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# Don't Panic: The Lawyer's Guide to Making Your Own Mobile App

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# Apps 101: What You Should Know When Making Your Own App

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## Introduction – The New Normal

Smartphones have consistently outsold traditional computers since 2010. The sale of tablet computers rose by 78% in 2012, fueled largely by the smaller (and more moderately priced) iPad Mini and Nexus 7. The two largest digital app stores, the Apple's App Store and Google's Play Store, each host more than 700,00 apps and represent more than 60 billion apps downloaded. 20 percent of web traffic in the United States comes from smartphones and tablets.

Normally, a web site is developed with the intention of being viewed from browsers on computer monitors. The mobile versions are an afterthought (if present at all), and treated like "website light." However, in light of these kinds of statistics, it shouldn't surprise many that professionals who plan or speculate on the future of technology are saying that mobile technology is the "new normal." The advice being circulated amongst those on the cutting edge of web development is to design content primarily around being seen on the smaller screens of smartphones and tablets. While an appealing desktop design is still desirable, it is now a secondary priority. This represents a fundamental change in the way websites will be developed in the future. This change is also a remarkably difficult one that challenges years of conventional wisdom and poses a myriad of technological challenges.

Apps have risen to importance in a similar way. Apps were once the designation for ubiquitous tools and time-wasting games; now they are highly sought-after resources that companies will spend hundreds of thousands of dollars to develop. In some fields, an organization's reputation and livelihood hinges on the successful adoption of an app.

And to an extent that far exceeds the challenges posed by mobile websites, apps are steeped in complexities.

Attorneys should be interested in embracing these developments, as interactions with a lawyer's web presence can be a client's first or primary point of contact. As this kind of technology becomes increasingly commonplace, it's important to implement, or at least start planning, a mobile presence. The topic of this paper is to describe mobile technology, go over some of the best features and functions that should be considered when developing your mobile presence, and means of facilitating development.

## Apps in a Nutshell

"Apps," is just an abbreviation of "applications;" computer programs designed to add functionality or perform particular tasks. In this respect, many familiar pieces of software fall into the definition of an app. The suite of productivity software included in the Microsoft Office suite are all technically "apps," as are services that live on servers accessed by your web browser (the "cloud," in other terms). Email services like Gmail and Yahoo are such cloud based apps. Office brings word processing, spreadsheets, and presentation functionality to a computer, while email services allow you to send messages and files.

Such a term has seen little use until now due to its overly broad nature, but that quickly changed as smart phones became more sophisticated. The iPhone was particularly notable, for two key developments: the touch screen interface and the App Store. The touch screen introduced a viable alternative to the mouse and keyboard interface many developers were familiar with. The tiny keyboards or multi-press input

on mobile phones was a severe restriction for developing more versatile applications. Using a touch sensitive interface effectively replaces the mouse for manipulating a graphical user interface, allowing for more dynamic functions (like dragging and dropping, or guiding the trajectory of ill-tempered avians). The App Store as a means for distributing new apps seemed intuitive, but the software that enabled the creation of the apps is even more noteworthy. The software development kit (SDK) released by Apple empowered everyone from the biggest software developers to rogue programmers and bored college students to create apps. The number of apps and the variety of tasks they helped perform satisfied a dormant desire and created an entire market for apps on every mobile platform.

However, apps did not remain homogenous in structure. While a great many apps are still developed like conventional computer programs, some are actually cleverly designed websites. Using new advances in website technology, these pocket sized web pages can emulate the form and functionality of a conventional mobile app. These web versions of apps are called “mobile apps,” while apps written specifically for a device are called “native apps.”

## Native Apps

Apps are considered to be native when they are in a device’s native programming language. For iPhones and iPads, which run the iOS operating system, the native language is ObjectiveC. Devices that use the Android operating system use apps written in Java. BlackBerry apps are also written in Java, while Windows phones use a variety of languages, such as C#, C++, F#, VB.NET, and JavaScript.

