



# COURT INNOVATIONS, INC.

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AMERICAN SIGN LANGUAGE ONLINE COURT  
USER EXPERIENCE DESIGN

PRESENTED BY

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# EXECUTIVE SUMMARY

## CLIENT MISSION

Court Innovation's mission is to increase individual's access to justice. Using Court Innovation's online dispute resolution service, Matterhorn, individuals can resolve their small claims online rather than in-person. Resolving disputes online has improved the fairness, integrity, and accessibility of the court system.

## PROJECT OVERVIEW

While Court Innovations was our main client, we worked with one of their customers, the Franklin County Municipal Court in Columbus, Ohio. Specifically, we were tasked with improving the accessibility of Franklin County's Matterhorn platform for American Sign Language individuals. Following our research, Matterhorn proved to be an inadequate solution for the average American Sign Language individual as they prefer to resolve legal disputes in-person with an interpreter. In response to this finding, we focused our design efforts on improving the registration and in-case mediation flow for higher proficiency American Sign Language individuals and improving Matterhorn's ability to redirect low proficiency American Sign Language individuals to the in-person court system.

## PROJECT GOALS

**Ensure that ASL individuals have the same "access" to justice, regardless of their level of comfort with online platforms and level of English proficiency.**

This requirement ties back to our client's mission statement. Court Innovations seeks to ensure that all individuals, regardless of need and ability, have access to mediation services.

2. *Assist Court Innovations in developing an in-depth understanding of the needs and behaviors, both online and offline, of ASL individuals.*

Our client doesn't want their future changes to the product to forfeit its level of accommodation of ASL individuals. Thus, they need to have a thorough understanding of how to ensure that their added functionality aligns with the needs and behaviors of this user group.



# RESEARCH PHASE

## GOALS

Develop an understanding of how ASL individuals communicate, both with ASL and non-ASL individuals.

Determine how current online platforms assist as well as fall short in allowing ASL individuals to achieve online goals.

Determine what assistive tools ASL individuals use, if any, to help them achieve online goals.

Gain a thorough understanding of the court resources that are available to ASL individuals and how they aid or hinder these individuals in achieving their goals related to legal processes.

Gain a thorough understanding of how English proficiency affects how useful an online dispute resolution service as well as an in-person court session is to an ASL user.

## QUESTIONS

**RQ1** How do ASL individuals communicate, both with ASL and non-ASL individuals?

**RQ2** What assistive tools do ASL individuals use to help them achieve online goals?

**RQ3** What court resources are available to ASL individuals and how do they aid or hinder these individuals in achieving their goals related to legal processes?

**RQ4** How does proficiency in English affect ASL users' court experiences, both online and in-person?

## RESEARCH PHASE

# UX METHODS

### HEURISTIC EVALUATION

Conducted a heuristic evaluation of the Franklin Municipal County's Matterhorn platform to gauge its usability

### TARGET USER SURVEY

Created a survey in Qualtrics that was distributed to American Sign Language individuals. Our team contacted over 40 stakeholders with connections to the ASL population, including non-profit organizations serving the Deaf community, interpreters, and University of Michigan faculty associated with the ASL community, to distribute the survey.

### PRIMARY AND SECONDARY INTERVIEWS

After distributing our user survey, we refined our interview protocols and used them to conduct interviews

### USER PERSONAS & SCENARIOS

Created personas as well as user scenarios to precisely communicate the frustrations, needs, and behaviors of our target user group.

# RESEARCH PHASE

# HEURISTIC EVALUATION

## PURPOSE

To familiarize ourselves with Franklin County's Matterhorn platform as well as assess its user experience, our team conducted a heuristic analysis of the platform, evaluating Matterhorn's core tasks against Nielsen's 10 Heuristics as well as an Accessibility heuristic added in by our team.

## METHODOLOGY

The Matterhorn platform for Franklin County Municipal Court was evaluated by each team member. Each evaluator attempted to complete the core tasks of the platform, all while evaluating each task against a set of usability heuristics. Each evaluator conducted their analysis separate from one another to ensure this report did not rely on a single person's findings.

## SEVERITY RATING

A severity rating was assigned to each usability issue to convey how it would impact users.

**No Issue:** May conflict with one of the heuristics but isn't a usability issue.

**Minimal Issue:** Is easy for users to overcome and should be given lowest priority to fix. May be a cosmetic issue only.

**Minor Issue:** Slightly slows down and irritates users. Should be given low priority to fix.

**Major Issue:** Is difficult for users to overcome. Causes significant delay and moderate irritation. May occur often and should be given high priority to fix.

**Catastrophic Issue:** Prevents users from completing a task and causes considerable irritation. Is imperative to fix and should block the release of the product.

## TASKS

The Matterhorn platform for Franklin County Municipal Court was evaluated using the following tasks:

*Learn about the service*

*Register*

*Participate in discussion with mediator to come to a resolution*

*Sign an agreement, resolving the issue*

*Become aware of next steps following mediation*

## RESEARCH PHASE

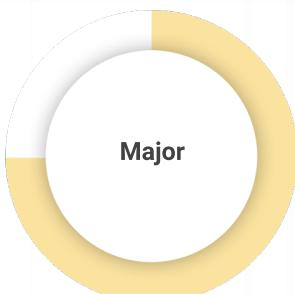
# HEURISTIC EVALUATION



### Lack of language assistance in mediation

*Point of Contact:* Registration Flow

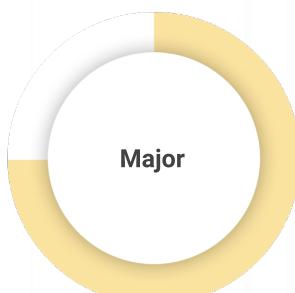
*Description of Usability Issue:* Users can indicate needing the aid of an interpreter or language assistance, but no such assistance is provided once they're in the mediation space. Therefore, ASL individuals are not provided with the aid of an interpreter in the mediation space even if they indicate needing one.



