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Ownership of Intellectual Property in the Library Complex

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Abstract:

In order to broadly explore intellectual property in the context of the library complex, this research examines the patents produced by companies that provide goods and services to libraries, as well as patents associated with international libraries. This paper also surveys the trademarks and copyrights held by Charlotte Mecklenburg Library, located in Charlotte, North Carolina. This research suggests ways in which development of intellectual property by U.S. libraries might evolve in the future, with evidence obtained primarily through the searching of online databases.

Keywords: Libraries, Copyright, Patents, Trademarks, Intellectual Property, Trade Secrets, Library Complex, Brands, International
Introduction

Libraries are vibrant sources of knowledge, but they are also at a crossroads. As they seek to redefine their place in society, the role they play will undoubtedly change and grow. It is well established that libraries deal with intellectual properties of all kinds, but little is known about their ownership of the legally protected works of creativity, invention, and design that they generate themselves. In the United States, libraries are popularly seen as information providers, assisting those engaged in the research process. Except perhaps for copyrighted matter, libraries have not been traditionally conceptualized as producers of intellectual property. Rather, the library is thought of as a facilitator of innovation (Daland & Walmann-Hidle, 2016).

A significant number of for-profit and nonprofit businesses, which are associated with libraries through their provision of various kinds of equipment, software, and databases, can be found to own patents; outstanding examples are OCLC (Online Computer Library Center) and the Library Bureau. Along with libraries, these organizations may be conceptualized as elements of a library complex, which includes all those entities which specialize in supplying libraries with the material means for accomplishing their goals, missions, and purposes. The library complex evolved at least, in part, as a result of the needs of libraries to obtain those means; however, in the context of international libraries, there may be less formality or differentiation with regards to its structure, possibly allowing foreign libraries to be more flexible when it comes to
intellectual property. It is interesting to note that the library complex could even comprise companies involved in library architectural and interior design, as certain firms focus on those areas (McCarthy, 2007).

While it is not unusual for universities and other academic institutions to collect royalties on patents (Sampat, 2009), a basic search of the United States Patent and Trademark Office records (1976- present) indicates that it is still the exception for United States libraries to be listed on patents as their owner; however, when it comes to the higher education enterprise, it may be of little significance whether the parent institution or a subdivision thereof, such as a library, is listed as the owner or “assignee” of a patent. Although libraries in the United States are more focused on buying and lending materials protected by intellectual property than creating it, it is not unusual for universities to be major hubs of innovation. And so educational institutions and the bodies that administer them can often be found to own intellectual property. Unless advertised or announced, often the only way one can know whether companies and various organizations are involved in the creation of new technologies in the first place is to search for and examine the patent records associated with them (Dhawan, 2006). Copyright, of course, is a different matter; when one considers the digitization of archives, and the preparation of library guides and textual resources, “[n]ot only are libraries purchasing intellectual property, they are producing and maintaining it. Libraries are publishers.” (Dais and Lafferty, 2005, p. 21). In short, libraries purchase and receive copyrighted materials all the time.

In other parts of the world, it is possible that libraries may be breaking out of conventional patterns, becoming more directly involved in the development of
intellectual property. This may be partly due to the less regulated state of intellectual property laws in other parts of the world, such as China (Behr, 2017), but could also be part of a coordinated national effort in some cases (McCary 2013). This research attempts to broadly characterize the production of intellectual property by libraries and closely associated businesses by investigating some of the major trends in library-related patents, followed by a brief analysis of the intellectual property coming out of an important American public library, Charlotte Mecklenberg Library in Charlotte, North Carolina.

**Literature Review**

In the past, libraries were not seen as places of patent and trademark legal activity, although they have long served as a source of demand for technology (such as catalogs), which positively influenced the development of innovation, which was subsequently exploited in the for-profit sector (Franzraich 1990). Libraries undoubtedly help inventors, and some, such as the Patent and Trademark Resource Centers (PTRC), are designated by the United States Patent and Trademark Office to provide patent and trademark search assistance and answer pertinent research questions (Jenda, 2005). However, the PTRCs are not inventive entities in their own right, nor are they sources of legal advice on patent prosecution.

Most academic libraries in the U.S. help staff provide access to online patent tutorials (Baldwin, 2007), but that is the closest they come to the inventive process or the various procedural steps which must be followed to establish patent protection. In general, little is known about the role that intellectual property ownership plays in libraries, though branding, a related practice, is now common and studied (Roughen, 2012). When brands are used for commercial or similar purposes they obtain a level of
trademark protection, and they are used by many libraries to publicize their services. In fact, as early as 2011 Hariff and Rowley observed that branding, the “art and cornerstone of marketing” (Kotler, 2003, p. 418), has moved from a peripheral interest into the heart of a number of UK library authority marketing plans” (p. 18). Thus, brands may be protected through trademark law, while technical innovation can be protected by patents (Schechter, 2006).

