
Free as in Tibet: ibiblio's cultural cultivation and community creation

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Abstract

ibiblio is a digital library hosted at the University of North Carolina-Chapel Hill that manages to be both a repository for cultural information and a resource for community building. The project has existed in many forms since the beginning of the web, and has maintained a core commitment to open source software and tools. ibiblio's maintainers have continually expanded the project's offerings in response to the availability of new technologies and the support of financial and technological partners. Their newest project is an open source weblog development and distribution system.

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If you've got something unusual that you want to share with the world, chances are that ibiblio will put it online for you [1].

I have a confession to make. I am not just discussing ibiblio's digital archive – which they call “the public's library” – I am also a client. By “client”, I mean someone to whom ibiblio has graciously extended the free use of their servers to host my weblog librarian.net and its associated archives. My small site is one of many content archives hosted by the ibiblio project at the University of North Carolina, one of the largest “collections of collections” online.

ibiblio is run by librarians, computer scientists and students. The servers host many large well-known digital archives and provide services such as storage, shell access, mailing lists, technical support and website statistics for the site owners and maintainers. Where other digital repositories tout their size and power in terms of terabytes and gigaflops, ibiblio prefers to think of their immense storage and retrieval systems in terms of freedom. To quote their FAQ, “We're all about freedom, man! Free Tibet, Free Burma, Free Love, you get the picture. We offer a free platform for the exchange of free thought” [2]. As libraries have become more than just storage places for books, the role of digital libraries has also been growing and changing. ibiblio, through offering space, tools and know-how, and encouraging synergies between them, is “breaking the fourth wall” [3] of the Internet: using the web to connect people to each other.

My website and its associated archives comprise about a hundred files out of over two million that live on ibiblio's servers. I had been maintaining librarian.net as a labor of love for several years, paying the hosting and domain registration fees myself and updating and designing when I found time. One of ibiblio's collection developers contacted me and asked if I'd like to host my pages on their servers free of charge. They had more robust server architecture than the host I was currently with, and their only caveats were that all my content had to be freely available, and I could not sell anything or solicit donations from the site. I had been interested in moving to a content management system (CMS) to run my website for some time, and this provided me the perfect opportunity to upgrade while not incurring additional costs. I moved my site over after installing Movable Type in the last week of September 2003. The more time I spent looking at the collections that ibiblio hosted, with their collection index available in Universal Decimal Classification and their list of online library catalogs dated 1991, the more I became interested in this fusion of computing and libraries.



This overview includes information on ibiblio's system architecture, statements of purpose over time, and some evaluation of how they have managed to do what many aspire to: create an actual community out of a series of websites.

Form

Tools have their way of defining us and defining our next tools as well. The Web became more of an encyclopedia than a town hall with Mosaic and in that we are all made a little less by it (Jones, 2003).

The ibiblio project is much more than a vast filing cabinet with a fat pipe to the Internet, though it is also that. Here is some raw data from the project [4]:

- constant outbound network traffic in the 160-180Mbits/sec range;
- five terabytes of server space;
- 1.5 terabytes of data moved daily;
- 10 million server requests per day;
- original home to the Internet Movie Database [5] and the Internet Underground Music Archive [6] and the current home to Project Gutenberg [7]; and
- host of the Linux Software Archives [8] housing 171 gigabytes of freely available Linux programs, as well as The Linux Documentation Project [9].

The project has always been conceptualized as a community resource. The bits and bytes that were ibiblio's predecessors grew out of a technical support system at the University of North Carolina. Their DECStation 3100 system had 1.2GB of disk space – an amount equal to the RAM on many current home computers – and ran Ultrix, an old Unix-like operating system created by Digital Equipment Corporation. In an attempt to make university resources available to UNC alumni in the late 1980s, they built a Bulletin Board System (BBS) facilitating access for remote users. By the early 1990s they were experimenting with wide area information server (WAIS) systems, distributed text searching systems that search remote databases using the z39.50 protocol. According to current project director Paul Jones, “we were in a kind of race with Brewster [Kahle] to see who could get the most and the most interesting databases available on the net” [10].

