Intelligent Forms Workstream

RECOMMENDATIONS FOR
CONSIDERATION BY THE
INFORMATION TECHNOLOGY
ADVISORY COMMITTEE

DATED: MAY 15, 2018

JUDICIAL COUNCIL
OF CALIFORNIA

INFORMATION TECHNOLOGY
ADVISORY COMMITTEE

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Introduction

Workstream process overview

California relies on court forms more than any other state court system, and areas such as family law, probate, protective orders, name changes, and other legal processes are largely forms-driven. Access to forms, especially for parties like self-represented litigants, is access to justice, as these forms allow such parties to file court documents. From the court perspective, judicial officers, clerks, attorneys, and litigants can scan forms to quickly locate key issues. Providing statewide forms increases efficiency by providing a standard interface where information is presented in a predictable and easily identifiable way, and alleviates the need for individual courts to develop full sets of court forms for use in each county.

Forms are an integral part of the court system, and there is a real need to leverage technology to improve forms processes. Judicial Council forms have traditionally been used to produce paper documents. While paper-based forms serve an important purpose, new laws make them increasingly complex and difficult to use. Moreover, new technologies like e-filing, e-service, and new court case management systems will require better data portability between forms, these new systems, and other court technology solutions.

The workstream was established to examine the use of court forms and investigate options for modernizing the electronic format and delivery of Judicial Council forms. Workstream members were officially appointed in May 2017, and met for the first time on May 16, 2017. The workstream met bi-weekly via conference calls, and between meetings corresponded using a collaboration tool, Slack.

After an initial phase of surveying forms use, the workstream discussed issues presented and ways to address those issues. Members then collaboratively drafted this report.

Document overview

In this report, we describe how forms are currently used and the impact they have on the administration of justice in California.

We then identify and describe individual problems for ITAC's consideration, along with proposed solutions for those problems. While many more concerns around forms usage can be identified, the workstream finds that those included here have the greatest impact across the branch. We recommend seven target solutions:

1. Certified forms
2. Data population API for certified forms
3. Accessibility requirement updates for certified forms

4. Basic governance for form updates
5. Priority matrix and list of forms to be updated to new API and accessibility requirements
6. Evaluate the possibilities of dynamic forms production
7. Evaluate the possibilities of document assembly within this context

We recommend that this report serve as the basis for a Request for Information ("RFI") that will in turn inform any Budget Change Proposals ("BCP") deemed necessary.

Forms background

Under article VI, section 6 of the California Constitution, the Government Code and other applicable law, the Judicial Council adopts, approves and modifies all statewide forms for optional or mandatory use in all California courts. Forms are developed by Judicial Council-appointed advisory committees, and are subject to an extensive and rigorous process of internal and external review.

Judicial Council forms benefit litigants, justice partners, and the courts in many ways. They help litigants, especially self-represented litigants, to file court documents. Forms assist law enforcement with enforcing restraining orders. Forms also simplify reviewing and processing documents for clerks, court staff, and judicial officers. A 2014 report by the Task Force on Trial Court Fiscal Accountability included Judicial Council fillable forms as an example of judicial branch efficiencies.

Forms usage

Court forms are the most frequent point of contact that the public has with the Judicial Council of California. Form downloads and views dwarf all other resources offered by the Judicial Council website. Of the top downloads from www.courts.ca.gov in 2016, 92% were forms; the page listing all available forms had 2.7 million page views that year, *20% more than the homepage* (the next-most frequently viewed page).

Forms are used to exchange information. The form filler wishes to accomplish a specific task, and the form recipient requires specific information to act on the form filler's request. Well-designed forms elicit *only* the information required for a specific action, and do so in an easily accessible and understandable format. This is true when forms have to be filled in by hand or typewriter, and it remains true when forms are completed electronically in a wide range of interactions.

Most court forms are part of a longer conversation – there is an initial filing, followed by several exchanges with the court and other parties to an action. Forms have been developed with a standard interface to make them easy to scan for relevant critical information. Consistency of design has served to identify – or *brand* – forms at a glance as Judicial Council forms. The

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ability to quickly scan forms for information is particularly relevant for clerks, judicial officers, law enforcement, and attorneys.

Judicial Council forms are historically and currently conceived of as *paper*, with an 8.5" x 11" layout. Judicial Council advisory committees develop forms to include cues for all information that may be relevant for an action. Hence, forms may be filed with only a small part of the available fields populated.

Judicial Council forms also "translate" rules of court and legislation into a sequence of guided steps; see for instance receiverships (rules 3.1175-3.1184), or small claims (Code of Civil Procedure, section 116.110 et seq).

Courts

Litigants file forms either at the court or through an e-filing service provider (EFSP). At filing, clerks can review documents for completeness and possibly alert the filer to any omissions before filing the form. Forms are generally scanned or filed in a flattened (non-editable) format into the court's document management system (DMS), or filed as paper. When not e-filing, data is still manually entered into the court's case management system (CMS).

Courts use Judicial Council forms but also develop local forms. Consistent and predictable form layout enables judicial officers to quickly review filings for jurisdictional and key information, saving time for everyone involved in the process. Court findings and orders are summarized on Judicial Council forms, at least where they are mandatory, or by other means.

At the end of the process, the court outputs and distributes its findings and orders. Some form orders are mandatory, others are not. Currently, the creation of Judicial Council form orders requires a manual process because the courts' existing case management systems (CMSs) do not output data to PDFs.