Native apps present numerous advantages over their mobile cousins. Given that they're written in a proper coding language, they can be remarkably complex pieces of software. Document management suites, courtroom presentation apps, word processing, and other types of in-depth functionality are capable with a native app. They also have the ability to use the features of the device they're installed on. The camera installed on your phone can be activated to collect visual information, or your tablet can use the GPS to calculate your location and nearby points of interest. They are also function independently of their connection to the internet. As long as the app is loaded, it can be used reliably (while any function that does require an internet connection will still be available).

There are some marked disadvantages, though. They are complex to develop, requiring a constantly expanding knowledge of new features being added to the core programming language, as well as new hardware tools consumers are expecting to be utilized. This can lead to lengthy development time, high cost, or both. They're also rather expensive to develop, especially if it's meant to be available on more than one operating system. While an iPhone/iPad app may be feasible by itself, having the same app available for Android devices, BlackBerries, and Windows phones, as well as constantly being updated to fix possible errors and patch exploits can be considerably expensive.

## Mobile Apps

Mobile apps (also known as "webapps") are websites designed with the objective of being viewed on a phone or tablet sized screen. Many of these are optimized versions of websites designed for smaller screens, while some actually perform functions as an

app. An overwhelming majority of these kinds of apps are written in HTML5 and JavaScript. HTML5 is the new standard for HTML, replacing the old standard from 1999. It represents an important step moving into the era of mobile technology since it uses lightweight structure and reduces the necessity of bulky external tools like Flash. An important feature of HTML5 is the ability to detect the size of the screen or window being used to view the page. A properly written page done in HTML5 can use separate cascading style sheets (CSS) to rearrange the structure of the page. For example, if you were to view such a page on a normal computer monitor, it would appear like you would expect, maybe with a column for navigation on the left, content down the middle, tabs across the top for different content, etc. While it looks fine on a monitor, it would look cluttered on the screen of a smart phone. However, the page would recognize the difference in size and load a different CSS file to make the page look more appealing and navigable. The same page described above would collapse the navigation bar and tabs, changing the functionality of some elements to work better with a touch screen than a mouse and keyboard, and so on. There might even be a third CSS file for larger tablet screens that looks like a hybrid of the full size and pocket sized. Websites designed in this mannered are termed “responsive” since they respond to the environment in which they are viewed. Responsive web design is dramatically shaking up the norms of web design, requiring even the most skilled of designers to approach their tasks from a completely new angle.

This highlights a major benefit and problem with mobile apps as compared to native apps. Whereas multiple versions of a native app need to be created to be seen on different devices, a mobile app will appear uniformly across every platform. While

incredibly intuitive and truly responsive website can be rather challenging, putting together a sufficiently responsive website is less intense than a native app and well within the means of most experienced with web design. For those that wish to expand their presence into the realm of apps, a mobile website designed responsively is the best option. However, the downside is that, since it is a website, it requires an internet connection to access and use it. There will be moments when internet access will be unavailable, and unlike a native app which remains installed and functional on a device, a mobile app will be inaccessible. Some mobile apps can make use of generous amounts of content being written in JavaScript, which can emulate native functionality on a mobile site without internet connectivity. However, this level of operation is less efficient and slower than a comparable native app. It is also as complex, or even more so, to create than in a native app.

## Apps for Attorneys?

A survey of the AmLaw 200 and Global 100 for 2011 and 2012 find that an increasing number of large firms have developed mobile web sites. In 2011, 19% of the AmLaw list had mobile sites, while of the firms on the Global 100, 22% had mobile sites[1]. In 2012, the amount had risen to 27% and 29%, respectively[2]. What benefit do mobile websites and apps bring to law firms? Anyone practicing law, either a solo practitioner or a large firm, should be considering as much if their practice has a web presence. That is to say, if you have a website as an advertisement or providing

[1] Matt Gross, *LFM 2011: Report on the AmLaw 200/Global 100 Mobile Web*, http://lawfirmmobile.com/2011/12/lfm2012-report-amlaw-global-mobile-web/ (Dec. 2011)
[2] Matt Gross, *LFM Second Annual AmLaw 200 and Global 100 Mobile Web Survey*, http://lawfirmmobile.com/2012/12/lfm-second-annual-amlaw-200-and-global-100-mobile-web-survey/ (Dec. 2012)

information about your practice, you should give serious consideration to the idea of creating an app, either native or mobile. Recall the statistics mentioned at the beginning, regarding the amount of internet traffic being generated by mobile devices: 1 in 5 people that view a law firm's web site are doing it from a smartphone or tablet.