### Online presence of mediator and other party

*Point of Contact:* Mediation Dashboard

*Description of Usability Issue:* When a user is present in the mediation space, there is no element indicating if the mediator or other party is online and in the mediation space as well.



### Video content accessibility issues

*Point of Contact:* About Page

*Description of Usability Issue:* Video content did not have written descriptions to communicate to the user what type of content the video included. Video transcripts are necessary for hard-of-hearing users who are proficient in English.



### Ambiguity for required fields when registering

*Point of Contact:* Registration flow

*Description of Usability Issue:* When registering for a case, certain required fields are not marked with asterisks and users are unaware of password requirements until they have entered a password.

# RESEARCH PHASE

## USER SURVEY

### METHODOLOGY

Following our evaluation, our team distributed a survey to American Sign Language individuals created in Qualtrics to gain a better understanding of how these users communicate, both online and offline. The survey items included probed users attitudes and behaviors pertaining to technology as well as their background as members of the Deaf community. We received 10 responses.

### FINDINGS

An overarching theme was that videos on websites often lacked accurate captions. This could lead to a frustrating user experience.

ASL individuals indicated increased difficulty with reading legal documents, suggesting that they may require additional assistance in the context of legal disputes.

Access to an interpreter is a barrier to accessibility for some ASL individuals. It is crucial that any online dispute-resolving system allows for the opportunity to access an interpreter if one is needed.

All participants reported using the Internet either multiple times a week or multiple times a day. Additionally, two participants reported having experience with accessing online court-related services, suggesting minimal awareness across the Deaf community of online dispute resolution services.

### QUOTES

*A lot of videos have poorly translated captions, "craphions" if you will.*

*One participant indicated an understanding that these kinds of platforms don't provide enough captions or access to an interpreter on a regular basis.*

*Video Relay Services reduce the interpreter to a 2D screen, so important contextual information could get lost in translation.*

*One participants reported using online legal services to access court documents.*

## RESEARCH PHASE

# PRIMARY USER INTERVIEWS

## METHODOLOGY

After distributing our survey, our team conducted user interviews with three members of our target population. All interviews took place remotely while using Video Relay Services (VRS). Video Relay Services allows ASL individuals to communicate with voice telephone users through video equipment, rather than through typed text (FCC).

## FINDINGS

Our users often discussed the pros and cons of using video relay services for everyday communication purposes.

Many of our users could not think of a website that accommodated Deaf individuals.

At least one user indicated a strong preference in wanting to settle their dispute in person.

For in-person communication users often texted, signed, or passed notes.

## QUOTES

*“...Good reception is needed for a positive experience with a video relay service application...”*

*“I can’t say that I can think of an example off the top of my head no...”*

*“Many individuals do not understand VRS and often hang up at the beginning of the call”*

*In terms of in-person communication, they mentioned that they communicate with co-workers through a variety of ways: voice (primary), ASL, text messaging, and interpreting.*

## RESEARCH PHASE

# SECONDARY USER INTERVIEWS

## METHODOLOGY

Our team also conducted user interviews with six secondary stakeholders. For this project, our secondary stakeholders include interpreters, non-ASL individuals, or professionals who work with the Deaf Community.

## FINDINGS

Many Deaf or hard-of-hearing individuals may already use the current Matterhorn platform with little to no assistance.

One of users recommended having a “switch case to offline” kind of option on the platform.

It should not be assumed that all ASL signers understand written English as well as English individuals.

Similar to user interviews, many users mentioned that online platforms may not be 100% accessible for ASL individuals.

The ASL population also faces challenges related to the in-person court resources.

## QUOTES

*Deaf of hard-of-hearing individuals with high English proficiency navigate online platforms with little difficulty.*

*Users may initially believe that solving their issue online was the correct decision, to only change their mind later.*

*“...potentially focus on improving access to ASL interpreters for Deaf users ....”*

*The Deaf community has a dislike of video relay interpreting because of its inability to fully mimic an in-person interpreter.*

*There is a lack of interpreters in the courtroom, and the interpreters that are present are not always well-versed in legal concepts and terminology.*

# RESEARCH PHASE

## AFFINITY DIAGRAM

### METHODOLOGY

Our team created sticky notes that reflect the insights from our survey as well as our primary and secondary stakeholder interviews. We grouped these sticky notes into tangible themes that reflect the needs, behaviors, and constraints of members of the ASL population.

### FINDINGS

Online platforms are not always accommodating of ASL individuals' needs.

ASL individuals prefer to sign with an in-person interpreter, allowing them to communicate with more confidence.

ASL individuals prefer resolving legal disputes in-person with the presence of a qualified interpreter.

Interpreters face particular difficulties when interpreting for ASL individuals.

VRS and voice-to-text apps allow ASL individuals to participate more readily in conversation.

### QUOTES

*Reducing "visual noise" on websites would help them be more accommodating of online websites*

*"If you use an interpreter things are just facilitated a lot quicker compared to just writing back and forth or using text."*

*In-person mediation may be a better solution for individuals with a low proficiency in English than online dispute resolution.*

*"Sometimes one sign has different meanings so sometimes [interpreters] have to clarify which sign I'm talking about."*

*"Sometimes you can't find an available interpreter... But VRS you know is available 24 hours."*

# RESEARCH PHASE

## USER PERSONAS

### METHODOLOGY

These personas helped our team avoid developing elastic users (user who bends to fit the opinions of whomever is in charge). Our team developed user personas based on the two main groups of our target audience: users with high English proficiency and low English proficiency.

