

TIG FINAL EVALUATION REPORT

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I. Project Goals and Objectives

The overall goal of this project was to enhance the delivery of legal information, news and legal aid referrals to the public and *pro bono* attorneys through the development of mobile applications. To achieve this goal, the project focused on the following two objectives:

1. Develop five (5) mobile apps that will provide high-quality, useful information to a targeted audience, and
2. To share the mobile apps and what we learned about app development with the legal aid community in order to encourage replication.

No significant changes were made to the goals and objectives throughout the project.

II. Evaluation Data and Methodologies

This report uses the data and methodologies from the evaluation plan to assess the project's success. The evaluation data and methodologies for the first objective - *develop five (5) mobile apps that will provide high-quality, useful information to a targeted audience* - are:

- A description and the specifications of the technical components (mobile platform, mobile application and API);
- A description of the notification systems used;
- A description of content and how it was identified;
- The results of usability testing conducted primarily by Kathleen Caldwell, Peter MacArthur, Brian Stewart and Hugh Calkins and changes made as a result;
- The results of usability testing conducted by Illinois Legal Aid Online staff with potential legal aid and pro bono users and changes made as a result;
- Mobile analytics data; and
- A description of outreach conducted.

The evaluation data and methodologies for the second objective - *to share the mobile apps and what we learned about app development with the legal aid community in order to encourage replication* - are:

- A list of trainings conducted and links to trainings' archive;
- A list of and links to online resources developed;
- Results of community survey; and
- Information of replication, if applicable.

The only change in the evaluation data used versus what was contemplated in the evaluation plan was that Pine Tree did not conduct focus groups. Pine Tree found the informal testing by staff and informal consultants was more than sufficient to test the apps. We believe that all five apps have been sufficiently tested and are working well.

III. Summary of Major Accomplishments, Recommendations and Future Steps

This project was a tremendous success. Specific accomplishments include the development and publication of 5 applications that facilitate users' access to high quality useful legal information. The applications created through this project are as follows:

1. National Legal Aid Finder" app, which delivers referrals to the largest legal aid agencies in each state based on the user's location, has been downloaded more than 100 times.
2. Legal Aid News" app, which delivers legal news relevant to the lower-income community from national news sources, has been downloaded approximately 1,943 times.
3. "HelpMELaw" app, which provides legal information and specific referrals for legal aid consumers in Maine, has been downloaded 5 times in the first 2 months of publication. This app is specific to Maine and thus has a smaller audience and has been downloaded fewer times than the national apps. In addition, this app is only available on android devices.
4. "Illinois Legal Aid" app, which provides legal information and legal aid referrals for lower-income Illinois residents, has been downloaded 6,319 times in the first year of publication.
5. "Illinois Pro Bono" app, which provides Illinois attorneys and other legal professionals with a volunteer opportunity search tool, a calendar of upcoming events, and instructional legal content, has been downloaded 3,791 times in the first year of publication.

Usability tests were completed on all the applications and several issues were identified and resolved as a result of the testing. The revisions made in response to usability testing were wide-ranging – from major technical fixes (e.g. home button not working from some locations and Google Play's rejection of HelpMELaw image) to simple user-friendly preferences (e.g. creating simpler, cleaner home page layout on Illinois Legal Aid and font changes to distinguish different categories of links). All of the usability feedback - from the major to the mundane – contributed significantly to the quality of the final versions.

In addition, Pine Tree Legal Assistance and its partners provided two trainings on mobile apps. The trainings covered app development and lessons learned through this project. Approximately 60 members of the legal aid community attended the events. The trainings were designed to encourage replication.

Mobile technology continues to be an important and rapidly developing method of communication. Legal aid organizations should seek out innovative and effective ways to take advantage of mobile technologies to enhance the delivery of legal information, news and legal aid referrals to the public, *pro bono* attorneys, and other audiences. Specifically, Pine Tree encourages other legal aid problems to replicate apps like the Maine HelpMELaw, Illinois Legal Aid, and Illinois Pro Bono for other states.

In addition, Pine Tree will continue to explore ways to enhance our mobile technology projects. Although it functions well on the newer devices, we are in the process of updating the Legal Aid News App for the different screen sizes in the iPhone version 5 and the iPad

In the near future, Pine Tree will incorporate a data feed from the LSC site into both the Stateside Legal site (including mobile) and the National Legal Aid Finder app finder app. As for possible longer term projects, we are considering:

- Adding some additional functionality to the HelpMELaw app and the National Legal Aid finder app, and then resubmitting to the Apple store. (Currently, these are launched as native apps for Android and as online apps accessible by iOS mobile devices but have not yet been accepted by the Apple store);
- Adding a database of *pro bono* programs around the country to the Legal Aid Finder app;
- Continuing to develop mobile versions of all of Pine Tree's desktop sites as we move them to Drupal and to more updated versions of Drupal. Drupal 7 mobile modules are still under development and not completely ready to duplicate D6 functionality. As those modules become available, we will update Pine Tree's new D7 sites to include a mobile version.

