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# Law Libraries Linking Data to Mobile Devices: Save Patrons' Time and Stay Hip

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## Save patrons' time and stay hip

By Anna Russell and Carli Spina

From cars and cameras to computers and smart phones, as a society, we tend to gravitate toward new technology because it helps us work more efficiently or have more fun. Many articles have been written on the modern interest in newer, faster, smaller technologies—cue in mobile devices and mobile technologies. Mobile devices do everything that computers can do—but in the palm of your hand. The legal community, as a microcosm of the larger society, is no different in its desire for mobile devices because they provide quick access to work information and personal information and because they are fun. But how do law libraries, the bastions of voluminous print resources and the access portals to subscription-based digital piles of legal data,

(principally 2-D barcodes) could be used to provide patrons with access to legal information. Since at least 2010, many marketers, bloggers, and researchers have speculated on mobile devices and technology trends, postulating that mobile devices will take the place of computers. A September 2011 press release from the International Data Corporation (IDC) described a new media market model, which estimates that mobile internet users will surpass wireline (i.e., cable-connected terminals in a fixed location) by 2015. The IDC press release states, “As smartphones begin to outsell simpler feature phones, and as media tablet sales explode, the number of mobile internet users will grow by a compound annual growth rate of 16.6% between 2010 and 2015.”

With mobile devices like tablets and smart phones becoming ubiquitous, by using mobile devices for viewing information, we as legal librarians are reducing the number of tech devices individuals must connect to at one time, adding value to data that may have only had one or two points of entry (print or PC) but now has three or four (add tablet and smart phone).

What about mobile devices, though, makes them useful for accessing information?

One reason to use a mobile device is the efficiency of action associated

with the mobile tagging capabilities of mobile devices. Phrased another way, after information has been published, how does it get to the patron and how can mobile tagging be of use? In broad terms, the logistics of information supply generally consist of 1) published data, 2) a storage medium for the data (e.g., print books, databases), 3) a transfer process to access the data in the storage medium (e.g., the internet connection), and 4) the output or viewing device (e.g., the book, PC, tablet, or smart phone). Mobile tagging,

then, functions during the transfer process; it is faster than human hands in locating specific internet-accessible data. Mobile tags, set in advance, point to specific pieces of internet-accessible data; they wait for a patron to initiate them (i.e., scan them), and once initiated, these tags rapidly link to the set information.

### Understanding Mobile Tags

Simply deciding to use mobile tagging technology, however, is not enough. For better or for worse, 2-D barcodes have proliferated over the past few years, with each type offering its own advantages and disadvantages. In addition, as mobile tagging has grown popular, other technologies have emerged that aim to one day achieve the advantages of mobile tagging without the need for unsightly barcodes. The decision to integrate mobile tagging into your outreach efforts requires a careful analysis of the features of available technologies to determine which most closely meets the needs of your institution.

Despite the multitude of mobile tagging options, two emerged as early favorites, particularly in libraries: Microsoft Tags and QR codes. Each has its pros and cons.

Microsoft Tags, the best-known type of high-capacity color barcode, are frequently seen in magazines and advertisements and consist of a small square with a colored pattern made of triangles or dots overlaid on an image. Unlike QR codes, Microsoft Tags have not been opened up to developers, so users must create and read the tags using Microsoft's proprietary platform. While users can currently create Microsoft Tags and download the reader for free, Microsoft may charge for certain features in the future (though this does not seem likely in the near future). Moreover, this also means that there is only one Microsoft Tag creator and one reader, though the reader is available for a wide range of smart phones and mobile devices. According to the company's website, Microsoft Tags can incorporate any image or logo by overlaying a pattern of dots over the image and can be used to link to websites, phone numbers, text, or contacts.



This QR code will take you to a LibGuide collecting mobile tagging resources.

incorporate mobile device tools that often have more to do with social networking than reading primary source law? They do it slowly, if at all, due to the many challenges adding new technology usually presents. This article attempts to offer ways to meet the challenges of mobile tagging and successfully overcome them.

Mobile devices began to pick up steam among law librarians in 2010; mobile devices existed before then, of course, but in 2010, conferences and meetings like the Computer-Assisted Legal Instruction (CALI) conference began to discuss how mobile applications and mobile tagging technologies

Conversely, because QR codes are not subject to any license, QR code generators and scanners have proliferated widely over the past several years. Free scanner applications are available for virtually all smart phones and mobile devices, and there are a variety of different QR code generators available both for free and for pay. QR codes have sufficient redundancy built in, in that approximately 30 percent of the code can be covered without negatively impacting the scanning process, which gives users the ability to incorporate logos or designs into their QR codes with ease. QR codes can also be made in any color as long as there is sufficient contrast with the background on which it is displayed. QR codes have also been gaining recognition in libraries recently, with several using them in unique ways—in part because of what is perceived as their greater visibility among patrons. New options are emerging that allow the destination of the QR code to be changed without editing the code itself, which makes using QR codes more convenient when the destination URL changes frequently.