#### PRIMARY

Low English proficiency

**Franklin**  
Fine Artist

Franklin is 36 years old and works as a fine artist. He's been deaf since birth and has a highschool diploma. He is facing a breach of contract issue with his landlord.

**BEHAVIORS**

- Uses ASL interpreters (and family members familiar with ASL) to follow written instructions and notes. Has difficulty communicating with an English speaker without the presence of an interpreter.
- Has rarely encountered legal jargon and has very little understanding of legal processes and how to go about resolving a dispute
- Often uses a video-relay service to communicate with individuals (including friends and doctors) over longer distances
- Meets with local members of the Deaf community once a week for social gatherings
- Uses the internet everyday, predominantly for social media (Instagram is his platform of choice)

**GOALS**

- Gain a deeper understanding of the processes and procedures involved in resolving a legal dispute with mediation services
- Maintain a thorough understanding of the content shared throughout the case as well as the state of the case (i.e., when it is resolved and no further steps are required)
- Be able to easily obtain accommodations for conversing with individuals (mediators and the other party) in-person
- Resolve their dispute in a timely manner

**FRUSTRATIONS**

- Struggles to read text that is above a 4th grade reading level
- Occasionally struggles to understand whether an interpreter is signing to him verbatim what the other individual said or if they are signing more generally; this sometimes causes confusion
- Online sites don't facilitate tasks to be completed with the assistance of an interpreter, either online or in-person
- Struggles to initiate conversations using VRS as well as ensure everything they sign to interpreter is accurately communicated to other party in conversation
- Video captions can be incomplete or inaccurate, causing increased difficulty with task completion online



#### SECONDARY

High English proficiency

**Sara**  
Web Developer

Is 30 years old and works as a freelance web developer. She has an undergraduate degree in computer science. She developed proficiency in sign language 9 years ago and considers herself a member of the Deaf community since then. Sara is facing a payment dispute with one of her clients.

**ABOUT**

**BEHAVIORS**

- Prefers to communicate using sign, since English is their second language
- Often uses a video-relay service to communicate with individuals over long distances
- Alternates between using a live transcribe app, texting, and a notepad to communicate in-person
- Uses the internet everyday, predominantly for reading articles and communicating with clients
- Prefers to have access to an English transcript when using an in-person interpreter to give more context as to what is being said

**FRUSTRATIONS**

- Struggles to understand texts that require a high reading level (?)
- Encounters websites that require tasks to be completed with spoken communication, rather than digital communication
- Visual noise on websites can make it difficult to focus on text
- Video captions can be incomplete or inaccurate
- Facial expressions and gestures can be missed over VRS due to lack of video quality causing miscommunication

**GOALS**

- Maintain a thorough understanding of the content shared throughout the case
- Be able to easily obtain access to an interpreter, if completing task in English becomes too difficult
- Resolve their dispute in a timely and understanding manner



# RESEARCH PHASE

# UX REQUIREMENTS

## MUST HAVE

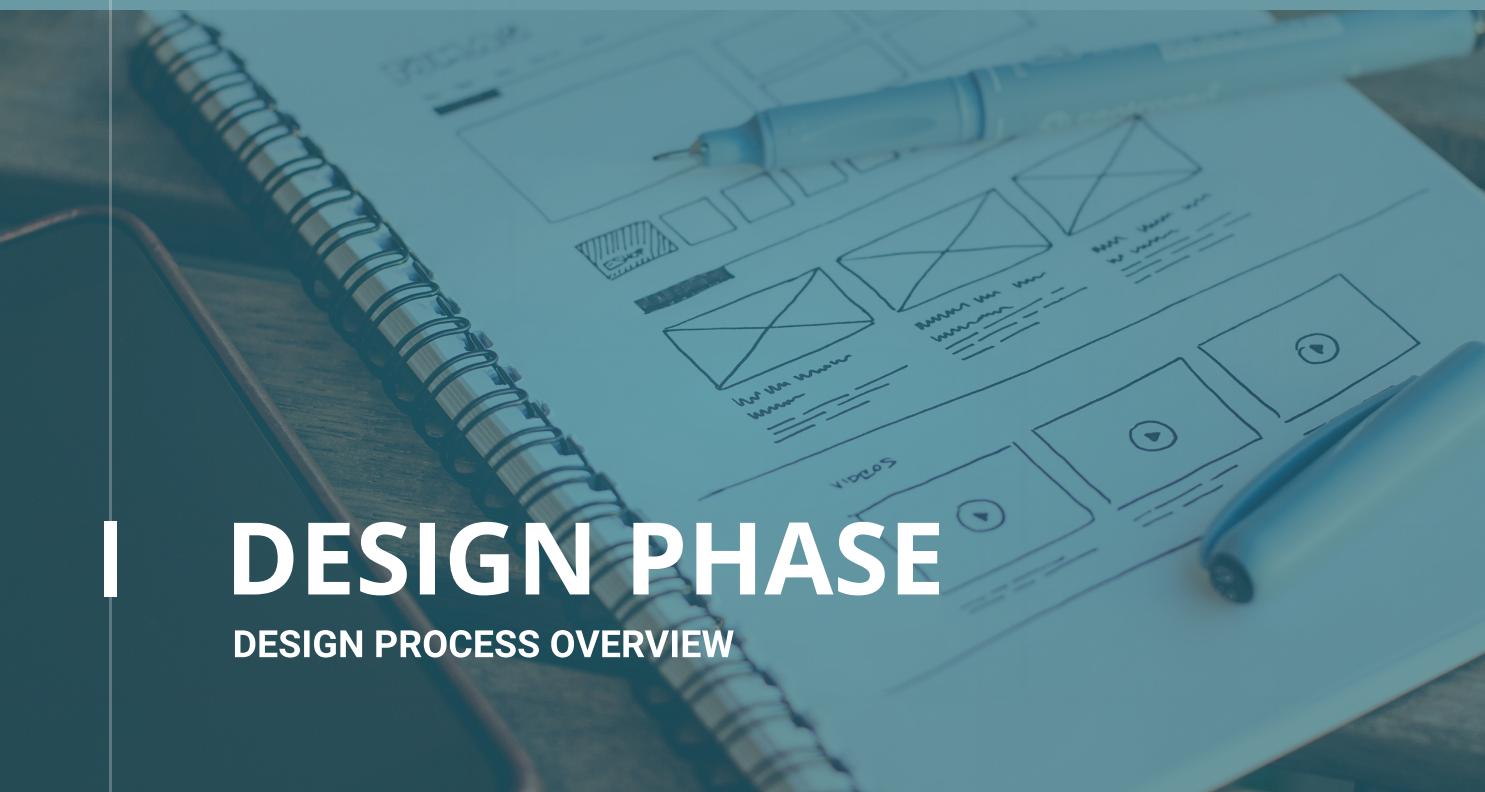
1. ASL individuals are made aware of the steps involved in completing the dispute resolution process online versus in-person, allowing them make an informed decision regarding which option to choose.
2. The platform allows users to leverage the in-person court system by assisting them in scheduling an in-person dispute resolution appointment that contains an interpreter.
3. Copy on the platform is simplified, where possible, to match a 4th grade reading level.
4. The platform's video content is able to be absorbed without necessarily listening to the videos. This can be in the form of thorough and accurate captions or transcriptions.