Litigants

Litigants use Judicial Council forms to initiate and complete actions in court. Forms are especially important for self-represented litigants (SRLs), an increasingly large population that courts serve. There are many resources available to SRLs, including court self-help centers, local non-profits, and the branch online self-help center.

The Judicial Council has focused on serving SRLs by creating "plain language" forms that use simpler and shorter sentences, active voice, whitespace, and illustrations. The Council has created information documents to guide SRLs through the most commonly pursued actions. To serve approximately 7 million limited-English proficiency court users, the Judicial Council has translated several forms, specifically in harassment, family law and juvenile law, into four languages: Chinese, Korean, Spanish and Vietnamese. Some other languages are also provided for specific information forms.

However, self-represented litigants could use more help. A 2013 national study found that self-represented litigants consistently reported that it was difficult to find the right form for their legal issue.[1] Similarly, in a 2014 survey of California Courts website users, 37% of respondents who were seeking self-help resources said that they needed help with legal forms. An overwhelming 86% of self-help seekers responded that they wanted step-by-step instructions for completing forms.

Document assembly

To address this need, the Council, individual courts, and private vendors have developed document assembly solutions that assist litigants by walking them through several interview questions, in the end producing the forms needed based on the answers provided. These vendors and solutions create simplified workflows for the litigant, automating much of the repetitive data entry on the form. Some solutions integrate the form with existing databases, allowing users to receive or transmit information to those databases. Some progressively save users' work, allowing users to revisit partially-completed forms. Lastly, many solutions perform calculations on field data, such as totaling sources of income on financial forms.

Some vendors, like LawHelp Interactive, have worked directly with the Council and individual courts to create online solutions. Others, like Tyler Odyssey Guide & File, work with individual courts to create workflows. Vendors like TurboCourt have developed off-the-rack solutions that do not require court development. Lastly, some courts like Orange, Riverside, and Contra Costa Counties have developed their applications in-house. Although the workstream does not have access to statistics for every solution, the numbers for LHI show that self-represented litigants served by LHI assembled 28,000 documents in the third quarter of 2017. The workstream believes this represents a fraction of the actual need.

Attorneys and other professionals

Attorneys use forms to communicate with the court and other parties on behalf of their clients. Forms provide a convenient vehicle for communicating the complex and highly specialized information often involved in legal actions. Additionally, several non-attorney professionals use forms in areas such as collections and receiverships.

Justice partners, for example the Department of Child Support Services, law enforcement agencies, counties, also have substantial interaction with courts through forms. This particular relationship was the focus of ITAC's Data Exchange Workstream.

Many attorneys use case management software or form filler solutions to generate forms, and commercially available solutions often include both statewide and local forms. Some attorneys use the forms made available for free on the branch website at www.courts.ca.gov.

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[1] The National Self-Represented Litigants Project: Identifying and Meetings the Needs of Self-Represented Litigants, 2013.

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Consistency of form layout is also important to this group of form users. Attorneys and other professionals rely on forms to be predictable, quick to fill out, and easy to scan for key information. Because of the predictability, the face of a form is a sufficient interface.

Forms delivery

Judicial Council forms are developed in Adobe LiveCycle and provided as fillable forms to end users directly on www.courts.ca.gov, and to courts on http://jrn.courts.ca.gov/. Flat forms (without fillable fields) are distributed separately to a list of publishers. Forms development has changed significantly in the past five years.

Past state

Before 2012, designers created a form's content in Omniform, converted the content to a flat PDF, and then made the form fillable using Adobe Acrobat. Fillable fields had to be individually named and formatted every time a form was revised. OmniForm reached end of life and was discontinued.

At the time, development of the California Case Management System (CCMS) was ongoing. CCMS included Adobe LiveCycle in various workflows, so Judicial Council forms were converted to LiveCycle to save time and be able to integrate with CCMS.

Current state

Judicial Council forms, as provided to the public, are all a form of PDF. Internally, however, they are maintained in four different formats:
- Adobe LiveCycle Designer ES3 (since 2012)
- OmniForm (discontinued - form development program used prior to 2012)
- Word (a few informational forms)
- Adobe Acrobat (forms developed in OmniForm prior to 2012, translations, and forms maintained in Word)

LiveCycle works well as a design tool. Custom elements can be templatized, which helps to enforce consistency across forms. This includes naming, size, and format of fields. Unlike the prior workflow, which used OmniForm for form design, and then Acrobat to make the form fillable, LiveCycle performs both steps in the same workflow. LiveCycle offers advanced features the council is not currently using. For example, forms can dynamically show and hide information based on user input, data can be extracted as XML data files, and can be submitted in various formats.

All publicly available forms are extended for the free software Adobe Reader, which means that anyone can save and fill out Judicial Council forms for free. Currently, forms are posted as password-protected files, extended for Adobe Reader, on the public website at http://www.courts.ca.gov/forms.htm, and as Adobe Reader-extended files on JRN

(http://jrn.courts.ca.gov/jc/forms). Flat PDFs are emailed to all presiding judges and court executives after Judicial Council approval.

Findings and Recommendations

Solution proposals

Now that we have described how forms are currently used and delivered, this section outlines key concerns and issues that the workstream has identified. We describe our recommendations for the next steps to evaluate possible solutions to mitigate the key issues and concerns.

Target solution one: Certified forms

PROBLEM: There is no mechanism to ensure the integrity of Judicial Council forms.

- We recommend that the Judicial Council provide resources to certify all Judicial Council forms.

