but they rarely contain original material.

- Almanacs;
- Bibliographies (also considered secondary);
- Chronologies;
- Dictionaries and Encyclopedias (also considered secondary);
- Directories;
- Fact books;
- Guidebooks;
- Indexes, abstracts, bibliographies used to locate primary and secondary sources;
- Manuals;
- Textbooks (also be secondary).

1.6 Cycle of Information

	Primary	**Secondary**	**Tertiary**
Definitions	Sources that contain raw, original, non interpreted and unevaluated information.	Sources that digest, analyze, evaluate and interpret the information contained within primary sources. They tend to be argumentative.	Sources that compile, analyze, and digest secondary sources. They tend to be factual.
Timing of publication cycle	Primary sources tend to come first in the publication cycle.	Secondary sources tend to come second in the publication cycle.	Tertiary sources tend to come last in the publication cycle.
Formats--depends on the kind of analysis being conducted.	Often newspapers, weekly and monthly-produced magazines; letters, diaries.	Often scholarly periodicals and books. (Professors like these.)	Often reference books.
Example: Historian (studying the Vietnam War)	Newspaper articles, weekly news magazines, monthly magazines, diaries, correspondence, diplomatic records.	Articles in scholarly journals analyzing the war, possibly footnoting primary documents; books analyzing the war.	Historical Dictionary of Vietnam ;The Vietnam War, An Almanac
Example: Literary Critic (studying the literature of the	Novels, poems, plays, diaries, correspondence.	Articles in scholarly journals analyzing the literature; books analyzing the literature; formal biographies	Writing About Vietnam; A Bibliography of the Literature of the

Vietnam War)		of writers of the war.	Vietnam Conflict; Dictionary of Literary Biography
Example: Psychologist (studying the effects of the Vietnam syndrome)	Article in a magazine that reports research and its methodology; notes taken by a clinical psychologist.	Articles in scholarly publications synthesizing results of original research; books analyzing results of original research.	Diagnostic and Statistical Manual of Mental Disorders; The Encyclopedic Dictionary of Psychology
Example: Scientist (studying Agent Orange exposure)	Article in a magazine reporting research and methodology.	Articles in scholarly publications synthesizing results of original research; books doing same.	Agent Orange and Vietnam: An Annotated Bibliography

Information source in Internet age

What is internet?

World English Dictionary

The internet Also known as: the Net the single worldwide computernetwork that interconnects other c omputer networks, on which enduser services, such as World WideWeb sites or data archives, are locat ed, enabling data and other information to be exchanged

Internet

a vast computer network linking smaller computer networks worldwide . TheInternet includes commerc ial, educational, governmental, and other networks, all of which use the
same set of communications protocols.

Terminology of Internet

- Internet is a short form of the technical term internetwork, the result of interconnecting computer networks with special gateways or routers. Historically the word has been used, uncapitalized, as a verb and adjective since 1883 to refer to interconnected motions. It was also used from 1974 before the Internet, uncapitalized, as a verb meaning to connect together, especially for networks. The Internet is also often referred to as the Net.
- The Internet, referring to the specific entire global system of IP networks, is a proper noun and written with an initial capital letter. In the media and common use it is often not capitalized: "the internet". Some guides specify that the word should be capitalized as a noun but not capitalized as an adjective.

Use of internet

World Wide Web browser software, such as Microsoft's Internet Explorer, Mozilla Firefox, Opera, Apple's Safari, and Google Chrome, lets users navigate from one web page to another via hyperlinks embedded in the documents. These documents may also contain any combination of computer data, including graphics, sounds, text, video, multimedia and interactive content that runs while the user is interacting with the page. Client-side software can include animations, games, office applications and scientific demonstrations. Through keyword-driven Internet research using search engines like Yahoo! and Google, users worldwide have easy, instant access to a vast and diverse amount of online information. Compared to printed media, books, encyclopedias and traditional libraries, the World Wide Web has enabled the decentralization of information on a large scale.

The Web has also enabled individuals and organizations to publish ideas and information to a potentially large audience online at greatly reduced expense and time delay. Publishing a web page, a

blog, or building a website involves little initial cost and many cost-free services are available. Publishing and maintaining large, professional web sites with attractive, diverse and up-to-date information is still a difficult and expensive proposition, however. Many individuals and some companies and groups use web logs or blogs, which are largely used as easily updatable online diaries. Some commercial organizations encourage staff to communicate advice in their areas of specialization in the hope that visitors will be impressed by the expert knowledge and free information, and be attracted to the corporation as a result.

Internet as a Information Source

The Information Age (also known as the Computer Age, Digital Age, or New Media Age) is a period in human history characterized by the shift from traditional industry that the industrial revolution brought through industrialization, to an economy based on information computerization. The onset of the Information Age is associated with the Digital Revolution, just as the Industrial Revolution marked the onset of the Industrial Age.

During the information age, the phenomenon is that the digital industry creates a knowledge-based society surrounded by a high-tech global economy that spans over its influence on how the manufacturing throughput and the service sector operate in an efficient and convenient way. In a commercialized society, the information industry is able to allow individuals to explore their personalized needs, therefore simplifying the procedure of making decisions for transactions and significantly lowering costs for both the producers and buyers. This is accepted overwhelmingly by participants throughout the entire economic activities for efficiency purposes, and new economic incentives would then be indigenously encouraged, such as the knowledge economy. The Information Age formed by capitalizing on computer microminiaturization advances. This evolution of technology in daily life, as well as of educational life style, has allowed rapid global communications and networking to shape modern society.