## IMPORTANT

1. The platform should present text in a way that is visually easy for ASL individuals to read.
2. The platform should have visual aids (including graphics and icons) that act as a supplement for ASL individuals with a low English proficiency.

## CONSIDER

1. ASL individuals can move their case to the in-person court system if they become uncomfortable carrying out their dispute online.
2. The platform provides video content with ASL captions for each instruction item in the online mediation process.
3. The platform should avoid presenting information with either multi-channel or low-quality audio.



# DESIGN PHASE

## DESIGN PROCESS OVERVIEW

### IDEATION AND SKETCHING

Began ideating and sketching based on UX requirements and results from heuristic evaluation

### LOW-FIDELITY WIREFRAMES

Created low-fidelity wireframes in Figma with the goal of identifying the placement of large elements, reconfiguring the registration and mediation flows, and further informing users of the online dispute resolution process.

### MID-FIDELITY WIREFRAMES

Refined our low-fidelity wireframes to include additional design elements and refine the design of the registration and mediation flows.

### HIGH FIDELITY WIREFRAMES

Synthesized previous design decisions with findings from user testing to create polished, high-fidelity mockups in Figma.

### UX VALIDATION STUDY

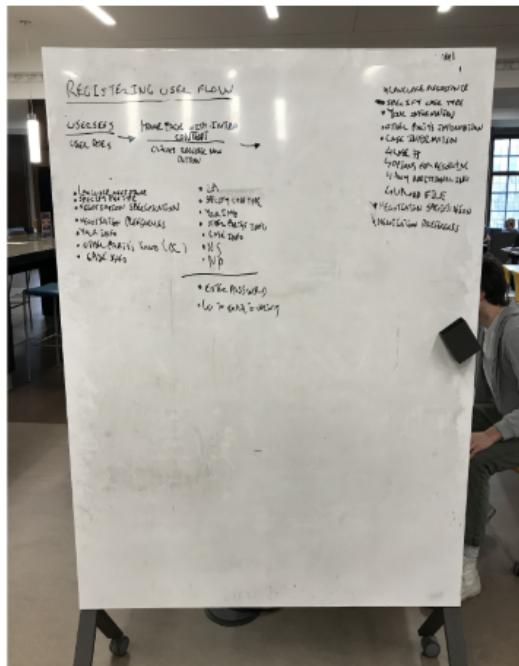
Conducting user testing with primary and secondary users to evaluate the effectiveness of our design decisions from an accessibility standpoint.

# DESIGN PHASE

## IDEATION

### USER REGISTRATION FLOW

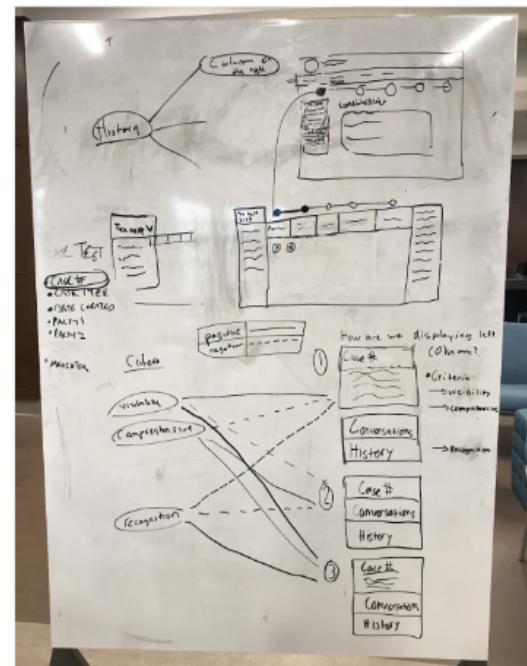
During the ideation phase, our team wanted to streamline the registration process such that it would be more efficient and cohesive for users. Therefore, our group reordered and regrouped certain questions so that the most straightforward questions would appear first. Additionally, we conceptualized a sidebar that would indicate visually to users exactly where they were in the registration process.