- We recommend that this mechanism also be implemented by courts who create local forms for their use. The forms would use a technology as recommended by ITAC or its designee to provide verification to courts and litigants that documents submitted are from the Judicial Council's canonical forms source.

- We recommend that ITAC consider if the Judicial Council's Electronic Signature Initiative can be extended for this purpose (see [RFP-JCC-101817-ESIGNATURE-WV](#)), or if current forms development software licensing offers solutions.

- The end user should be able to easily identify a certified form.

Business reason: Form security and confidence

Given the widespread use of Judicial Council forms, it is important that they have a recognizable and predictable look and feel, and that end users have confidence that they are using a valid product. Certifying forms as original Judicial Council forms provides a mechanism by which the form's authenticity can be verified by anyone.

Many providers (e.g., local courts, case management software providers, and statewide projects for self-represented litigants) are deconstructing existing forms and then recreating the fillable fields. Occasionally, providers' products have bugs that corrupt the form's output. Other times, providers deconstruct the form, then reconstruct it, producing an adulterated version of the form.

Judicial Council forms on the public branch website are password-protected to preserve form content. However, several free services exist that will allow anyone to unlock protected forms. Additionally, some California e-filing service providers and forms publishers provide unlocked forms free of charge. This creates the potential for intentional or accidental changes to forms. Currently, whether a form is printed or submitted electronically, when a party or a court receives a form, the only way to determine whether it has been altered is a line-by-line visual inspection. Even if one can determine that a form has a bug, or that it has been modified, there is no way to determine what software or publisher made the modification, unless the vendor annotates the form.

One of the workstream's recommendations, dynamic forms (*target solution six*), increases the problem of form integrity. If future forms dynamically create and remove content based on user input, and a vendor recreates that dynamism, it will be difficult to ensure that vendor-created

forms are true to the Judicial Council original without some form of governance, either by rule or by technology.

Target solution two: Data population API for certified forms

PROBLEM: Judicial Council forms are not compatible with existing data sources.

- We recommend that the Judicial Council provide resources to create an API for certified forms. The forms would use a technology as recommended by the ITAC committee or its designee so that third-party organizations would be able to use the published APIs and the Judicial Council-provided infrastructure to return to the third-party organization a populated form based on data sent to the API.

Business reason: Consistency and compatibility

Forms must be compatible with external data sources, and must therefore have a consistent data integration, consistent data fields, and be delivered in a universally accessible way. Additionally, there must be some mechanism to ensure form integrity, to identify any third-party software used to prepare forms, and whether that software has modified or corrupted the form. Because of the fragmentation from vendor to vendor, from court to court, and from external agency to external agency, there is currently no feasible way to standardize this data across so many disparate sources. Vendors and courts are unlikely to abandon their current database structures in order to comply with a mandated standard.

Technical concept and structure

One solution to incompatible forms is a *template processor*. A template processor could address many of the problems identified in this report at a relatively low cost. The function of a template processor is straightforward: create a public web application programming interface (API) to populate PDF forms. The template processor would be a web *server*, but it would not serve web *pages.* Instead, the template processor would accept structured data through a web request, then return a populated PDF. Developers, including the Judicial Council, could use the server with any type of software. This could lay the groundwork for:

- A move away from filling out PDF forms in the browser
- HTML web forms which will generate complete PDF forms
- HTML form data can be sent to template processor to assemble document
- The first step towards an intelligent forms server
- Use progressive web apps (Mozilla explanation, Google explanation)
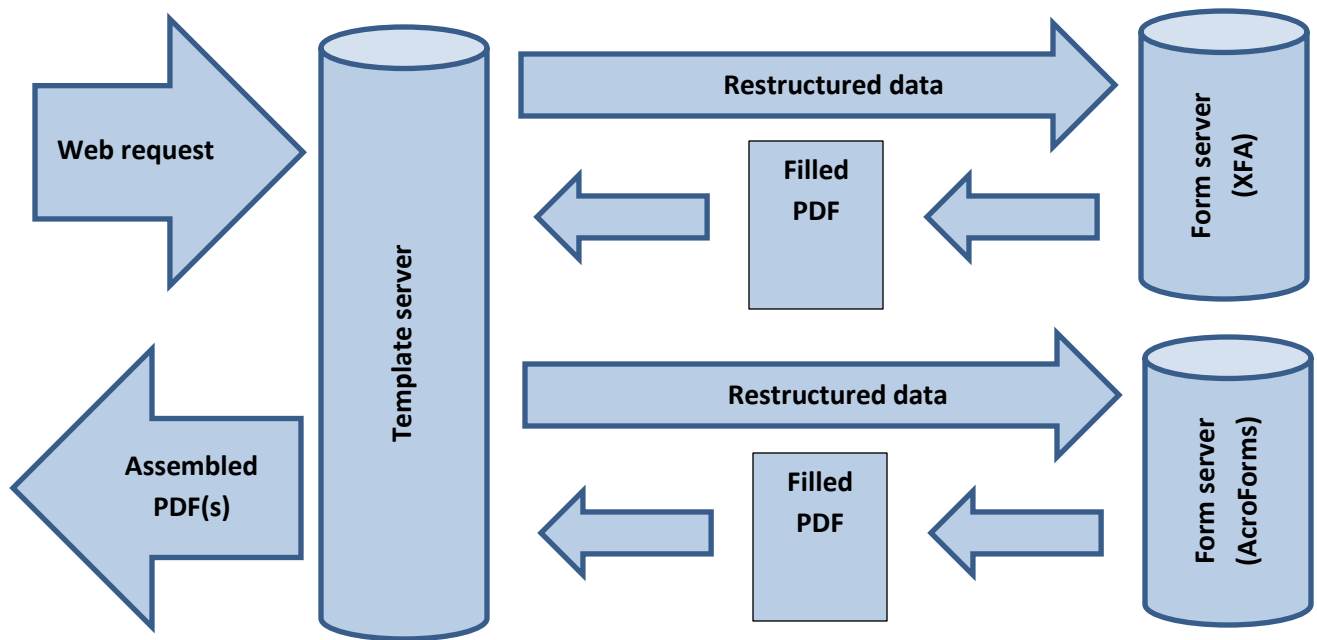
The template processor would be the canonical source of Judicial Council forms, hosting certified PDFs to verify document authenticity and integrity. Although the processor would not create intelligent forms, it could increase consistency and platform independence. The template processor may later be integrated with an intelligent forms server and case management systems.