Jones wrote a grant application to Sun Microsystems in 1992 asking for server resources to “make free software and multimedia resources of interest to Sun users available to all”. They called the program Sun Software, Information & Technology Exchange (SunSITE) [11,12] and became the first grantee in a program that now

includes over 50 members worldwide. Some of the purposes of SunSITES (which were outlined originally as part of Jones's proposal) were to provide easy, global access to free software and tools, and to act as a repository for key Sun, local and government information [13]. The Clinton administration became the first presidency to have its presidential papers, speeches and even budgets archived and made available online, years before Yahoo was available. On campus, the project was jointly sponsored by The School of Journalism and Mass Communication, the School of Information and Library Science and the Office of the Vice Chancellor for Information Technology and Networks. The University of North Carolina's (UNC) SunSITE was one of the first public file transfer protocol (FTP) servers, and represented a way for people who used the Internet for communication to keep track of that communication. “[I]f the electronic mailing list was the community, SunSite was the book shelf”, Eric Troan, former Linux Archive maintainer, has said [14].

ibiblio's support from Sun continued until 1998 when they amicably parted ways and the servers were temporarily renamed MetaLab [15]. Soon thereafter, a local open source software company called Red Hat approached Jones about working with their new philanthropic organization, which later became the Center for the Public Domain (CPD) [16]. CPD pledged \$4 million in support over five years. To reflect their renewed commitment to information sharing, the project managers rechristened the site ibiblio in 2000 – “a made-up word that alludes well to librariyness” [17] – the name that it bears today [18,19]. Their goal is to become the largest collection of freely distributed information on the Internet or, put another way, “a lively, noisy, Jacksonian library” [18].

Function and family

The free market is a wonderful device for cooperation, and we say there is no point in fighting it when it's so much easier (and so much more fun) to co-opt it [20].

Unlike many online ventures that call themselves electronic libraries, ibiblio has no product. It sells nothing. In fact, one of the few content restrictions for collections on ibiblio is that the collection must be entirely non-commercial: no t-shirts, no bumper stickers, no corporate sponsor, no banner ads. Browsing ibiblio's content takes you back to a web era before pop-ups, when content was king. ibiblio also reflects an earlier time on the web through hosting the Linux Archive, nearly

200 gigabytes of Linux programs and documentation dedicated to helping Linux and open source software “evolve faster and spread further” [20].

Paul Jones, director of the project, open source and poetry advocate, and member of the Luxuriant Flowing Hair Club for Scientists [21] created his first hypertext page in 1991 and has been active recently in newer commons-oriented projects such as the Creative Commons licensing project [22]. To the public, *ibiblio* exists as one of the great “go to” places on the web, hosting the Online Burma Library, the Folk Music Index, and the Internet Poetry Archive. To the archive owners, the site is an oasis where they can create and present content free of the usual financial, space and support restraints that can be prohibitive to large collections. To the system maintainers, an assortment of students [23], staffers and educational and financial supporters, the project is a way of realizing their dream of a 21st century library using open source technology.

They envision the site as being driven by the collaborators who choose and maintain the content and lend their personalities to their projects. While the servers are maintained by UNC students and a few paid staffers, each content provider operates as a homesteader within their own space on the *ibiblio* servers, setting up their own archives, processes, files, programs and communities. A collection of mailing lists keeps the participants in touch with each other and allows for rapid dissemination of information, as well as an informal tech support network. The *ibiblio* site has several Wikis available for public interaction to facilitate further information exchange. Wikis are pages on the web that can be edited on the fly by anyone with a knowledge of the tags used in the Wiki syntax – putting square brackets around a page name to create a link to that page, for example [24] – and are used for creating spaces online where users can help each other [25], or even where they can create and add content [26].

Jones and the site take pains to point out that just because they believe in free software, it doesn't mean they are against the free market:

We think [selling low-cost CD-ROMs of files in the archives] is a good thing, because it spreads Open Source software much faster than pure network distribution possibly can. It also creates market incentives for people to support Linux and Open Source software as a full-time job, something we think is essential if we want to succeed at waking the world up from proprietary nightmares [27].

In their quest to represent the future of Internet librarianship, they would like the field to be able to support paid practitioners as well as provide free content. This model is a bit odd to people used to

supply and demand economics, but is fairly familiar on the Internet.

As Ghosh (1998) explains in his paper on what he calls “cooking pot markets”, “. . . much of the economic activity on the Net involves value but no money”. He then later rhetorically asks “What, indeed, is valuable, when everything's free?”, and finds an answer in the vast scale of the Internet, creating not a barter or a gift economy, but a large cooking pot:

The economy of the Net begins to look like a vast tribal cooking-pot, surging with production to match consumption, simply because everyone understands [. . .] that trade need not occur in single transactions of barter, and that one product can be exchanged for millions at a time. The cooking-pot keeps boiling because people keep putting in things as they themselves, and others, take things out (Ghosh, 1998).