IV. In-Depth Analysis of Accomplishments

Pine Tree Legal Assistance was successful in achieving its goal to enhance the delivery of legal information, news and legal aid referrals to the public and *pro bono* attorneys through the development of mobile applications. Below is an in-depth analysis of the accomplishments for each proposed objective.

Objective 1:

Pine Tree Legal Assistance was successful in achieving its first objective: the development of five (5) mobile apps that provide high-quality, useful information to a targeted audience. The five apps that were developed are the HelpMELaw, Illinois Legal Aid.

Developing the content for the apps was completed on the following dates:

- National Legal Aid Finder: The content for this app was completed on December 15, 2011.
- National Legal Aid News: The content for this app was completed on December 5, 2011. The content is automatically updated daily.
- HelpMELaw: Content from existing Maine legal services websites was identified in February 2012 and was edited and repurposed for app use in June 2012.
- Illinois Legal Aid: Content for the Illinois Legal Aid app was repurposed from existing content in the Illinois statewide website system. Illinois Legal Aid Online staff, in January 2011, identified which pieces of content to include in the app.
- Illinois Pro Bono: Content for the Pro Bono app was repurposed from existing content in the Illinois statewide website system. ILAO staff, in February 2011, identified which pieces of content to include in the app. Over the spring and summer 2011, ILAO's content team restructured content from the Attorney Desk Reference Manual into more mobile-friendly format for use in the app.

The technical development of the National Legal Aid Finder, Legal Aid News, and HelpMELaw apps was completed by consultants Hugh Calkins and Brian Stewart. Their work was supervised by Kathleen Caldwell. Gwen Daniels at Illinois Legal Aid Online performed the technical development of the Illinois Legal Aid and Illinois Pro Bono apps. The technical specifications vary by app:

Mobile Application	Mobile Platform	API
National Legal Aid Finder	Android**/Web App	Drupal
Legal Aid News	iOS & Android	Drupal
Maine Legal Aid	Android*	Drupal
Legal Aid-IL	iOS & Android	ColdFusion
Illinois Pro Bono	iOS & Android	ColdFusion

*The National Legal Aid Finder app and the HelpMELaw app have been approved for Android devices only. They are accessible for all iOS devices but not yet as a native app through the Apple Store. A description of the technical issues Pine Tree encountered with iOS is below.

Usability testing of the National Legal Aid Finder, Legal Aid News, and Maine HelpMELaw apps was completed by Hugh Calkins, Brian Stewart, Kathleen Caldwell, and Peter MacArthur. Usability studies of the Illinois Legal Aid and Illinois Pro Bono apps were conducted by graduate students from the University of Michigan School of Information and staff at Illinois Legal Aid Online. Several issues were identified and resolved as a result of the usability testing.

Mobile Application	Issues Identified	Changes implemented
National Legal Aid Finder	Phone number issues Navigation issues Numerous other issues	Phone number explanation section created under "Info" Created "Info" section to house "About," "Contact Us," "Phone Numbers," and "Privacy Policy." Linked to separate "Feedback" webform on PTLA Drupal site to house feedback. We constantly reviewed functionality and usability over a several month period, and made many ongoing corrections and adjustments, often with assistance from Gwen Daniels at Illinois Legal Aid
Legal Aid News	Feedback "Home" button not working from some locations in app Footer disappeared in some instances Numerous other issues	As with Finder App linked to separate web form on PTLA Drupal site Reprogramming corrected problem Reprogramming We constantly reviewed functionality and usability, and made many ongoing corrections and adjustments, often with assistance from Gwen Daniels at Illinois Legal Aid
HelpMELaw	Organizational returns very general and not	Added filter to the organizational data by proximity to the user, engaging the geolocation