The template processor would have three components: a web server, and an XFA server, and an AcroForms server. The servers could be separate physical machines or separate server applications on the same physical or virtual machine.

The web server would receive requests from the web. Based on the template(s) requested, the web server would restructure the data to comply with the XFA or AcroForms form data standard and send the request(s) to the appropriate forms server. The forms server would populate the form(s) and respond to the web server.

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Target solution three: Accessibility requirement updates for certified forms

PROBLEM: Judicial Council forms are not consistently accessible for people with disabilities.

- We recommend that the Judicial Council provide resources to develop guidelines for implementing in forms development the requirements outlined by the statutes detailed below.

Business reason: Access to justice

Forms must be usable by people with disabilities. The legacy Judicial Council forms have no or only very basic accessibility features to comply with current accessibility legislation, rules, and standards. Future forms development must create accessible forms to comply with federal and state laws, as well as information technology best practices.

New legislation (AB103) requires the Judicial Council to adopt rules to ensure that any system for e-filing and service of documents adopted by a trial court must comply with Section 508, ADA and WCAG 2.0. To the extent any such system integrates forms, those forms must also comply. The Legislature has approved a resolution that "affirms that the state's policies and procedures should ensure technology and information access for individuals with disabilities to the greatest extent possible." It would be a best practice to make Judicial Council forms accessible to the extent possible in whichever format they may be provided.

To make the Judicial Council forms more accessible, it is now possible to look for guidance to the Web Content Accessibility Guidelines (WCAG), a globally recognized, technology-neutral standard for web content. WCAG 2.0 covers a wide range of recommendations for making web content more accessible; it has been extended to cover non-web electronic documents. Federal regulations on the content of web pages and non-web electronic documents, though not binding, are instructive. The regulations provide that public-facing electronic content shall conform to the accessibility requirements of WCAG 2.0, with certain exceptions (See Electronic Code of Federal Regulations, Title 36, Appendix A to Part 1194, E205.2 and 205.4.) As so construed, WCAG 2.0 now provides accessibility guidelines for non-web electronic documents. These guidelines may be used as guidance in upgrading electronic documents, such as Judicial Council forms, to satisfy disability access standards.

Target solution four: Basic governance for form updates

PROBLEM: Forms are updated frequently, but certain changes are not well documented. It is difficult to isolate form errors, metadata issues, or vendor bugs.

- We recommend that the Judicial Council provide resources to define and implement policies around the governance of form updates. These policies should be developed in collaboration with stakeholders.

- We recommend that both the form metadata and the form itself include on its face and on each page of a multi-page form a semantic version number[2] and that this be mapped to version history and update logs that can be used by both internal and third-party organizations.

- We recommend that the Judicial Council consider requiring third-party organizations to identify the software used to create a form with a semantic version number in the form metadata and on each page of the rendered form, to allow customers to easily identify problematic forms and/or solutions and communicate such findings to the vendor. Revisions to the California Rules of Court may be required.

Business reason: Implementation of form updates

Forms are updated due to changes in legislation, case law, and best practices. There are two main cycles for form changes, one that takes approximately one-and-a-half years, with an effective date of September 1, and one that takes approximately two years, with an effective date of January 1. The council recently changed its meeting schedule, approving forms for September 1 and January 1 effective dates at its May and September meetings, respectively. Courts and publishers usually have three months' lead time between Judicial Council action and the effective date.

When the Judicial Council proposes changes to a form, it produces a report that describes those changes in varying detail. The proposed form shows where changes have been made, but certain changes are invisible. For instance, deletions, changes to data-field names, and changes to the data-field size and location are not currently published. There is no changelog, or other central source of information, highlighting these invisible changes. Consequently, it is difficult for CMS vendors, courts, self-help facilitators, and document assembly solutions to implement form changes in a timely manner.

Courts and vendors need as much time as possible to implement changes. Documentation should be available when forms are released after each council meeting, preferably no more

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[2] The semantic version number would be *in addition to* the effective date currently included at the bottom left of page 1 of each form

than two weeks after approval. Developing more detailed documentation would require changes to the form design workflow and additional staff time.

Considerations for a change log could include:
- Any new or deleted data fields
- Changes to names of fields
- Changes to data types (e.g.., radio button to checkbox)
- Specific text changes - deletions and additions
- Changes to the amount of space allocated for text responses
- Changes to the order of items
- Changes to functionality (e.g., a change in processing time, "court days" vs. "calendar days".)
- Changes to the form's designation as "optional" or "mandatory"

Target solution five: Priority list of forms to be updated to new API and accessibility requirements

Problem: Limited resources require prioritizing projects and ensuring that they are independent of, but compatible with, each other.