With its attempts to grow larger and larger, *ibiblio* begins to approximate cooking-pot scale and, additionally, cooking-pot economics. The question then becomes: who runs the place?

The *ibiblio* team learned early on that removing the librarian authority figure from the archive and collection development model required some tinkering to ensure quality control of the material available. Or, put another way, what happens to authority control when everyone (or no one) is the librarian? Jones approached this problem by creating and offering tools for the community to assess, approve, and comment on the items submitted to the Linux Archive:

By removing nearly all barriers to submission and instituting instead some simple verification procedures, we were able to accept (and later distribute) very high quality software with a very low rejection rate. [. . .] By giving contributors and readers access to tools for evaluation, ranking and managing the collections, we are not just off-loading work; we are building communities of intellectual discourse. Strong community members are recognized by reputation capital and trust metrics and are rewarded (Jones, 1991).

For example, when a user wants to upload open source software to the Linux Archives, they must first fill out a template that ensures that their software includes a complete set of metadata, such as keywords and contact information. Software cannot be uploaded without this document. The information from this document is then fed to the archiving program which categorizes it for easy retrieval [28]. Strict naming conventions are observed so that a user can tell if the software in the archive is more recent than the one they have, just by looking at the filename [29].

A similar approach is seen with *etree.org*, a site on *ibiblio* dedicated to digital-audio distribution of high-quality concert recordings, all legally tradable [30]. *etree.org* is maintained by an

all-volunteer community of 85,000 registered users who together own digital recordings of over 150,000 unique shows [31]. The site uses a very strict set of naming conventions for their uploaded files to facilitate easy storage and retrieval. Each file that is indexed by the site is available to be reviewed by the entire community, with reviews of the recording posted directly to the information page about the file [32]. Individuals can set up trades with other members and are encouraged to post feedback about these trades [33]. While supremely bad behavior can get a user banned from the site, the community mostly self-moderates. Since no money is being exchanged, reneging on a trade can get you at most a few free CDs but it will also inspire the enmity of a large community with access to a very large collection of resources.

Involving the people who care about the material when you create and maintain the archive is the best way to ensure high quality of that same material. This reputation model is seen at work in ranking and karma systems built into many larger sites such as eBay, Amazon and Slashdot, as well as social software sites like orkut.com. Creating a reputation system in a community that people want to be involved in encourages co-operation. People who participate have a stake in the work created, whether it is a software repository, a book review or a comment on a threaded discussion list (Durand, 2002). Once the internal content is created by the community, ibiblio is available to help present the archives and other content to the external community, where reputation models are not as binding.

ibiblio's work with Creative Commons puts them in a position to assist or enable their content providers to share their material on their own terms. While ibiblio maintains that collections on their server must be provided to the public at no cost, they do not envision this sharing as an information free-for-all where people plunder available resources simply in order to make them available in a for-profit manner outside of ibiblio. "We are working with Creative Commons, which we also host, to develop a small but viable set of licenses for folks including our contributors who want to share their work on various terms (attribution, home or personal use, educational use, etc.)", says Jones [4].

Future

Revolution is born of enabling technologies; this is our experience with the Internet. Technologies that facilitate the sharing of information, in ways both remarkable and intuitive, enables users fundamentally [34].

My mention of ibiblio as the host of my weblog wasn't just for publicity: it represents a new direction being taken by the project.

Fred Stutzman, one of ibiblio's few paid employees, has been working on an open-source weblog development project for the past six months. The general idea is to position ibiblio not only as an archive for storing and retrieving open source software, but also as a place where interested people can comment on and discuss their open source and academic topics. Using an open source tool called Lyceum, they hope to ease peoples' transition into communicating digitally about topics they are already discussing. The software has the added benefit of offering robust tracking and reporting tools built in to it for users to track site statistics and visitors.

According to Stutzman, making this software freely available will allow people to focus on content and not get dissuaded by hard-to-use tools or technological barriers to entry: "Blogs, like listservs, emails, bulletin boards, are just wrappers for digitized thought", he says. "The main difference I see is the simplicity and pervasiveness of blogs; many great content producers who once enjoyed a luddite status have no excuse to not contribute to the digital sphere" (Stutzman, 2004).