Evaluating sources: The Information Cycle : Internet Age

Once you have found information it must be evaluated. A practical way of evaluating the information is to consider where information comes from and how it has been produced. The diagram below – it is the same as the list of sources we saw earlier, but now the relationship between the different sources is clearly shown - this is the Information Cycle. The Information Cycle illustrates how information is published in set patterns. Information at the beginning of the cycle (Internet) is aimed at an audience wanting quick, up-to-date facts. As the information progresses around the Cycle it becomes more detailed but also more out of date. When deciding on the quality of the information you may have balance reliability (accurate and proven facts) against currency (the period of time over which the information was written and produced).

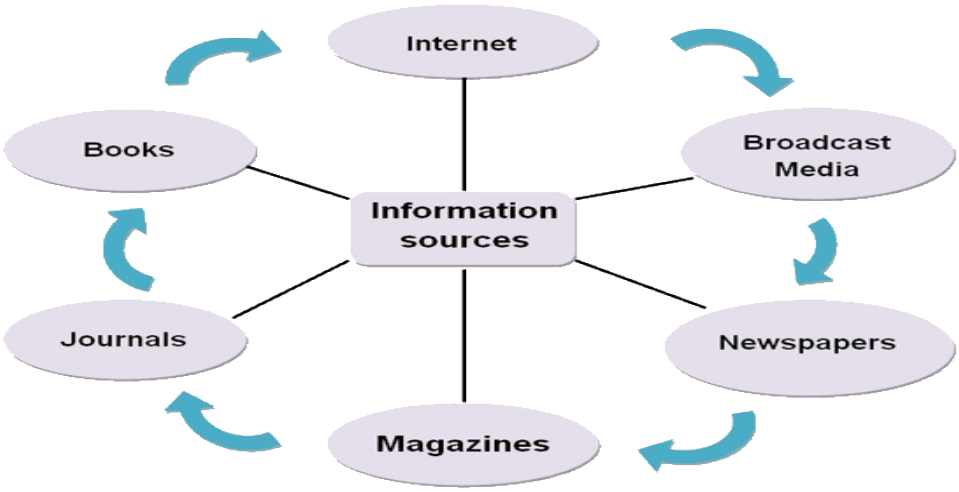

Figure 1

The Information Cycle in practice

Information changes as it progresses along the Information Cycle from format to format: Internet The Internet is usually the first place information is posted. Information can appear almost instantaneously on the Internet, but this leaves little time for the author to write the information. As a result the information tends to be **descriptive**, explaining **what has happened** and **who was involved** – it is simply stating facts. There will also be a **lack of depth a**nd the information posted will be short.

Broadcast Media

Information is also likely to appear quickly on **television**and**radio**. Initially the information will be produced rapidly and is likely to be **descriptive,** explaining **what has happened** and **who was involved**. Professional journalists with expertise in a particular area may be able to provide some relevant background information, and it is likely that **expert opinion** will also be sought. As time passes and more information becomes available, **longer pieces** and **documentary** features may be produced.

Newspapers

Newspapers are published frequently; usually daily or weekly. The articles will be written by professional journalists, who often have expertise in a particular area. The emphasis will be on reporting facts, and once the information appears in newspapers the author has had more time research the information, so there may be greater depth such as statistics, analysis or expert opinion. Newspaper articles will not be correctly referenced and they will not provide a bibliography or list of sources, so it will be difficult to identify where the author has found their information. The articles are aimed at the general public, and so should use accessible language.

Magazines

Magazines are frequent publications in a 'glossy' format. Examples include The New Scientist, The Economist and Scientific American. The articles are written by professional journalists with knowledge of a specific subject area.

There will be emphasis onreporting facts but usually with some analysis as the author has more time to reflect on the information and conduct some research.

Although articles in the professional press are likely to be longer than newspaper articles they are unlikely to be correctly referenced with no bibliography or list of sources, so it is difficult to tell what sources the author has used in their research. The articles are aimed at the general public or a knowledgeable layperson with an interest in the area of publication, and so should use accessible language.

Journals

Academic journals contain articles written by scholars and specialist researchers. The authors have had time to conduct their own research and review the available literature. As a result the article will be a detailed examination of the subject with analysisand primary research. Research can take months to conduct, so the article will not be current. Before publication the articles are reviewed by an editorial board comprising of other scholars and experts – this is called peer review. The articles in academic journals are aimed at scholars, experts in the field and university students, therefore the articles tend to be detailed and written in technical language.

Books

Books may take years to be published, and so are not good sources of up to date information. The strength of books as a resource lies in their authorship, they are usually written by scholars and experts in the field. Their content can be variable ranging from a simplified overview of a subject to an in depth

piece of research. Books offer a great introduction to a new subject. Books include a list of the sources the author has used to research their book called a reference list. The reference list allows you toreview the original sources of information used in the book, which can be used in your assignments to strengthen your own research and arguments.

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