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The Laws of the Web. Patterns in the Ecology of Information

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The Laws of the Web. Patterns in the Ecology of Information

Posted on April 1, 2003 by Editor

By Jeffrey Barlow <barlowj@pacificu.edu>


For those who produce web pages, engage in e-commerce (or contemplate doing so), or are merely anxious to understand the web, one of the true obstacles to understanding is its sheer size and its apparently chaotic structure. The classical blind men trying to describe an elephant seem to have had a much easier problem.

One of the consistently successful scholars in the enterprise to understand the web has been Bernardo Huberman (See his home page at: http://www.hpl.hp.com/shl/people/huberman/). Huberman, trained as a physicist, can be said to be an expert in understanding and quantifying nonlinear systems. That is, he discovers orderly properties in apparently chaotic bodies. Huberman is also very adept in deriving an understanding of human behavior on the web from game theory as utilized in economics and related fields.

Huberman is obviously a busy man and anxious to convey as much information in as few words as possible. One can feel his frustration at writing for a lay audience when a few long formulae would doubtless be the best means of conveying most of his arguments. But this very small (105 pages) and elegantly presented book is well worth reading, despite the difficulty of doing so.

The scope of his analysis can be seen in this quotation taken from his summary:

... there is order in the midst of the gargantuan and arbitrary nature of the web. This order can be explained by using reasonable and simple assumptions about human behavior in the context of the Internet... strong and sometimes beautiful patterns emerge, and... those patterns in turn reveal a lot about social dynamics, individual preferences, and order beyond
the appearance of total disorder. (p. 97)

Huberman deals with very large bodies of data, such as thousands of AOL logs, surveys of large audiences, aggregations of thousands of web pages, and, in addition, conducts his own experiments to determine latency and other functions of the Internet. He then analyzes his data with mathematical approaches drawn from a wide range of fields, and when necessary calls upon economics and game theory to further understand the data. He is widely published. He can also be said to write well for a lay audience, though his arguments sometimes requires repeated readings to fully understand.

Among the questions to which Huberman has useful answers are these:

- What causes the slowing of the Internet and how can we as individuals minimize download times?
- What is the most important parameter in any e-commerce transaction?
- What is the correlation between the age of a site and the number of links it has? (Answer: none.)
- If we pick two web pages at random, how many clicks will it take on average to get from one to the other? (Answer: four.)
- How can we persuade individuals to cooperate in closed systems to maximize the speed of their individual connections, that is, to reduce web use at times of high use?
- How can we encourage consumers to stay within our web pages? Long search paths or short ones? Good content or incentives to move to other pages in our site?

These are just a few of the questions that Huberman answers (more thoroughly in some cases than others) and his approach to them is always based on a variety of useful insights.

This is not an easy book, but the information and understanding to be gained from it more than repay the effort.

Jeffrey Barlow
Editor, Interface.

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6 THOUGHTS ON “THE LAWS OF THE WEB. PATTERNS IN THE ECOLOGY OF INFORMATION”

pastor quiboloy mansion
on February 5, 2014 at 2:44 AM said:

I almost never comment, however after readong through some of the remarks here The
Lawws of the Web.
Patterns in the Ecology of Information | Interface.
I do have a couple of questions for you if it’s okay.
Could it be simply me or does it appear lime some of these responses
look like they are left bby brain dead folks? 😐 And, if you are writing
at additional online sites, I would like to folpaw anything fresh you have to post.
Could you make a list of all of your social
networking sites like your linkedin profile, Facebook page or twitter feed?

christian music ministry
on February 6, 2014 at 2:42 AM said:
Incredible quest there. What happened after? Good luck!

christian ministry development
on February 6, 2014 at 2:44 AM said:
Pretty! This has been an extremly wonderful post. Thanks for supplying this information.

Jewell
on February 6, 2014 at 8:22 AM said:
I think this is among the most important info for me.
And I’m glad reading your article. But should remark on
few general things, The website style is great, the articles
is really nice : D. Good job, cheers

christian church locator
on February 6, 2014 at 9:05 AM said:
Thank you for some other informative web site.
Where else may just I get that type of information written in such a perfect means? I’ve a mission that I am simply now running on, and I’ve been on the glance out for such information.

christian outreach church on February 6, 2014 at 10:50 AM said:

Unquestionably believe that which you stated. Your favorite justification appeared to be on the net the simplest thing to be aware of. I say to you, I definitely get annoyed while people think about worries that they just don’t know about. You managed to hit the nail on the top and also defined out the whole thing without having side-effects, people could take a signal. Will probably be back to get more. Thanks