- We recommend that the Judicial Council provide resources to create a priority list of forms to apply to target solutions one through four above.

- We recommend a phased iterative approach to begin immediately, certifying all forms as described above, and initiating v1.0.0 for all forms and APIs (see further details below)

- We recommend that ITAC establish a team of stakeholders to create a prioritization tool for subsequent form updates.

Business reason: Maximize outcomes from limited resources

There is currently no funding that would allow the Judicial Council to perform a full-scale update of all forms as a batch. Budget Funding Proposals are developed with a two-year lag time, and must include cost estimates that we do not have yet. The need to modernize Judicial Council forms in a rapidly changing and varied technology landscape is critical.

Since forms are typically updated on a semiannual calendar, with emergency updates for statutory requirements and fee waiver updates when the income thresholds change, it would appear logical to simply make the accessibility and metadata and API updates on this cycle and allow time to eventually cover updates to all of the forms.

We instead recommend a phased approach:

1. All forms should immediately be given a certification mechanism that is inexpensive and widely used and easily implemented. The understanding here is also that something is better than nothing, and that the technology to provide this functionality can be updated in the future.

2. All forms should use their existing form field mapping as the first version of the API for form data mapping and that no modifications should be made immediately. Essentially the API would be published with form fields for all forms "as is".

3. No accessibility modifications be made to any existing forms at this time. Those tasks will happen on a timeline as described below.

4. The form governance version for all forms would be 1.0.0.

This constitutes Phase I of the process of addressing target solutions one, two, and four. This would be done with existing staff and technology resources. Going through a limited-scope

iterative process would give us some idea of the human resource needs for activities, the planning and communication channels, communicating to third-party vendors and identifying the technology components that would be used for the first step.

To address target solutions one through four for subsequent form updates, we recommend that a team of stakeholders be assembled to determine a priority order or prioritization method for tackling form updates. We recommend that pilot projects could be established to address different groups of forms based on the collaborative team's recommendation.

For example:

1. A good initial project could be to make the accessibility updates for select groups of forms frequently used by self-represented litigants. Such form groups include unlawful detainer, divorce petitions, and small claims. Additionally, these forms are also used by third-party vendors who currently provide document assembly solutions for them.

2. Selecting some very simple attorney-used forms might make a good initial project. The Substitution of Attorney forms are frequently used, simple to populate, and could introduce third-party vendors targeting the professional users to this proposed solution relatively easily.

3. Prioritizing agency-used forms as the lowest priority might allow our small resources to address areas where there might be a higher priority. While it is true many agencies use e-filing and e-delivery solutions, it is very unlikely that they would modify forms to make them non-compliant.

Concentrating on these incremental solutions helps create a roadmap for forms updates, allowing rapid initial deployment, wide use, ability to learn from early phases of development, and providing usable, effective solutions.

Once the roadmap is complete, the first form candidates could then have in-depth efforts made such as:

1. Reviewing and defining all data elements across the set of forms selected (small claims, unlawful detainer etc.).
2. Conforming form fields to NIEM/ECF standards, collaborating with the e-filing workstream.
3. Creating version 2.0.0 of the API, focusing on reusability and standardizing data fields and formats across form types.
4. Updating the accessibility of all forms.
5. Changing forms as needed, to comply with statutes or other reasons.
6. Evaluating system capacity for increasing usage by end users and third-party vendors.

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Target solution six: Evaluate the possibilities of dynamic form production.

Problem: Forms are static, which can render them less effective for courts and litigants.

- We recommend asking the Rules & Policy Subcommittee to review the California Rules of Court to determine if rules need to be drafted or revised to permit a pilot project to evaluate the use of dynamic forms.

- Develop a pilot project to evaluate using dynamic forms in place of, or in addition to, the current inventory of Judicial Council forms. The pilot project should focus on a smaller set of forms, such as small claims, unlawful detainer, name change, or court-generated orders after hearing. Some considerations for the pilot project include:

    - What information is mandatory, optional, and conditional on each form?
    - What standard convention can be used to describe blank information?
    - How will forms differentiate between blank data and data that is not applicable?
    - Should the layout and order of information be changed for easier comprehension?
    - How is form integrity maintained?
    - How will forms adapt to updated information?
    - Should static forms be retained as an option for accessibility and to create "receipts" or "summaries" for form fillers to keep as documentation?

Business reason: Decrease complexity and increase access to justice

Form assembly progressively elicits information from form fillers based on their responses. This is distinct from dynamic forms.

This proposal defines a dynamic form as a Judicial Council form that contains required and optional data fields, and that allows for ad hoc additions (ie. ,"Add another defendant"). The form output includes all mandatory fields and any optional fields that have data, and omits any unused fields or automatically assigns to them a "not applicable" value. Dynamic forms do not present information in fixed text boxes, but will shrink or grow based on the data entered.

One issue with current forms is that there may not be enough space on the form to hold the information required because the fields are fixed. A field cannot contract or expand based on user input. If there is overflow, a user must attach a separate sheet of paper (form MC-025 is often used) and write the full answer on the attachment. Attachments are not structured, and therefore do not solicit concise, meaningful input from the user. Using attachments may cause a large number of attachments to forms with very little information on each attachment. This makes understanding the submitted forms more difficult for the court users and bench officers. Attachments can also be difficult to include in document assembly solutions. Dynamic forms can solve this issue by expanding or contracting as needed.