Despite their historic contributions, “libraries and related technology have not been considered or studied by institutional historians, and conceptualizations derived from business or entrepreneurial history have not yet been applied to the history of libraries” (Flanzraich 1990). Since patents are still infrequently owned by United States libraries, the emphasis here is on some major types of innovation associated with patents owned by businesses closely allied with libraries – in the library complex. And since trademarks are now common, this study will explore one particular public library, Charlotte Mecklenburg Library, which has made substantial efforts to protect its intellectual property in the past. Charlotte makes a good case study because it has a portfolio of trademarks, as well as a limited number of registered copyrights. As an aside, it should be stated that some librarians such as Melvil Dewey and Adelaide Hasse are recognized as the source of important innovative ideas, even though this recognition has been late in coming in some instances (Grotzinger, 1978).

**Libraries and Technical Innovation**

The roles that libraries play in the development of new technologies may be changing, whether in making available the means to build or devise inventions or help with the steps needed to protect them. Scholarly communication initiatives seem to be
more prominent, and libraries “are taking a more active part in university research” 
(Daland & Walmann-Hidle, 2016, p. xi). The idea of libraries as incubators or places 
where entrepreneurs can develop technology or clearinghouses for intellectual property is 
discussed in the context of Nigerian Libraries by Tella and Issa (2012); and “[l]ibraries 
throughout the world are recognizing the potential of the Maker Movement to provide 
their patrons with hands-on learning experiences…” (Pawloski & Wall2017, p. 11). In 
Europe, Pietruch-Reizes reported that “[w]e have seen an apparent change in perception 
of the library as the centre for testing and disseminating new technologies. In addition, 
university libraries should become actively involved in the management of intellectual 
property and the transfer of knowledge” (2009, P. 40). The British Library Board owns a 
number of patents. And in China, libraries may be becoming more fully integrated into 
the research networks associated with scientific and technical innovation, as well, by 
playing a more critical role in national efforts which aim to facilitate collaboration and 
synergy among state influenced commercial and academic entities (McCary 2013); on the 
other hand, others suggest that such a role is the exception and that Chinese academic 
libraries do not show evidence of being embedded in the scientific discovery process 
(Feng and Zhao, 2015). With respect to intellectual property, libraries may be at place 
where many possibilities converge.

**Embedded Librarianship**

The extent to which libraries or librarians can be directly involved in the patent 
process depends on many factors. In the United States only the actual inventors of 
something or legal professionals with years of education, who have passed the 
requirements of the patent bar, are allowed to apply for a patent (Pemberton, 2005). This
makes the process of incorporating the prosecution of patents into any business or enterprise a complex process because of the need for specialized patent expertise. As previously alluded to, legal and regulatory mechanisms for managing intellectual property are still developing in many places, but even in China “only an employee of the patent agency, who has Patent Agent Qualification, can get a Patent Agent License and be qualified to act as a patent agent” (Feng and Zhao, 2015, p. 298). In the United States, the process of applying for a patent involves legal procedure and is separate from the inventive act, which is primarily technical or scientific in nature. Nonetheless, librarians with good research and analysis skills and proper training can assist inventors in many ways, such as by helping them with knowledge discovery or the development of a picture of the current state-of-the-art; with proper education and training, librarians could assist with some of the steps of patent protection.

In a study by Feng and Zhao (2015) “embedded” patent librarianship was described as being “composed of patent search skills training, patent information analysis, patent monitoring, and assistance in patent application” (p. 299) and, furthermore, that “[p]atent information service is a newly emerging specialty and in-depth information consultation service in Chinese academic libraries (p. 292). Embedded librarianship (EL) is a model for strategically partnering library professionals with the working groups and individuals that need their expertise and knowledge (Shumaker 2012). “The phrase ‘embedded librarianship’ takes root from “embedded journalists,” a concept tied to wartime media coverage… using [a] similar concept, EL places a reference librarian right in the midst of where the user is to teach research skill whenever and wherever instruction is needed” (Abrizah, Inuwa, and Afiqah-Izzati, 2016, p. 637).
Overview of Intellectual Property

Intellectual property may generally be said to exist in four primary forms: (1) patents, (2) trademarks, (3) copyright, and (4) trade secrets (McJohn 2009). Patent law involves the protection of "any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof" (Kiklis, 2014, p. 2-10), whereas copyright law protects "original works of authorship fixed in any tangible medium of expression," (Balganesh, 2013, p. 267). In contrast, trademark protects “any word, name, symbol, or device, or any combination thereof” which act as an identifier of goods or services, while a trade secret is simply confidential business information not “generally known to, and not being readily ascertainable by proper means by, other persons who can obtain economic value from its disclosure or use,” (McJohn, 2009, p. 473). In the past, it would be unlikely that American public or academic libraries would be involved with trade secrets to any considerable extent, and so trade secrets is not a major focus here.