	<p>as helpful as they might be</p> <p>Problem with stuttering page refreshes and generation of multiple contacts when saving contact information from the organizational listings</p> <p>On Android testing device, switching the orientation of the phone crashed the app</p> <p>Some text contained in tables not displaying correctly.</p> <p>Not clear which PTLA office to contact.</p> <p>Feedback link takes user to Stateside feedback page.</p> <p>Google Play marketplace objects to HelpMELaw image.</p>	<p>functionality of the phone, as well as making dialing and contact functionality available.</p> <p>Debugging and correction of code, addition of updating code for contacts previously saved.</p> <p>Required technical reprogramming</p> <p>Mostly resolved. Still working to reformat some “tabled” content.</p> <p>Added individual office address locations, along with geo-location feature (see above).</p> <p>Still needs to be resolved.</p> <p>Create a high resolution vector image for the Google Play marketplace and resubmit.</p>
Illinois Legal Aid	<p>Home screen too cluttered with both helpful organizations and legal content</p> <p>Listview format of forms that cannot be used on the app was confusing</p> <p>Email article without</p>	<p>Revamped home page to remove helpful organizations; they are now only in the “Find Legal Help” section within each piece of individual content</p> <p>Listview format was removed</p> <p>On iOS, integrated with native mail app; currently unsupported in Android</p> <p>Changed the fonts to distinguish between those</p>

	<p>using the native operating system email was confusing</p> <p>Using the same fonts/colors for external links and glossary links was confusing</p> <p>Keyword search would be useful</p>	<p>links that open in the app and those that open in Safari</p> <p>Keyword search request has been scheduled for a later version</p>
Illinois Pro Bono	<p>Email article without using the native operating system email was confusing</p> <p>County list for volunteer opportunities too long/difficult to use</p> <p>Keyword search would be useful</p>	<p>On iOS, integrated with native mail app; currently unsupported in Android</p> <p>Moved Cook County to the top of the list, as that is the bulk of the location of both our opportunities and users</p> <p>Keyword search request has been scheduled for a later version</p>

Illinois Legal Aid Online (ILAO) staff worked with three graduate students as part of the University of Michigan School of Information's Alternative Spring Break project to conduct usability testing of both the Illinois Legal Aid and the Illinois Pro Bono apps in late February 2012. The usability study was conducted at the ILAO office and involved 3 testers for the Illinois Legal Aid app and 6 for the Illinois Pro Bono app. [Please contact TIG staff for access to the full reports.]

After the Apps were made available to the public Pine Tree utilized user feedback to identify potential issues or areas for improvement. Specifically, Pine Tree added a number of organizations to the Legal Aid Finder app at the request of those organizations, and instituted a system of automatic notification from certain problem states to catch changes in office location and contact information. As a result of user feedback the Legal Aid News app version 1.1 was released January 20, 2012. That version changed the order of news topics to place the most sought after topics first and added the date to news items.

To ensure the success of the apps, Pine Tree Legal Assistance and Illinois Legal Aid Online conducted several outreach activities. The programs developed a coordinated outreach plan which was submitted to LSC and is attached to this report as Appendix A. Specific activities include the follow:

App Promotion at Trainings/Conferences:

- In November 2011, Kathleen Caldwell and Gwen Daniels promoted the national apps during an LSNTAP/ProBonoNet online mobile training session. More details about this training are provided later in this report.
- Kathleen Caldwell and Gwen Daniels also promoted the Illinois apps and the national apps at the LSC TIG conference on January 12, 2012, at a session on mobile technology.
- In addition, ILAO also presented on the apps at various pro bono events and legal aid conferences, including the Illinois Statewide Advocate Conference in October 2011, at various Pro Bono Week events in October 2011 and two presentations at the National Legal Aid Defender Association Conference in December 2011.

App Promotion through Listservs:

- On December 6, 2011, Kathleen Caldwell sent out notice to LStech list, announcing availability of Legal Aid News app at Apple stores, for iPhone, iPad and iPod. She fielded several questions in response to this announcement.
- On January 29, 2011, Pine Tree sent out notice to LSTech list, announcing release of Legal Aid Finder app to Android store and online launch. (The email also repeated information about the Legal Aid News availability in the Apple app store.)
- Also in January, Hugh Calkins promoted the apps through the MIE Executive Directors, Managers, Administrators and Fundraisers mailing lists. The apps have been promoted through the ABA's email list for state access to justice staff and will be promoted through the next "Access to Justice Headlines" mailing.
- ILAO also posted announcements about the apps to various listservs in the Illinois legal community.

Other App Promotion Activities:

- Pine Tree Legal Assistance promoted the national legal aid apps and the HelpMELaw app on its website. Information can be found at <http://www.ptla.org/pine-trees-national-legal-aid-apps>. This page is linked from Pine Tree's homepage.
- ILAO promoted the two Illinois apps on its website. Information can be found at <http://www.illinoislegalaid.org/apps> and <http://www.illinoisprobono.org/apps>.
- In January 2011, Hugh Calkins added a "marketing url" to iTunes Connect.
- ILAO created and disseminated QR codes for each app.
- ILAO added redirect code to the IllinoisLegalAid.org and IllinoisProBono.org websites to direct users to download the apps when accessed from Android or iOS devices.
- ILAO also promoted the apps through press release to media outlets and online publications
- ILAO created and distributed promotional postcards and flyers for each app.