Apps represent a relatively unique way to turn prospects into clients. First of all, they're important for making prospective clients aware of your firm. If one fifth of the people looking for information about firms are doing so from their smartphone, they are far more likely to engage in the sites designed specifically for them. It's quite the opposite for sites designed solely for desktop, since navigating such a site is a frustrating and off-putting event. Experiencing a well-designed mobile interface is an incredibly novel experience that it invites involved interaction and engagement.

Being noticed is just the first phase, and while it's important, if the usefulness of an app ends there, then the app is failing to achieve its maximum potential. Preferably, the app should become a resource a prospect or client will refer to on a regular basis. The first part of this is immediately offering the specific type of information a user desires. While many practitioner websites are optimizing aesthetic appeal while presenting a mix of content and public relations material, an app needs to have a different focus. If the aforementioned survey of mobile sites is an indication, the most frequently offered pieces of information are attorney biographies, practice areas, and offices. This is literally the "who, what, and where" of a firm, and understandably the most important information for a prospect during their initial impression and evaluation. The ideal situation is to then provide additional content and tools that will

keep people using the app. The next section will discuss what type of content is ideal for making the best use of that first impression and on how to extend their usage.

An additional note should be made on how attorneys may leverage resources available in apps. It is possible to market the availability of an app, but to predicate installation or access to certain portions of the app on the prospect providing their name, business name, email address, or other pieces of contact information. Apps with analytics features can be paired with this information to understand who is using the app, where they are accessing it from, and what they are doing with it. This can help a firm further develop their app, or even help direct marketing and outreach in other mediums.

## Best (Mobile) Practices

Before implementing an app, either mobile or native, it should be planned and tested thoroughly. The content, layout, how frequently used elements need to be rearranged, and how often it will need to be updated and some of the many aspects that need to be taken into consideration. The Law Firm Mobile blog, who performed the AmLaw and Global 100 survey, had the following recommendations for mobile apps:

**Best Practices**

- Layouts tailored for the size and proportion of a smart phone screen
- Professional look-and-feel through appropriate graphics and layout
- URL input box automatically hides itself
- Amount of content on each page is appropriate to reading on a phone screen
- Easily accessed “home” button
- Simplified navigation interface

- Appropriately sized text

**Bonus Practices**

- Option to allow users to share content via social network services (e.g., LinkedIn, Facebook, Twitter)
- Mobile site automatically triggers offer to save website to the user's phone desktop (like an app)
- Metrics tracked separately from main firm website
- Provide value added content either via app download or password-protected area on the site

**Practices to Stop ASAP**

- Announcing to users on the home page that the user is on the law firm's mobile website.

**Areas for Improvement**

- Failing to provide attorney bio and contact information
- A text-based site (This is deja vu for websites at the infancy of the web)
- Having a cookie-cutter site that looks like many other law firm's mobile sites (many firms appear to share the same developer)
- Failure to automatically direct a smart phone user from the firm's main site URL to the mobile website
- Taking up significant space on the mobile web home page with general text about the firm
- Too many navigation and content elements[3]

While these recommendations are aimed towards mobile apps, many of the same can be applied to native apps. Furthermore, native apps should take advantage of the hardware functionality by allowing more advanced and customized functions:

- providing links to suggestions for articles written by the firm's attorneys and suggestions for future articles;
- recommendations for where clients can stay and eat when visiting the firm, including maps;