Method

Search Strategy

The search engines used to carry out this research include those provided by the United State Patent and Trademark Office (USPTO), in particular the Patent Full-Text and Image Database (PatFT)(1976- present) and Trademark Electronic Search System (TESS) (1984 – present). The USPTO’s patent and trademark databases are probably the most well-known free intellectual property databases in the United States (Dhawan, 2006). Clarivate Analytics generously provided the use of its proprietary Saegis on Serion trademark database for this research (active records from 1884 onward and
inactive records since 1984). Other search databases used were Espacenet (provided as a service by the European Patent Office, coverage varies from country to country), and Google Patents (coverage varies from country to country). Google Patents, another free patent search service, provided by Google, encompasses numerous national and international patent databases, as well as the patent database of WIPO (the World Intellectual Property Organization) and SIPO (the State Intellectual Property Office of the People’s Republic of China). The United States Copyright Catalog (1978-present) was used to search for copyright records. Simple searches for the term “library” in the field of “assignee” (or “applicant”, depending on the database) or similar terms of the patent databases produced a manageable set of results from which general trends could be derived.

Results

A search of the various intellectual property databases previously described reveals that although numerous libraries in the United States are listed as trademark owners, sole ownership by “libraries” or a “library” is not frequently shown on patents, with the preponderance of library-related patents being held by corporations. While this research did not focus on overall trends in trademarks for libraries, a similar search for the term “library” in the trademark databases along with a limitation to international class 41 (education, entertainment, and training) produces a set of relevant results which confirm that numerous libraries are registering trademarks (Carvalho, 2015). A broad search of the popular patent databases such as Google Patents shows some interesting trends regarding ownership of patents by businesses which specialize in serving libraries. In fact, the history of the development of American libraries is reflected in the patents
issued to many of those companies, the most famous of which would be the Library Bureau, founded by Melvil Dewey in 1876, who is also known for the Dewey Decimal Classification (Wiegand, 1996). For example, a search of the patent databases of the USPTO demonstrates that in the early decades of the twentieth century prominent classification fields of issued patents included both Current CPC Classification - B42F, which covers “holders for collections of papers, sheets, cards, or units thereof, each paper, sheet, card, or unit being individually insertable and extractable” (2016) and Current CPC Classification A47B, which covers “[t]ables, cabinets, or racks” (2017). Of course, the development of means of organizing and cataloging library resources mirrors the growth of American libraries, on which the Library Bureau capitalized. Libraries need furniture, as well. It was only much later on that the computer would revolutionize information services. And so patents related to electrical digital data processing are a frequently classification since the early 1990’s (CPC Scheme – G06F, 2017) (Note: these results reflect the modern classification of patents, which the original U.S. Classification system closely approximates).

On the other side of the Atlantic, several patents issued in the 1980’s for the previously mentioned Current CPC Classification B42F classification, show the British Library Board as assignee, evincing the impact of the British library system on the development of libraries. A simple assignee search for the term “library” or “libraries” in the USPTO PatFT and Google Patents Advanced search databases, as well as a similar search as an “applicant” in Espacenet, shows that the preponderance of patents issued in recent years to libraries are owned by institutions located in China rather than the United States. Prominent libraries which are listed as having a property interest in patents
include the National Library of China, the China Braille Library, and the Sun Yat-sen Library of Guangdong Province. Of course, patents do not on their face reveal all the possible intricacies associated with ownership under the law.

A PatFT (1976-present) search shows at least 13 patents listed with OCLC as assignee and at least 6 patents associated with the British Library Board. It would not be unusual to find that libraries are the primary assignees for many patented inventions, but according to its website, Shenzen Science and Technology Library appears to provide what is at least potentially legal advice along with services of a scientific nature:

We can conduct intellectual property audits to identify patentable inventions, trade secrets, and other proprietary interests. We conduct searches and render… opinions on patentability of inventions, patent infringement and validity. We also provide unique services in the area of infringement risk analysis and counseling with focuses on long-range patent portfolio development and management (2014).