User Registration Flow

### MEDIATION FLOW

Our team sought to redesign the case dashboard for users such that the need to toggle between views would be mitigated. Additionally, we decided to implement a progress bar so that users would more strongly understand exactly where they were in the mediation process. Additionally, we redesigned the side menu to provide a clearer view to users of the types of information they could view pertaining to their case.



Mediation Flow (Dashboard)

# DESIGN PHASE

## LOW-FIDELITY WIREFRAMES

### HOME PAGE

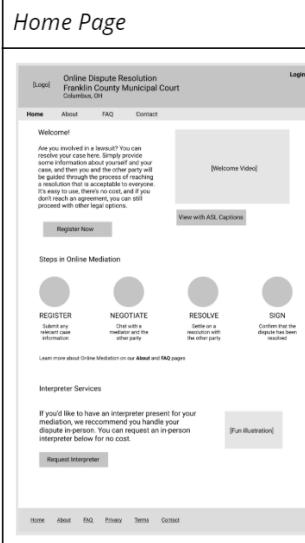
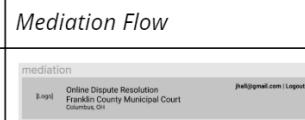
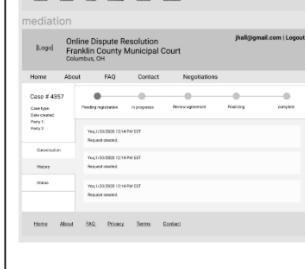
We condensed the Registration entry point into one button to reduce confusion. Next, we provided a link below the welcome video for users to view the video with ASL captions. Below the Welcome section, users can read an overview of the main steps involved in online mediation.

### USER REGISTRATION FLOW

Once users are taken to the registration flow, they identify their case type. Then, they are taken to a continuous registration flow where the items are grouped according to question type.

### MEDIATION FLOW

Previously, users could toggle between “Status”, “Conversations”, and “History”, reducing the visibility of the conversation space. Therefore, we implemented the “Status” and “History” information in the left sidebar so that the user is not forced to toggle back and forth. Additionally, we implemented a progress bar above the conversation space.

Low-Fidelity Wireframes		
Home Page	User Registration Flow	Mediation Flow
	 	 

# DESIGN PHASE

## MID-FIDELITY WIREFRAMES

### HOME PAGE

Changes to the home page from our low-fidelity wireframes largely concern font size, weight, and placement of visual elements. Our client appreciated the inclusion of the steps involved in online mediation as well as the Request Interpreter form linked at the bottom of the page.

### USER REGISTRATION FLOW

At this design stage, our team considered breaking up the continuous flow of the registration process into multiple stages. Therefore, these designs are indicative of the broken up registration flow.

### MEDIATION FLOW

Our team reconceptualized the design of the progress bar to be more cohesive and visually appealing in the mediation space. Additionally, our client informed us that ensuring the conversation stays above the fold would provide users with a negative experience since messages on the platform tend to be long and more formal than other chat platforms.

Mid-Fidelity Wireframes		
Home Page	User Registration Flow	Mediation Flow

## INITIAL USER TESTING

01.

**When requesting a language interpreter, American Sign Language (ASL) should be the first option to be in compliance with ADA standards**

When filling out the Request Interpreter form, ASL should be the first option on the list for users. This design suggestion is in compliance with ADA standards for web platforms and will increase ease of use for ASL users.

02.

**When users are registering for a case, it should be made clear where their case number (if they have one) originates from.**

Currently, there is no description telling the user where they can find their case number if they have one. This may cause confusion in the registration process, causing the user to drop out of using the service.

03.

**Font size should be increased in the Negotiations page as well as in the chat interface for readability.**

Currently, the font size in the Negotiations page and the chat interface hinders the user experience of the platform. Therefore, the font size needs to be increased to meet user needs.

04.

**The final step on the home page should be changed from "Sign"; this might cause confusion for ASL individuals.**

The final step in the online mediation process is currently listed as "Sign" (referring to signing the agreement). However, it was recommended to our team that we change this as this may cause confusion for ASL users.

05.

**If a user indicates that they have safety concerns regarding the mediation process, they should be able to clarify their concerns specifically with the mediator before entering the negotiation space.**

While registering their case, users can indicate if they have safety concerns regarding the mediation space including the other party. Users should be able to communicate these concerns with the mediator before entering the mediation space including the other party.

## HI-FIDELITY DESIGNS

# PROTOTYPE DESCRIPTION & DESIGN RATIONALE

## PROTOTYPE DESCRIPTION

Our prototype features updated versions to all existing screens in the Matterhorn platform, with the addition of a “Contacts” page.

From the home page, users can begin registering for a case, where they are taken to a form allowing them to enter their case information. The form features a long scroll option, which our team decided upon based on feedback from our client and user testing sessions. After users fill in their personal and case information, they provide their email address and create a password. Users can then log in and enter into their case via the “Negotiations” page.

Finally, users can resolve their dispute via their case dashboard. Here, users can view their case status, chat with a mediator, view their case history, and see their progress in the mediation process. Users may also sign an agreement to resolve their case from this dashboard, once a resolution has been decided upon. If an agreement is not decided upon, users may terminate the negotiation.

## DESIGN RATIONALE

Our home page allows the target audience to understand the basic steps of ODR, request a language interpreter, and to begin an ODR case.

Our request interpreter form allows our target audience to understand the process of requesting an interpreter quickly.

The user registration flow allows our target audience to register their case in a streamlined manner, without overcrowding the screen.

Users are able to maintain an awareness of their progress and actionables throughout the mediation process

Our team made changes to the sizing of headers and text boxes in order to help users find information quicker.