[3] Id. at 2

- methods for clients to access and manage case files;
- access state and local statutes and regulations without charge;
- make payments to the firm;
- depending on the type of work the firm does, various "widgets," such as a child support calculator (for a firm focused on family law) or a way to capture photos and audio at the scene of an accident (for firms involved in auto or trucking accidents).[4]

As technology improves, it's difficult to predict how the performance of mobile apps will compare to native apps. On the one hand, as more of the web converts to HTML5, the performance of mobile apps is bound to make advances. At the same time, new technology is being integrated into our mobile devices, enabling apps that will achieve functions impossible until now. Whether a firm should create a mobile app or native app will depend on a few important factors, including budget, scope of content, and amount of functionality. For many, mobile apps should provide the most return on investment as they probably supplement an existing web presence and reuse its content, and are easier and more affordable to create. However, native apps allow for some of the most appealing features, like mobile payments to the firm, document management, push messaging, and one touch calling. While expensive, a native app has a much higher potential for converting prospects into clients and advocates for a firm.

## Development Services - There's an App for Apps

That said there is an undeniable truth about apps, especially good, well received ones: they're hard. They're technically difficult to create, their development can take longer than expected, and they can require significant financial investment.

[4] Cheryl Niemeier, *Cool Law Firm Developed Apps and their Myriad Uses*, http://newsblog.boselaw.com/2012/11/14/cool-law-firm-developed-apps-and-their-myriad-uses/ (Nov. 2012)

Programming a native app requires extensive knowledge and experience in at least one programming language. Creating a fully responsive mobile app demands a level of web design possessed by the most skilled website developers. Considering how disparate the training for the practice of law is compared to computer programmers and website developers, it shouldn't be the attorney's responsibility to create such resources. However, this can be said of many professions that would desire an app, and the demand has created a market of services that will create apps for you. Below is a small selection of such services. While some are friendlier to the demands or interests of the legal professional than others, all offer the means of delivering a serviceable app.

**My Pocket Attorney** (http://www.mypocketattorney.net/) – A service tailored directly to attorneys looking to expand into the mobile space. The development is a la carte, beginning with a selection of which platform: mobile, native, or both. You can then add a number of standard features, like GPS directions, one touch calling, witness statement, taking payments, and client's voice messaging, for free. There are a few premium features, like custom graphics or account management, which will add to either the initial or monthly cost. Support starts at $250, and monthly management is $20 a month.

**Branded Business Apps** (http://brandedbusinessapps.com/) – Ideal for small to medium business, but targeted towards the service industry. Branded Business Apps is a service to construct basic native apps based on a questionnaire and selection of features. The functionality is limited and the designs only fall a set of templates, but the costs and development time are significantly lower. Development costs starts at $400, and monthly management is $40 a month.

**Eachscape** (http://www.eachscape.com/) – Provides a system that uses a drag and drop design environment to build both native and mobile apps. Eachscape provides a large variety of design elements and functions that can be assigned to these elements. Functions include features like chat, video, and navigation. The platform is still evolving, and if there is a desired feature that doesn't exist, the developers are able to build it and add it to the program. Licenses start at $2,500 a year.

**CloudSpokes** (http://www.cloudspokes.com/) – CloudSpokes actually provides a service to "outsource" the development of apps. Requests for specific apps, complete with technical requirements and a deadline, are posted on CloudSpokes and interested developers submit entries. Projects are judged by the CloudSpokes team or the client posting the requests. Project rates are determined by the client.

**PhoneGap** (http://phonegap.com/) – PhoneGap provides an application programming interface (API) for building mobile apps. PhoneGap is targeted towards more technically adept clients, requiring some moderate knowledge of web design. It operates by accepting HTML, JavaScript, and CSS and translating it into native apps across multiple platforms. This has the benefit of being easier than building individual native apps, but takes advantage of the hardware integration that native apps specialize in. PhoneGap is responsible for some very high profile apps, like the official Wikipedia app, or the BBCs summer Olympic app. PhoneGap lists most every mobile operating system and which features are supported on each. Supported features include use of the accelerometer, camera, contacts, and geolocation.  Basic 1 year subscription is $250 a year.