Paul Jones's vision for the future also shows how far they've come:

What began as let's-see-what-happens has become a valuable net.resource for millions of people and is becoming more of a trusted archive and a contributor-run digital library. We've become, thanks to my colleagues, more aware of our roles are archivists, librarians, publishers and broadcasters while trying to remain true to openness, information sharing, and user empowerment that were our roots.

The staff I spoke with all included "helping people" as one of their favorite things about their work (Lazorchak, 2003). Jones fleshes this out, saying:

Not every job gives you a chance to help out a Nobel prize winner in literature, the Dalai Lama, an organic farming cooperative, a rock musician, and a historical [chronicler] of slavery, not to mention helping out the folks who use the information that's shared here (Jones, 2004).

With the assistance of newer technologies and a collection of people devoted to the cause, ibiblio brings the best ideas from the technology world (i.e. open source development of things and ideas, rapid deployment of new ideas, and a sense of humor) together with positive aspects of libraries (i.e. free access for all, quality collections, good finding aids) to create a sustainable 21st century digital library and, even more importantly, a thriving digital library community.

Notes

- 1 newsobserver.com article "The Renaissance geek", available at: www.ibiblio.org/pjones/menconi.html
- 2 ibiblio FAQ, available at: www.ibiblio.org/faq/?sid=1#2
- 3 "Fourth wall", Wikipedia, available at: http://en.wikipedia.org/wiki/Fourth_wall
- 4 Unless otherwise indicated, statistics come from "Slashdot: ibiblio Director Paul Jones Answers", available at: <http://interviews.slashdot.org/interviews/02/08/07/0010200.shtml>
- 5 Internet Movie Database, now available at: www.imdb.com
- 6 Internet Underground Music Archive, now available at: www.iuma.com
- 7 Project Gutenberg, available at: www.gutenberg.net/
- 8 Linux Software Archive, available at: www.ibiblio.org/pub/Linux/
- 9 The Linux Documentation Project, available at: <http://tldp.org/>
- 10 Brewster Kahle, founder of the Internet Archive Project, available at: www.archive.org
- 11 Original URL for the project, available at: <http://sunsite.unc.edu>
- 12 Original web page for the project, available at: www.ibiblio.org/newlook/old.html
- 13 SunSITE project page, available at: www.sun.com/sunsite/
- 14 "The wide, wild world of ibiblio", available at: www.ibiblio.org/pjones/ibiblio/dyrness-story.html
- 15 Available at: <http://www.metalab.unc.edu>
- 16 Center for the Public Domain, available at: www.centerpd.org/
- 17 "ibiblio takes MetaLab contempt to a new level", available at: <http://slashdot.org/features/00/09/17/155240.shtml>
- 18 Press release announcing rename, available at: <http://carolinafirst.unc.edu/connections/fall2000/fall00ibiblio.htm>
- 19 ibiblio's first home page, available at: www.ibiblio.org/index.old/index-old.html
- 20 ibiblio Linux Archive Mission, available at: www.ibiblio.org/pub/linux/POLICY.html
- 21 Luxuriant Flowing Hair Club for Scientists site, available at: www.improb.com/projects/hair/hair-club-top.html
- 22 Creative Commons, available at: <http://creativecommons.org/>
- 23 "ibiblio ratz" staff page, available at: www.ibiblio.org/wdg/
- 24 "How to edit a page", Wikipedia, available at: http://en.wikipedia.org/wiki/Wikipedia:How_to_edit_a_page
- 25 "IbibConsultWiki", available at: www.ibiblio.org/ic/
- 26 "Permaculture Wiki", available at: www.ibiblio.org/ecolandtech/pcwiki/index.php/HomePage

- 27 "ibiblio Archive Mission", available at www.ibiblio.org/pub/linux/POLICY.html
- 28 "How to submit open source software", from the ibiblio Linux Archive, available at: www.ibiblio.org/pub/linux/HOW.TO.SUBMIT.html
- 29 "How to name things", from the ibiblio Linux Archive, available at: www.ibiblio.org/pub/linux/NAMES.html
- 30 Motto "Free music, free software, free thought", available at: <http://etree.org>
- 31 etree self-reported statistics, available at <http://db.etree.org/stats.php>
- 32 For examples of file comments, see http://db.etree.org/shninfo_detail.php?shnid=22006#comments
- 33 For example of personal comments, see http://db.etree.org/userating_view.php?ref_userid=mudpie
- 34 ibiblio's blog project, available at <http://blogs.ibiblio.org/>

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