# HI-FIDELITY DESIGNS

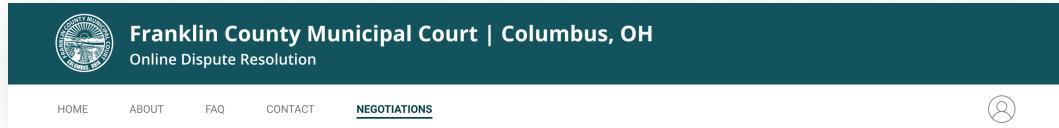
## NAVIGATION

### OVERVIEW

Contact was made into its own page. Additionally, the “login” button was moved into the top navigation and it was visually differentiated from other navigation items so that it would stand out to users. Thirdly, the navigation bar was made sticky, so that it scrolls down with the user. Finally, the size of the banner was reduced so that less content is pushed below the fold.

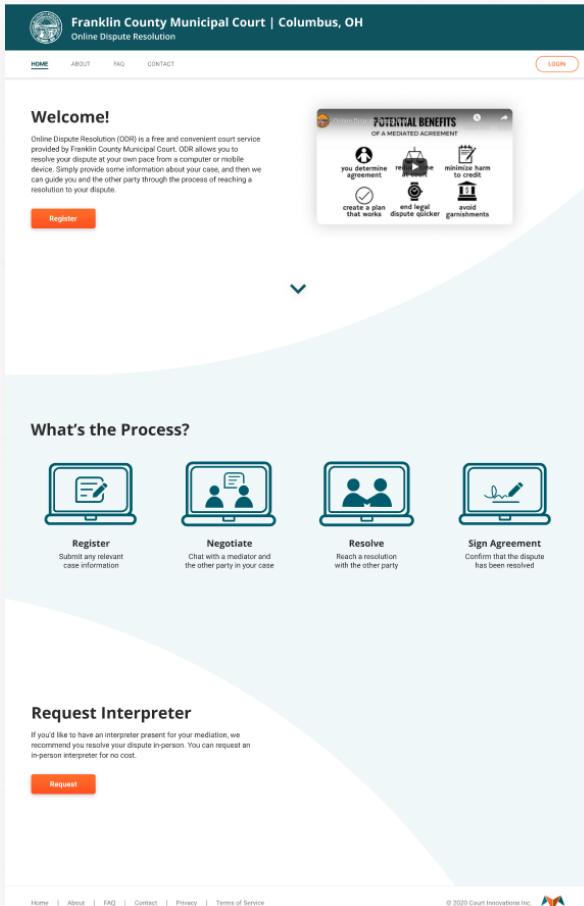
### LOGGED IN

When logged in, the log in button is replaced with a profile icon. When hovered over, a drop down appears containing actions related to the user’s account. Moreover, the “Dashboard” navigation items was changed to “Negotiations” to gives users more clarity in where they should go to find their case(s). Lasrly, the Negotiations tab was moved to the far end of the nav items, so that it didn’t change the position of the other nav items when a user was logged in.



# HI-FIDELITY DESIGNS

## HOME

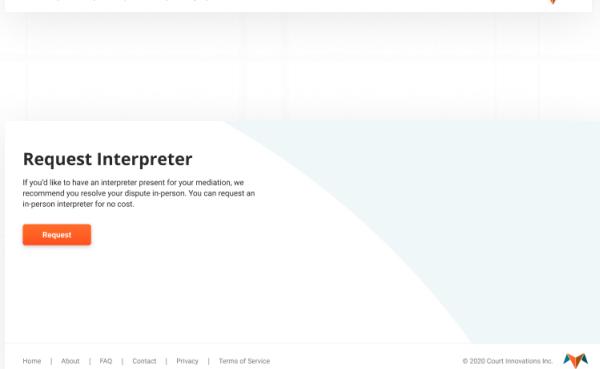


### WELCOME SECTION

The Welcome text was adjusted to give users a clearer understanding of the platform as well as the registration process. Moreover, we combined the registration buttons into a single button to reduce the noise and weight of entering the registration flow.

### THE PROCESS SECTION

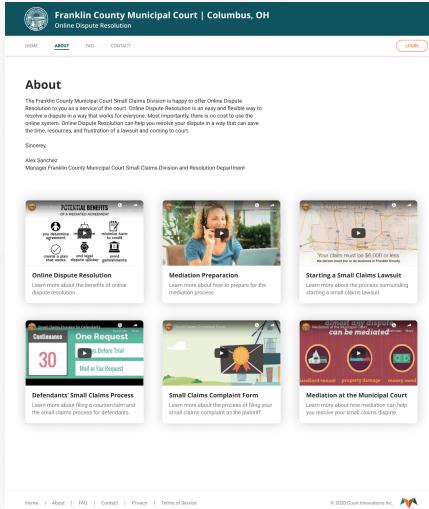
This section was created so that the user can view a brief overview of the steps involved in the online dispute resolution process.



### REQUEST INTERPRETER SECTION

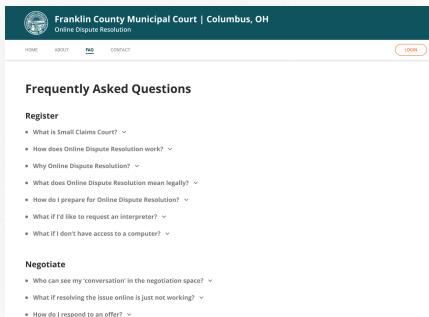
Helps ensure users who require language assistance are aware they have an alternative to using the platform.