To measure the success of the apps, Pine Tree has collected and analyzed analytics data as well. Analytics data for the Legal Aid News app is available through the ITC Mobile app and through iTunes Connect. ITC Mobile showed 1,184 downloads from the App Store through September 25, 2012. iTunes Connect does not provide demographic data within the United States but does provide country of origin data. In recent months there has been an increase in downloads from foreign countries, suggesting interest in the US legal aid system. From June 25 through September 25 2012 there were 38 downloads from foreign countries. Most were from the UK (5)

and Australia (11), but others were from China (3), South Africa (3), Malaysia (4), Russia (1), and nine other countries.

The Android version of the HelpMELaw app, during the first 2 months, was downloaded 5 times. The web-based version (currently posted in lieu of Apple store approval) has generated these stats:

- Organizational page requests thru 9/20/12: 302
- News Feeds page requests thru 9/20/12: 104
- Featured content page requests thru 9/20/12: 421
- Recent Additions page requests thru 9/20/12: 20

ILAO integrated Google Analytics into both of its apps as well as its websites. Some key metrics from October, 2011 to September 23, 2012 for the Illinois Legal Aid app:

- 12,500 visits to the app (compared to 1,271,644 visits to the website)
- 76% from iOS devices (compared to 46% for mobile web traffic)
- Average time spent in the app: 6:34 minutes (compared to 2:17 minutes on the IllinoisLegalAid website)
- 42% new visits/58% returning (compared to 76% new visits; 24% returning on the IllinoisLegalAid website)

Some key metrics from October 2011 to September 23, 2012 for the Illinois Pro Bono app:

- 5,477 visits to the app(compared to 214,468 visits to the IllinoisProBono website)
- 64% from iOS devices (compared to 46% for mobile web traffic)
- Average time spent in the app: 8:04 minutes (compared to 1:53 minutes on the IllinoisProBono website)
- 42% new visits (compared to 73% new visits; 27% returning on the IllinoisProBono website)

Objective 2:

Pine Tree Legal Assistance was also successful in achieving its second objective, sharing the mobile apps and what we learned about app development with the legal aid community in order to encourage replication.

Kathleen Caldwell, the project coordinator, presented two trainings on mobile apps. The first training was held on November 2, 2011. It was organized by LSNTAP and ProBonoNet. The training covered several topics including mobile apps and mobile sites. Kathleen Caldwell and Gwen Daniels collaborated to present information on both of these topics. Kathleen developed materials for the event. A recording of the session is posted by LSNTAP here: <http://lsntap.org/blogs/lsntappbn-webinar-recordings>. An estimated 35-40 people attended the training.

The second training was a session on mobile technology at the LSC TIG conference on January 12, 2012. Gwen Daniels unveiled the two Illinois apps, which had been launched prior to the session. Kathleen Caldwell covered a brief LSC history of mobile development and tips for mobile development. Abhijeet Chavan, of Urban Insight, also served on the panel, with his usual cutting edge insights about mobile development and where it is going. There were approximately 25-30 attendees. Outlines of Liz Keith and Abhiheet Chavan's portions of the presentation are

available online at: <http://tig.lsc.gov/conference/past-conferences-and-presentations/2012-conference>.

There was a lot of buzz about mobile development at the TIG conference and Pine Tree believes that some parts of this project may be replicated by other legal aid groups. Vince Morris was developing a *pro bono* app for Arkansas. Urban Insight unveiled their first mobile apps for SWWS's at the conference. There may be others that Pine Tree is not aware of.

ILAO staff also created extensive documentation on developing mobile apps using PhoneGap, jQueryMobile. This documentation was distributed as a link via the LS-Tech listserv. A copy was also provided to LSNTAP. The document can be found here:

https://docs.google.com/document/d/1V2rPzmKOjlbPp3q6Fv_xdtjleDMSLvcG_d-IfzdK63Y/edit.