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Another issue occurs when a user does not fill out all form fields. Current forms must present all fields and all text in the layout approved by the Judicial Council, whether or not those fields are relevant to the individual user's circumstance. For instance, form FL-100, the mandatory form for a petition for marital dissolution, has large pre-printed sections for child custody, visitation, and support. Even if a user has no minor children, that user's form will print the boilerplate requests, with blank fields. Dynamic forms can resolve this issue by presenting only the required information and not a collection of empty form fields.

Complex forms, developed with static content and static-sized fields are often problematic for professionals and justice partners alike. Self-represented litigants will have more difficulty filling them out and understanding the generated content. Enforcement will become more difficult. Creating dynamic forms will ease the burden on self-represented litigants, justice partners, and the courts.

The workstream recommends that looking forward, forms should be dynamic.

Impact on form assembly vendors

Dynamic forms will fundamentally change the way forms are delivered to third-party vendors and end users. Because there are hundreds of forms, with thousands of data fields, comprising virtually unfathomable permutations, it would be impossible for the council to test each vendor's product to make sure that dynamically created third-party forms conformed to Judicial Council standards. Consequently, the council's template processor must be the single source of dynamic and authentic Judicial Council forms.

Currently vendors reverse-engineer forms and adapt their interview to the items on each section of each form, then aggregate forms into collections as needed. What we are proposing is that this model changes over time.

The workstream recommends that the Judicial Council explore licensing the template processor server software. Third-party vendors could host their own template processing servers, using Judicial Council software, which would create valid and authentic Judicial Council forms. This would allow vendors to serve authentic forms, offer services internally and to the public, and test against the API without using Judicial Council bandwidth. This could minimize or offset operational costs for template processing.

The cost to vendors is that they would lose control over template processing, and they would have to adapt their software to the new API. However, adapting their software to the template processor API would eliminate significant time and effort for vendors because they would not have to modify their software for every change to Judicial Council forms. Instead of reverse-engineering forms, the vendors could adapt to public changes in the API.

Target solution seven: Evaluate the possibilities of document assembly within this context

Problem: No established knowledge base or standard best practices currently exists, creating possible duplication of effort

- Consider assigning to the SRL E-Services Workstream the task of developing a clearinghouse for sharing interview-based solutions. Such a clearinghouse would a) save programmer time, b) increase consistency across programs, and c) allow for a formalized review component (given adequate resources).

- Require that vendors to indicate digitally (e.g., metadata, certificate-based signature) and visually (by annotating the PDF) the software, version number, and date that produced the form output. This will ease tracking of bugs and other problems with third-party form providers. This may require revisions to the California Rules of Court.

Business reason: Share knowledge and best practices to establish quality baseline

Document assembly solutions provide valuable service to the courts and SRLs, but they also raise concerns. Each solution provides a PDF form for later submission, but there is no way to verify the integrity of printed or electronically submitted forms. If a solution has a bug that affects the completed form, there is no way to determine from the PDF file or printed form which solution produced the document. At this point, any vendor not associated with the judicial branch can create a solution, and there is little oversight over the integrity of how the forms are populated or the interviews that create them.

There is also a large duplication of effort to produce the same result. Although the end result of each solution is a PDF document based on a Judicial Council form, the intermediate workflows are incompatible. As Judicial Council forms are modified every six months, each solution adapts to the changes idiosyncratically. Thus, the same problem (change to Judicial Council forms) is solved multiple times in multiple ways. Some of these differences can be explained by the fact that the programs have different target users. Document assembly programs developed for use in assisted self-help workshops will, by design, work differently than those developed for unassisted users working at home or away from the courthouse. However, to the extent possible, programs should be standard. Since HotDocs and Guide & File are both developed by council and court subject-matter experts, there is some ability to work toward this goal.

Timeline

The first step is to identify expected resources for the initial phases of the projects. Since there is no funding in place for these activities, we would rely on existing resources and being able to implement the beginnings of these projects with minimal time and effort from staff resources, and low costs from equipment resources.

Since we are not aware of any other state or federal organizations doing the activities we propose, there doesn't seem to be an existing roadmap we can use as a guide. We cannot easily project the team sizes, equipment requirements, collaborative and planning efforts, or any technology obstacles we might face, nor can we currently estimate future maintenance and support costs.

To that end it is our suggestion that we think of these projects as initial "proof of concept" activities designed to answer some of those questions. Some might use the term "feasibility study". The objectives of the proof of concepts would be to use them to begin to try to determine costs and resource needs so that we can create future BCP requests to further develop the solutions based on what we learn in the proof of concept phases. JCIT has initiated the funding request process for three positions to ultimately manage the forms program; notwithstanding the outcome of this and future funding requests, the proposed solutions include a prioritization method that will allow project scaling to match available resources.

Attachment C is a proposed timeline for activities over the next three years.

General considerations that apply to the recommendations above

Platform independence

Forms must be usable on all platforms, including Windows, Mac, and Unix/Linux-based desktop systems, tablets, and mobile devices. Judicial Council forms are not currently responsive and many will function correctly only when opened in an Adobe product like Reader (free) or Acrobat (license fee). When a user accesses forms through a browser's built-in PDF viewer instead of Adobe Reader, forms may not open or display correctly. In that case, a user must download the form and then open it using Adobe Reader/Acrobat on a desktop computer.

Mobile devices render both XFA and AcroForms as flat, unfillable forms. Adobe has developed a free mobile app, Fill & Sign, that allows users to fill out and sign PDFs on the fly; however, this still involves working with a graphic form instead of a form specifically developed for use on mobile devices. In other words, the mobile user is navigating an actual page layout, adding text in the spaces provided, instead of moving through a series of fillable fields.