# HI-FIDELITY DESIGNS ABOUT, FAQ, & CONTACT



## ABOUT

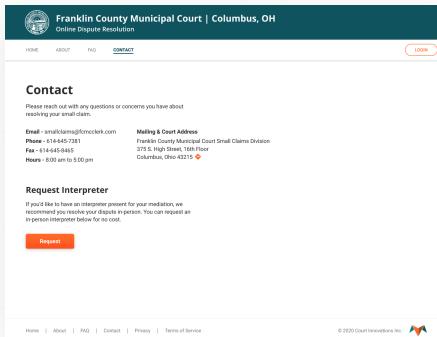
On the About Page, users can learn more about ODR services and the Franklin County Municipal Court. Additionally, they can watch a number of videos related to small claims services that builds off of the The Process section on the Home page. A description is present under each video so that users can assess whether a video is applicable to the information they're seeking prior to playing it.



## FREQUENTLY ASKED QUESTIONS (FAQ)

On the FAQ page, users can access answers to commonly asked questions related to ODR services. The questions are grouped by categories that match the steps presented in the The Process section on the Home page. We created a request interpreter question to add another entry point for the Request Interpreter form.

Moreover, the videos were moved from the FAQ to the About page because having the videos on the FAQ page pushed the questions below the fold. Thus, without scrolling, users would never know the FAQ page has questions on it.



## CONTACT

The contact information on the About page was removed and put into its own page, the Contact page. On the Contact Page, users can access contact information for the Franklin County Municipal court. Additionally, they may access the Request Interpreter form from this page.

# HI-FIDELITY DESIGNS

## INTERPRETER REQUEST FORM

### INTERPRETER REQUEST FORM

On this page, users fill out the request interpreter form in order to schedule an in-person meeting with a court mediator and language interpreter. The form only requires users to input their name, preferred form of contact, and the language they will need assistance in. Users are redirected to this screen from the home page, contact page, and FAQ page.

The screenshot shows the Franklin County Municipal Court website's "Request Interpreter" form. At the top, there is a logo and the text "Franklin County Municipal Court | Columbus, OH" followed by "Online Dispute Resolution". Below the header, there are navigation links for "HOME", "ABOUT", "FAQ", "CONTACT", and a "LOGIN" button. The main section is titled "Request Interpreter" and contains the following fields:

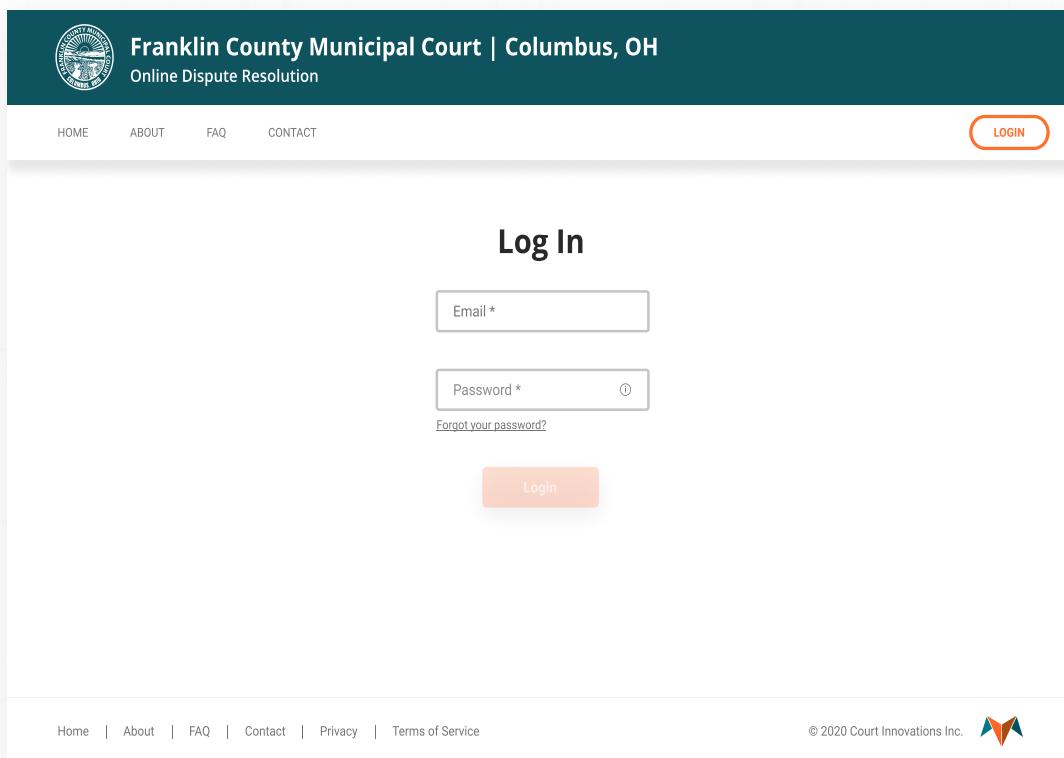
- First Name \*: Courtney
- Last Name \*: Malcolm
- Preferred form of contact? \*:
  - Email
  - Phone
- Phone Number \*: 555-435-2893
- What language? \*:
  - American Sign Language (ASL)
  - አማርኛ (Amharic)
  - 阿拉伯语 (Arabic)
  - Español (Spanish)
  - Français (French)
  - 普通话 (Mandarin)
  - ਪੰਜਾਬੀ (Nepali)
  - Русский (Russian)
  - ਤੀਗਿਆ (Tigrinya)
  - سومالی (Somali)
  - Other:
- A "Submit" button at the bottom of the form.