## The Future of Mobile Tags

SnapTags are a newer option that was developed by SpyderLink as an alternative to existing 2-D barcodes. The major advantages of SnapTags are their more subtle, appealing look and their ease of use. Unlike traditional 2-D barcodes, SnapTags make use of a mobile device's camera rather than a separate reader app. SnapTags encode all of the necessary information in a circular band, leaving space for a logo in the center of the tag, which can provide a more professional look than some of the other mobile tag options. However, the advantages of SnapTags are somewhat tempered by the fact that it is a proprietary technology with no free options currently available. Also, users may not initially be as familiar with how to use this technology since it is a newly emerging option.

Because recognition by users is an important component of use, it is generally easier to use one of the more popular code types to take advantage of the fact that users may already be

familiar with these types of codes. 2-D barcodes may become obsolete in the future, with some companies, such as Kooaba and even Google with its Google Goggles project, already looking forward to a time when it will be possible to scan print materials, or even your surroundings, and connect directly to

online content without the need for any sort of code. But in the meantime, 2-D barcodes offer exciting options to provide an immediate connection between a physical library and its electronic resources.

## Mobile Tagging Technology in Libraries

Mobile tags can be used in a wide range of contexts, and many users have already developed surprising uses, ranging from including them on advertisements to putting them on clothing. While many of these uses may seem like mere novelties, some institutions have found ways to leverage this technology in

ways that complement their mission and help them to reach their users in new ways. For example, museums have been using QR codes generated by QRpedia for their unique ability to connect users with relevant Wikipedia entries in their native language (or more precisely, the language of their mobile device).

Libraries have also started finding ways to use mobile tags to engage with patrons. The William A. Wise Law Library at the University of Colorado Law School, another user of mobile tags, stands out for its early experimentation with Microsoft Tags on end panel signs, as well as to link patrons to library policies and resource guides. Interestingly, the library recently switched from Microsoft Tags to QR codes in an attempt to increase patron use after finding that few students were scanning the Microsoft Tags.

QR codes were the predominant mobile tags used in the libraries surveyed. The Harvard Law School Library has used QR codes as a way of connecting patrons with additional information about library policies, where to find materials, and how to get

reference help, as well as connecting a physical exhibit with its digital counterpart. In response to a February 2012 email correspondence, Austin Groothuis, marketing manager for CALI, describes some CALI QR code uses, including marketing and linking to legal education tools such as LibTours—short audio instruction pieces explaining specific types of legal resources. The mobile tag, when scanned, initiates the audio on the user's mobile device. Law libraries can place QR codes linked to CALI LibTours near related legal resources on their own shelves to provide patrons with additional information about the resource at the point of need.

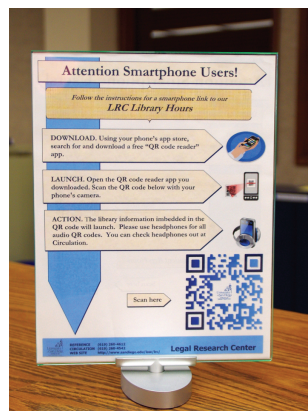
The Western New England School of Law Library has used LibTour QR codes in its stacks since July 2011 and has included them in library orientations and offered displays to educate patrons on their use. The library has also used QR codes to allow patrons to email reference staff when reference services are unavailable. Elliott Hibbler, the library's research/faculty services librarian, notes, "While QR code adoption has not been as high as I thought it would be, I still think QR codes have a useful place in a library's outreach toolbox. It is a great way to augment a display with multimedia content or to provide links to point-of-need reference next to print

material in the stacks."

He goes on to say, "QR codes still have a marketing use, as well. Even if QR codes are not directly converting to hits, they convey a message of accessibility to library patrons. That 'accessibility anywhere' message can be a part of your library's brand."

Similar to CALI's use of QR codes in LibTours, at the University of San Diego's Legal Research Center, QR codes have linked patrons to the

library's streaming media presentations of specific legal resources. The University of San Diego has also used QR codes to link patrons to an SMS number for texting questions to the reference desk's email address, as well as to link to the library's hours, the mobile library catalog, and various other online resources. Ruth Levor, associate director of the Legal Research Center, explains that the library's QR code program is part of a larger goal to make



A mobile tag flyer in the University of San Diego Legal Research Center directs patrons to the library hours.



QR codes on table tents at the Harvard Law School Library link patrons to additional information.

students “feel that they are never alone and always have somewhere to turn for research assistance.” She adds that, given the way students tend to wait until they absolutely need a research question answered, mobile tags are a way to meet students where and when they have a need.