Shenzhen Science and Technology Library possibly exhibits a closer connection to the intellectual property protection process than that commonly demonstrated by the library complex in the United States, as well as a more strategic positioning in the collaborative network to which embedded librarianship aspires. The existence of patent-related services in some international libraries might point to the need for libraries in the United States to consider integrating the invention and discovery process with the informational research which supports it, essentially building upon the collaborative features of modern reference and the information literacy skills of librarians.
Analysis of Charlotte Mecklenburg Library’s Intellectual Property

Located in the City of Charlotte and the County of Mecklenburg, North Carolina, and an integral part of its community, Charlotte Mecklenburg Library (CML) has repeatedly demonstrated innovation in library service, winning numerous state and national awards. A prominent example of CML’s branding activities is ImaginOn, the name of the facility where its great children’s library, which holds most of the former children’s collection from its Main Library, and the Children’s Theater of Charlotte (CTC), are housed together (Charlotte Mecklenburg Library History: About Us., n.d.).

Statistics

CML was founded in 1891 as the Charlotte Literary and Library Association and the population served by CML is approximately a million and is still increasing (Charlotte Mecklenburg Library History, n.d.). According to recent statistics, from July 1, 2016 to June 30, 2017, around 3.4 million patrons were served by the library, and over 6 million items were lent; furthermore. “16,727 people used computers in the Job Help Center and experienced 334 Job Help-themed programs” (Charlotte Mecklenburg Library: Library by the Numbers, n.d.). There are 20 individual branch libraries, including the Main Library and ImaginOn.

Trademarks & Copyrights

A Basic Word Mark Search of “Charlotte Mecklenburg Library” in the “Owner Name and Address” field on September 24, 2017, of the Trademark Electronic Search System (TESS) at the website of the United States Patent and Trademark Office (USPTO) produced the following results:
The name “ImaginOn” is unique for library services and so its name acts as a source identifier, and is, therefore, protectable as a trademark under the intellectual property laws. Because “ImaginOn” is such an important service to children and young people in Charlotte, it is not surprising that this is one of only two marks that CML maintains active (and therefore shows up as “live” in the TESS database) – the other live mark being “Novello.” Except for the Novello mark, which was applied for in 1993, applications for the other marks were made between 2000 and 2003, when Bob Cannon was director of the library. Cannon was director of CML, then known as the Public Library of Charlotte and Mecklenberg County, from 1986-2003 and was interviewed before he retired as director of Broward County Library (Roughen, 2012). Under Executive Director Cannon many innovative initiatives were introduced through the library, including the building of ImaginOn and the establishment of an online catalog (Director of Broward County Library: Robert E. Cannon, n.d.). Cannon noted that because CML was then a relatively independent institution from a legal viewpoint, it had the freedom to create and promote the brands it wished. Like most United States Libraries, CML does not appear to own any patents.
In addition to the protection available through federal law, legal protection may be afforded to common law trademarks; common law trademarks are created when any “[f]anciful, arbitrary, distinctive, and non-descriptive mark, word, letter, number, design, or picture that denominates and is affixed to goods” is used to identify a product (McManis and Friedman, p. 106). “Trademark rights acquired at common law are predicated on actual use of the mark in commerce” (Raysman et al., 2006, p. 4-10).

Generally speaking, individual states may permit registration on the state level, as long as there is no conflict with federal trademark laws. In the case of Charlotte Mecklenberg Library, at least three state trademarks are on file with the North Carolina Secretary of State, as indicated by the following results from the North Carolina Secretary of States trademark database:

<table>
<thead>
<tr>
<th>Mark Name</th>
<th>Status</th>
<th>RegNumber</th>
<th>Description</th>
<th>Goods &amp; Services</th>
<th>Keywords</th>
<th>Owner</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prosearch Public Library of Charlotte &amp; Mecklenburg County</td>
<td>Cancelled</td>
<td>010896</td>
<td>prossearch public library of charlotte &amp; mecklenburg county research services</td>
<td>research and document delivery services</td>
<td>prossearch public library of charlotte &amp; mecklenburg county</td>
<td>Public Library of Charlotte and Mecklenburg County</td>
</tr>
<tr>
<td>Biz Link</td>
<td>Cancelled</td>
<td>014706</td>
<td>the word &quot;bizlink&quot; with the word &quot;biz&quot; being hollowed capital letters, followed by the smaller solid letters of &quot;link&quot;</td>
<td>a service that provides information to the public on business, industry, marketing, taxes and other related subjects via the internet</td>
<td>biz link</td>
<td>Public Library of Charlotte and Mecklenburg County</td>
</tr>
<tr>
<td>Charlotte's Web and Stylized Globe and Web</td>
<td>Cancelled</td>
<td>011112</td>
<td>charlotte's web with a stylized representation of a globe and web in white with the words appearing below the square</td>
<td>information service provided by the library which provides access to other information sources via telecommunications</td>
<td>charlotte's web and stylized globe and web charlotte</td>
<td>Public Library of Charlotte and Mecklenburg County</td>
</tr>
</tbody>
</table>