The extensive usage and popularity of these apps in the brief period that they have been available indicates that this approach could become a major new tool that will broadly expand the way people access legal services. The early success of this project suggests that it has the potential to be analogous to the very successful statewide websites. As with many of Pine Tree's previous tech projects, we do not yet have concrete data that demonstrates the long-term effectiveness of apps as a delivery tool. We do not know for certain that the wild popularity of apps will be long-lived, but trends to date would suggest that apps will be part of a legal services delivery system in the future. Because this project is ahead of the curve, specific data is not available. However, anecdotal feedback from clients and service providers suggests that providing services responsive to the mobile revolution facilitates our clients' ability to deal, on their own, with their legal problems or to locate and receive assistance where appropriate. Our client population and the organizations that provide services to our clients increasingly use mobile devices to access information and assistance. The existence of mobile apps, whether iTunes, Web App or Android based, in combinations with mobile-oriented websites, facilitates client and organization access to needed information and assistance through such features as direct live telephone number and website links, mobile and app specific legal information available to clients and service providers wherever they are.

IV.a. Information for Multiyear or Multiple Projects.

n/a

V. Factors affecting project accomplishments

Challenges with iOS

Although the National Legal Aid News app and both of the Illinois apps sailed through the relatively cumbersome Apple Store process, the iOS review team rejected both HelpMELaw app and the National Legal Aid Finder app. We appealed those decisions but were still denied. We are considering additional functionalities that could be added, in order to satisfy the iOS criteria. In the meantime, iOS device users can access these two apps but not as native apps.

Revisiting Mobile Platforms

In our original proposal, we anticipated building the apps for 5 mobile platforms. Between the time of the application and the start date of the project, the iPhone, iPad and Android took over the market, becoming the clear winners in mobile delivery. Due to this rapid development, it became clear to us that putting time and effort into refining the apps for these 2 platforms was the way to go. We have received complaints that many attorneys and other professionals use Blackberries. However, in our judgment, the market trends did not justify putting time an effort into development for the Blackberry.

Drupal 7

Drupal 7 mobile modules are still under development and not completely ready to duplicate D6 functionality. As those modules become available, we will update Pine Tree's new D7 sites to include a mobile version.

VI. Strategies to address major challenges

Challenges with iOS

One potential enhancement for the National Legal Aid finder app would be to add the LSC local programs feed that PTLA has been working on with David Bonebrake and the LSC tech staff. HelpMELaw, with its relatively small potential audience, may never be able to clear the iOS hurdles, however, Pine Tree is pondering possible enhancements there as well.

Drupal 7

As the Drupal 7 modules become available, we will update Pine Tree's new D7 sites to include a mobile version.

VII. Major lessons and recommendations

Rapidly Changing Technology

The primary lesson learned from this project is that developing native mobile apps is a never-ending project. Mobile technology changes rapidly, with both Apple and Google releasing new versions of their operating systems at least once a year. For instance, when Illinois Legal Aid Online (ILAO) released the Illinois Legal Aid app, iOS was at version 4.3 and Android was on versions 2.2 and 2.3. In the year since the launch, Apple has released versions 5.0, 5.1, and 6.0, and Google has released version 4 (Ice Cream Sandwich) and version 5 (Jelly Bean). Keeping the apps functional on new operating systems (especially for iOS 5 and iOS 5.1) requires staff time for further code changes.

Challenges with iOS

Another lesson that should be considered by other app developers stems from the nail-biting experience with the Apple review process. Apps may be developed, but for iOS, they may only be available as native apps once the Apple review team approves them. As stated above, Pine Tree had two apps rejected by Apple because the reviewers did not feel the apps had enough native functionality, did not possess adequate "entertainment" value, and/or had limited utility. Illinois submitted an app outside of this grant (a Spanish-language version of the Illinois Legal Aid app) that was rejected because the reviewers had issues with the fluidity of the user

interface. There is a risk inherent in developing for the iOS platform in that one may spend hundreds of hours developing apps only to have Apple reject them. Pine Tree would recommend that developers either skip the Apple submission process and directly create a Web App or incorporate elements that Apple likes such as “add to contacts” and geographical location.

Thorough Testing

Developers must plan ahead for the challenges of testing. Without investing thousands of dollars in devices, programs developing apps are limited in how thorough their testing can be by the devices that the program has on hand through staff or volunteers.

Return on Investment

Finally, there is an important question about the return on investment in developing mobile apps. For instance, Illinois Legal Aid Online staff spent far more time on this project than originally anticipated. If they had it to do over, ILAO staff may have been better off developing robust mobile websites instead of mobile apps. While there are some nice elements in the Illinois mobile apps that would be impossible to do in a mobile site, such as saving events to the user’s calendar or adding a legal aid organization’s information to a user’s contacts, much of what the apps accomplish could be done just as easily using HTML5 in the device browser, without the daunting review process of Apple or needing to keep up with the breakneck pace of mobile device updates. That said, ILAO’s visibility increased in being the first to market for apps in the legal aid community. ILAO staff also developed significant expertise in HTML5, Javascript, and mobile optimization through this project that will carry over to future technology initiatives.