## Mobile Tagging Tips, Tricks, and Pitfalls to Avoid

When considering adding mobile tagging as an access point for legal information, we advise first establishing a strategic planning process that incorporates the following:

- A plan to determine the display areas for your mobile tags in an organized, uniform, and branded fashion. Deciding where you want to physically display your mobile tags is an important first step and requires knowing where mobile devices are most commonly used in your library. Displaying a mobile tag on your website, for example, is less effective than displaying the tag near print materials because a patron who is already accessing your website on a PC is unlikely to switch to a mobile device. Some may also want to consider using mobile tags to reach outside their library. Also, if your mobile tags are not displayed in an orderly manner, the pitfall is sensory overload. Furthermore, having a uniform, branded set of mobile tags allows patrons to immediately recognize the value of the tag, remembering how to use the tag from previous encounters with different but similarly branded tags.
- A plan for determining the type of mobile tag and the mobile tag generation software you will use. Using different types of mobile tags requires your patrons to download different mobile tag readers, which is confusing and inefficient. Having one mobile tagging generator also saves you time as you create new tags. The University of San Diego's Legal Research Center has had great success with efficiently creating and organizing 2-D mobile tags using a URL shortening, sharing, and tracking program called bitly (bitly.com) and the French QR code generator Unitag (www.unitaglive.com/qrcode). Shortening your URL is important because it shortens the amount of information that the QR code must process and makes for a more scannable code. Also, a good free QR code generator should not require special programming or design skills, though it may allow you to change the color of the tag as well as add a logo.

It will also provide a blank buffer around the tag that allows the reader to effectively scan the tag.

- A plan to conduct patron surveys and receive periodic feedback on the mobile tags' usefulness. Without some form of feedback, accurately assessing how useful mobile tags are for your patrons is difficult. Jen Ferguson, data services librarian at Northeastern University, endorses usage statistics, stating, “Usage stats from the codes have been enormously helpful in letting us know what our patrons are interested in. It's been interesting to speculate on why certain types of codes seem to generate more interest than others.” Use of online surveys and online analytics are two separate ways to chart usage statistics. One example is bitly, an online tool that tracks the number of clicks on a particular bitly link so that you will know how many times a tag with a bitly link has been swiped. At the University of San Diego, bitly provides us with the comforting knowledge that all but one of our QR codes in the stacks are being utilized by patrons. From our statistics, we found that our QR code flyer linking students to guidance on study aids is not useful to patrons and is potentially in a poor visual area since we see that it has never been scanned. On the flip side, through our bitly stats, we found that a separate QR code flyer linking to a streaming media presentation of the Federal Practice Digest System is popular among patrons. The Federal Practice Digest System QR code went into the stacks near the print Federal Practice Digest set in mid-January 2012. A September 2012 usage check in bitly shows that the bitly link to the presentation contained in the QR code has been clicked a total of 21 times since its inception with usage by month also viewable.
- A plan for addressing technology issues. Patrons, for example, must have wi-fi or a cell phone signal to use mobile devices. A patron scanning a mobile tag that links to internet-accessible content requires the patron's mobile device to be online. Mobile tags have also been used by bad actors to link people to sites containing malware, though applications such as Unfurlyr now provide a means of checking for malware when scanning codes. Law libraries ought to be aware that patrons are trusting them when scanning library mobile tags to access some type of data.
- A plan for determining the types of content that work best on mobile devices. Not every piece of legal information is readily viewable on a mobile device. For instance, using a

mobile tag to access a large PDF file that is not in mobile device format is not as effective for the patron as using a mobile tag to link to the mobile OPAC. Material that has a mobile web version, on the other hand, would be a good candidate for a mobile tag.



A mobile tag display on an end panel at the University of San Diego Legal Research Center directs patrons to online presentations about specific legal materials.

Having an advance plan that leverages these aspects and has received supervisor buy-in before rolling out even one mobile tag flyer is key to making the entire process seamless and value-added.

## Groundwork for the Future

Although future mobile technologies may supersede 2-D barcodes, if 2-D mobile tags are properly integrated into your library, they have the ability to lay a foundation in patrons' minds for the next generation of mobile tagging. CAL's Austin Groothuis is not alone when he admits of 2-D mobile tags: “A cool idea that, because of user adoption barriers, might be better in theory than in real life.” However, the primary function of current 2-D mobile tags to quickly link mobile device users to specific data is not expected to become outmoded since mobile device popularity is only expected to grow. Having a library environment that integrates mobile device technologies into accessing information is not only hip, it familiarizes patrons with the interaction between legal research and technology trends and thus lays the groundwork for further integration between your library's physical and electronic resources. ■

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