*Figure 2. North Carolina State Trademark Database Search for CML Trademarks*

Marks shown in Figure 2 above include Charlotte’s Web, an information resource in which members of the Charlotte community published information, and “Bizlink” an online business resource center (Windau, 1999). Promotion of the library comes in many forms, such as the graphics and animation of two of its popular children’s literature sites:
The BookHive (a website where children’s books are reviewed) and Storyplace: The Children’s Digital Library, an interactive Flash-website for preschoolers that was designed to recreate storytime (CMLibrary: Family of Web Sites, 2012). Other examples of brands that have been associated with CML, which may function as common law trademarks, include “Novello Press,” “Readersclub.org,” “Hands on Crafts,” “PLCMC Online, Bizlink,” “The Charlotte Mecklenburg Story,” “Reader’s Club,” “HealthLink Plus,” “Commerce Connection,” “Glow & Learn,” “Library Loft,” “Novello Festival,” Smart Connections,” and “Train Your Brain.” One way CML promoted the library through its websites was to make identifying information on these sites less easily apparent or discoverable by the user, allowing the user to develop positive associations with the websites before making a connection to their source, the library.

An essential part of branding is the strategic use of intellectual property to promote one’s message, but marketing may still not be viewed as a core function of many libraries. On the other hand, “[c]opyright is at the heart of the laws that libraries, archives, and museums and other cultural institutions need to understand in order to avoid legal problems”; under federal law copyright is automatically created the moment a word is written on a page (or in tangible form) and so copyrights are considered here primarily in the case where the additional step of federal registration was taken (Carson, 2007, pp. 44-45). “North Carolina does not currently offer statewide protection for intellectual property above and beyond what’s already provided on the federal level by U.S. copyright laws” (Registering a Trademark or Service Mark in North Carolina, 2006, p.7) Even a basic search for the copyright claimants “public library” produces numerous results in the United States Copyright Catalog (1978- present). In addition to a small
number of written works, Charlotte Mecklenberg Library appears to have only a handful of federally registered marks, including (1) “2013 Charlotte Mecklenburg Library Summer Reading Web Site,” protecting its associated text, 2-D artwork, and database, (2) “An African American album: The Black experience in Charlotte and Mecklenburg County,” which is a collection of photos, and (3) The Tycoon Platoon, which is also a website.

**Conclusion**

This research has sought to broadly describe the types of intellectual property produced and owned by various entities in the library complex. With respect to patented technologies, in some libraries outside the United States, the boundaries between the traditional functions of the library and the more scientific, legal, and commercial functions of business appear to be blurring, allowing for a less formal approach to innovation. In the United States, the role of businesses and libraries is still well defined as reflected in the predominance of patents issued to corporations. Nonetheless, except for trade secrets, U.S. libraries in general may be found as owners of the main types of intellectual property: patents, trademarks, and copyrights. The current association of maker spaces with many libraries would seem to suggest that they can play an important part in the development of new ideas. In the United States libraries are traditionally viewed as places to access information. As the philosopher Michel Foucault observed, libraries are “not merely inert or non-affective storage, but a place where the texts themselves were actively re-interpreted …not merely voids where information is held, but are also places where new knowledge is born (Pierre, 2005, p. 148). One way to increase the value of libraries and librarians might be to change some of the requirements
of the United States Patent and Trademark Office, allowing ALA-accredited Master’s degree librarians (and not just individuals with a science or technical background) to sit for the patent bar and prosecute patents. This could be another specialty area within librarianship. Libraries and librarians already play an important role in the intellectual property development process, but the future points to many possibilities as to how this role might evolve, which could increase the value of librarians and their institutions, while addressing certain important national and strategic needs.
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CPC Definition - B42F SHEETS TEMPORARILY ATTACHED TOGETHER; FILING APPLIANCES; FILE CARDS; INDEXI... (2015, November). Retrieved September 23, 2017, from

CPC Scheme - A47B TABLES; DESKS; OFFICE FURNITURE; CABINETS; DRAWERS; GENERAL DETAILS OF FURNITURE. (n.d.). Retrieved September 23, 2017, from


inventor; [everything you need to know to make money from your ideas]. New York: Square One Publishers.