According to [Pew Research Center (2017)](#), 77% of US adults own a smartphone, and 12% rely exclusively on their smartphones to access the internet. In the younger generation, those between 18 and 29 years old, 92% own smartphones. Perhaps most importantly, [twenty percent](#) of adults living in households earning less than $30,000/year are smartphone-only internet users.

It is axiomatic that these lower-income households are the most likely to be self-represented. A recent study entitled *Serving Self-Represented Litigants Remotely: A Resource Guide (2016)* found that SRLs expect courts, legal services, and the bar to use technology. There is not only an expectation, but also a growing *need,* for people to interact with public entities via technology. The current model does not meet those needs and expectations.

Data portability between forms and CMSs

In the future, forms must create data that is compatible with external systems. As forms become an increasingly important source of data for the court, they should facilitate exchanging data with external processes, including case management systems, data exchange with justice partners, and self-help software systems. Each of these external processes will have incompatible field names and incompatible database systems. The challenge is to create a solution that allows interchange with disparate systems.

Outbound forms

Courts use a mix of case management systems, some stovepipe or legacy systems, and some new state-of-the-art systems. None of these systems can currently generate outbound forms using existing Judicial Council forms. Some courts reengineer forms into Word, an extremely time-consuming exercise, and one that risks introducing errors into what is presented as an authentic Judicial Council form. The Word forms must be programmed by adding "tokens"

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where data should appear. This is essentially a type of mail merge, and, if not carefully monitored, will produce a result that substantially alters the layout of the original Judicial Council form.

In a perfect world, courts would be able to automatically generate orders and findings on relevant Judicial Council forms. This would require CMSs to be able to query and output data as structured data files that can be merged with a forms template.

Inbound forms

Data collected on inbound Judicial Council forms cannot be seamlessly migrated into CMSs. Consequently, time and ingenuity is expended locally on finding ways to work with and around forms as CMSs are implemented. Manual data entry increases the risk of human error.

In a perfect world, case management systems would be able to accept a form for filing as a signed or otherwise certified PDF, along with the data captured on the form. Form data would populate the court CMS as required. There should be no manual data entry of any forms data.

Consistency of form field data

All Judicial Council forms are in a single file format, PDF. But due to the many past iterations of Judicial Council form workflows, the data fields within the PDF forms are inconsistently named and stored. There has been no policy or effort to ensure that like fields are consistently named across forms prior to the application of LiveCycle Designer. For example, in form FL-100, the field for the petitioner's name is labeled "petitioner," but in form FL-105, the same field is labeled "FillText59." Inconsistent naming and incompatible technologies have made any effort at data-mapping futile.

LiveCycle allows for templatizing and development of custom form objects that can be applied across all forms, ensuring consistency in naming and format. However, many older forms still exist, and not all new forms have been consistently formatted.

The PDF documents resulting from the current and legacy forms allow form fields to be created in incompatible formats: XML Forms Architecture (XFA) and AcroForms. Adobe LiveCycle Designer produces XFA. XFA is Adobe's current state-of-the-art interactive forms development product, but it is proprietary. XFA allows dynamic content, but statewide rules of court do not currently allow a form format other than that published by the Judicial Council (i.e., paper-based forms). Further, XFA content as currently delivered by the Judicial Council is inaccessible from many browsers, especially mobile browsers.

AcroForms was the original technology used for interactive form elements in PDF documents, and its content is viewable in most browsers. AcroForms has fewer features, but greater compatibility. AcroForms do not support dynamic forms.

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Relevant ongoing projects

ITAC Workstreams:

- **Data Exchange Workstream**
  Learn from structure and results (how to exchange data from vastly different sources)
  Promote communication with main EFM, EFSP and CMS vendors to develop data integration standards
- **E-Filing Strategy Workstream**
  Enable data portability
  NIEM/ECF implementation
  Integrate forms solution with EFSP certification standards
  Identity and Access Management Strategy
  Enable data portability
- **SRL E-Services Workstream**
  Develop SRL portal integration

Relevant Judicial Council IT projects:

- **Electronic Signature Initiative**
  Certify Judicial Council forms
- **Web Accessibility Implementation Plan & Strategy**
  Drafting and implementing form accessibility guidelines

Conclusion

The future state of forms may eventually eliminate the use of PDF forms and other technologies proposed as initial pilot projects. Systems may more easily be built that allow for data upload for those litigants who do not wish to work through an interview–mainly vendors, attorneys and public agencies–and a responsive set of interview-based forms for those litigants who choose that option–mainly self-represented litigants. Data gathered in this manner should be consumable by CMSs and by any other systems that provide case management from filing to bench and back to the submitter.

The Judicial Council, as the official publisher of Judicial Council forms, is the entity properly charged with the responsibility for providing legally accurate and accessible forms. The proposed project would allow anyone the ability to collect relevant data through any design mechanism, send properly formed data files to the Judicial Council forms server, and receive an authenticated and filled out form in return.

When the project expands to truly dynamic forms, the council's role will be to define which data fields are mandatory, which are optional, and which are causally dependent. This is a different function than the one currently performed by the council, and may require changes to business practices and governance.

The widespread use of Judicial Council forms speaks to their viability and necessity as a means to access justice in California. The workstream is optimistic that we can make a real difference with relatively little investment, at least in the opening phases of the project. It does require technical staff resources from the branch and the Judicial Council, and we recommend that ITAC specifically solicit stakeholder team members with the required expertise.

The workstream wishes to thank ITAC for the opportunity to weigh in on this project, and look forward to following the continued efforts in forms modernization.

Attachments

Attachment A: Workstream roster
Attachment B: Proposed timeline for phased forms modernization
Attachment C: Forms overview

Intelligent Forms Workstream

Membership roster

Hon. Jackson Lucky, Executive Sponsor
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Proposed timeline for phased forms modernization

Target Solution	2018	2019	2020
1. Certified forms	Determine if JCIT Electronic Signature Initiative can be extended for this purpose: *Yes:* Certify all forms *No:* Write and process RFP for possible solutions; project cost and include in procurement plan/BCP	Continue RFP/procurement process, as needed; deploy if possible	Continued assessment and implementation
2. Data population API for certified forms	1. Determine if JCIT can provide server space (Microsoft Azure Government space for internal projects such as the Ability to Pay Calculator might be extended) for Judicial Council forms: *Yes*: Develop plan for hosting certified forms and move all forms *No*: Establish ad hoc group to recommend best solution, considering RFP and other procurement options 2. Determine if in-house resources exist to develop pilot APIs:	Continue RFP/procurement process, as needed; OR Apply solution acc. to roadmap established by Target Solution 5 Continue RFP/procurement process, as needed; OR	Continued assessment and implementation

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Target Solution	2018	2019	2020
	Yes: Assemble cross-functional project team; develop pilot *No*: Consider if Intelligent Forms IFR/BCP staffing request will adequately cover staffing needs. If BCP does not go forward, repeat in future years and keep fine-tuning project scope	Proceed acc. to prioritization method in Target Solution Five	
3. Accessibility requirement updates for certified forms	Evaluate accessibility assessment and plan (see [RFP IT-2018-42-RB](#)) as related to forms and PDFs Establish cross-functional staff project team to define guidelines and implementation strategy	Implement strategy in coordination with prioritization method in Target Solution Five	Continued assessment and implementation
4. Basic governance for forms updates	Assign all forms version number v.1.0.0 Establish stakeholder group, including courts with various CMSs, to define what constitutes a sufficient change log Ask the Rules & Policy Subcommittee to determine if rules need to be drafted or revised to require third-	Update form version numbers as needed Implement change log in coordination with prioritization method in Target Solution Five Continue rule amendment process, as necessary	Continued assessment and implementation

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Target Solution	2018	2019	2020
	party providers of forms to identify in metadata and on each form the software version used; if yes, draft and process rules		
5. Priority matrix and list of forms to be updated to new API and accessibility requirements	Establish stakeholder team to create a prioritization policy/method for forms updates Establish stakeholder team, including CMS, EFSP, EFM, and E-Filing Workstream representatives, to create policies and guidelines for extending NIEM/ECF standards for JC forms; decide on how to continue monitoring and evaluation	Implement prioritization method Implement NIEM/ECF policies and guidelines Create v.2.0.0 of API and forms	Continued assessment and implementation Include vendor version identification requirement from Target Solution Four
6. Evaluate the possibilities of dynamic forms production	Ask Rules & Policy Subcommittee to determine if rules need to be drafted or revised to permit a pilot project to evaluate the use of dynamic forms; if yes, draft and process rules	Continue rules process, if needed Establish cross-functional project team to scope project, using prioritization method from Target Solution Five. If additional funds are required, start procurement process	Continue procurement process if required Launch pilot
7. Evaluate the possibilities of document assembly within this context	Establish stakeholder team, including representatives from HotDocs, Guide & File and the SRL E-Services	If funds are required, continue procurement process; OR	Continued assessment and implementation

Target Solution	2018	2019	2020
	Workstream, to form clearinghouse for sharing interview-based solutions knowledge and best practices; consider continued governance structure. If additional funds are required, start procurement process	Deploy clearinghouse	
	Ask the Rules & Policy Subcommittee to determine if rules need to be drafted or revised to require third-party providers of document assembly solutions to identify in metadata and on each form the software version used; if yes, draft and process rules	If rules are required, continue rule amendment process; OR Include requirement in governance policies of clearinghouse	

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Forms overview

Number of fillable forms: 1,228
Information sheets: 90
Translated forms: 519

Top 20 downloads (www.courts.ca.gov), 2017:

FL-100 Petition - Marriage	224,897
FL-300 Request for Order, Custody/Support	125,932
FL-150 Income & Expense Declaration	113,243
FW-001 Request to Waive Court Fees	107,869
SC-100 Plaintiff's Claim & Order	103,449
FL-110 Summons	101,541
FL-107-INFO Legal Steps for a Divorce or Legal Separation	87,739
FL-105 Child Custody Declaration	83,001
NC-100 Petition for Change of Name	81,919
CM-010 Civil Case Cover Sheet	80,743
FL-115 Proof of Service of Summons	80,743
rc-amnesty2015-Entities-Administering-Amnesty.pdf (Traffic – Infractions Amnesty Program – inactive doc)	78,040
filingfees.pdf (Statewide Civil Fee Schedule)	73,492
FL-311 Child Custody and Visitation (Parenting Time) Application Attachment	67,418
FL-160 Property Declaration	65,892
FL-141 Declaration Regarding Service of Declaration of Disclosure and Income and Expense Declaration	65,701
FL-140 Declaration of Disclosure (Family Law)	65,510
FL-180 Judgment	57,433
FL-120 Response - Marriage/Domestic Partnership	54,698
MC-030 Declaration	53,998