# HI-FIDELITY DESIGNS

## LOGIN

### LOGIN

Elements on the login screen were centered to signify that submitting the filled out fields will result in different behavior than other forms. Moreover, centering the elements better matches users' mental models for the layout of login screens. Additionally, the "forgot your password" link was placed under the password field to make the two elements appear to be closely related as well as reduce where the user is scanning the page. Lastly, an info button was added in the password field. When a user hovers over it, a tooltip detailing password requirements appears (Note: this tool tip is also present on the password field in Forgot Password and Create Account flow).



The screenshot shows the Franklin County Municipal Court login page. At the top, there is a dark blue header with the court's logo and the text "Franklin County Municipal Court | Columbus, OH" and "Online Dispute Resolution". Below the header, there is a navigation bar with links for "HOME", "ABOUT", "FAQ", and "CONTACT". On the right side of the navigation bar is a red "LOGIN" button. The main content area is titled "Log In". It contains two input fields: one for "Email \*" and one for "Password \*". Below the password field is a small link "Forgot your password?". A red "Login" button is located at the bottom of the form. At the very bottom of the page, there is a footer with links for "Home", "About", "FAQ", "Contact", "Privacy", and "Terms of Service". To the right of the footer is the text "© 2020 Court Innovations Inc." and the Court Innovations logo.

# HI-FIDELITY DESIGNS

## REGISTRATION FORM

### REGISTRATION FORM

Following their click of the registration button on the Home page, users are asked to select a case type. After they've selected their case, users will be progress to the registration form. The form is divided into three sections: personal info, case info, and clarification.

The three sections appear in the side drawer on left side of screen. The section a user is currently in will be highlighted, helping users maintain an awareness of how far along in the form they are as well as what section they're in. Moreover, users can click a section label in the side drawer to automatically scroll to the top of that section.

The registration form was stripped down to only include fields, not additional information around the fields. Doing so shortened the form as well as reduced the noise, making it easier for users to walk through. Lastly, required fields are marked with an asterisk so that users know what they need to fill out to be able to submit the form.

This screenshot shows the initial step of the registration process. At the top, the Franklin County Municipal Court logo and the text "Franklin County Municipal Court | Columbus, OH Online Dispute Resolution" are visible. Below this, there are links for "HOME", "ABOUT", "FAQ", "CONTACT", and a red "LOGIN" button. The main content area asks, "What type of case are you seeking to resolve?" It features two options: "Columbus Tax Case" with an icon of a tax document and a red dollar sign, and "Other Cases" with an icon of a magnifying glass over a document. A red "Continue" button is located at the bottom right of this section.

This screenshot shows the "PERSONAL INFO" section of the registration form. On the left, a vertical sidebar lists three sections: "PERSONAL INFO" (selected), "CASE INFO", and "CLARIFICATION". The main area is titled "Your Information \*". It contains several input fields: a "Business Name (if applicable)" field, three fields for "First Name \*", "Middle", and "Last name \*", a "Street \*" field, a "City \*", "State \*", and "Zip \*" dropdown, and finally "Email \*" and "Phone" fields. All input fields have an asterisk indicating they are required.

# HI-FIDELITY DESIGNS

## ACCOUNT SETUP

### ACCOUNT SETUP

Instead of being redirected to their email to setup their password, first time users are redirected to the account setup page after submitting their registration form. Users who have an existing account are redirected to the login screen. After creating their account users have to verify it through an email they receive from Matterhorn. Requiring users to leave the platform at the end of the registration flow, rather than in the middle, makes the registration process feel more continuous. Moreover, this flow better matches user's mental models of account setup.

The screenshot shows the Franklin County Municipal Court website's account setup page. At the top, there is a dark header with the court's logo and the text "Franklin County Municipal Court | Columbus, OH" and "Online Dispute Resolution". Below the header, there is a navigation bar with links for "HOME", "ABOUT", "FAQ", "CONTACT", and a "LOGIN" button. The main content area has a light gray background and features a heading "Account Setup". Below the heading, a message says "Thank you for registering your case! Please confirm your email and set a password to create your account and enter the negotiation space." There are two input fields: one for "Email \*" and one for "Password \*". Both fields have placeholder text and small "i" icons. A red "Create Account" button is located below the password field. At the bottom of the page, there is a footer with links for "Home", "About", "FAQ", "Contact", "Privacy", and "Terms of Service". The footer also includes a copyright notice "© 2020 Court Innovations Inc." and the Matterhorn logo.

# HI-FIDELITY DESIGNS

## NEGOTIATIONS

### NEGOTIATIONS

The “view details” was replaced with a forward arrow to better signify to users that they will be taken to a new screen. Moreover, we made the entire container clickable, so that user’s wouldn’t have to precisely click to navigate into their case.

The “Case type” and “Case number” labels were combined into one line since they’re closely related and visually differentiated from other previewed info so that the user could effortlessly scan down the Negotiations page to find their case.

Moreover, a Status label was added. It helps users further understand what case they’re looking at and primes them with what actionables they should be focused on completing for their case.

The screenshot shows the Franklin County Municipal Court website. At the top, there's a dark teal header with the court's logo and the text "Franklin County Municipal Court | Columbus, OH" and "Online Dispute Resolution". Below the header, a navigation bar includes links for "HOME", "ABOUT", "FAQ", "CONTACT", and "NEGOTIATIONS", with "NEGOTIATIONS" underlined. To the right of the navigation is a user icon. The main content area has a light gray background and features a large, bold heading "Negotiations". Below it is a card with a dark teal header containing the text "Mediation Case #4357". Underneath this, there are three lines of smaller text: "Created On - Apr 4, 2020", "Party 2 - John Wulfer", and "Status - In Progress". To the right of the "Status" text is a small circular progress bar with four dots, the first of which is filled red. A green right-pointing arrow is located at the bottom right corner of the card.

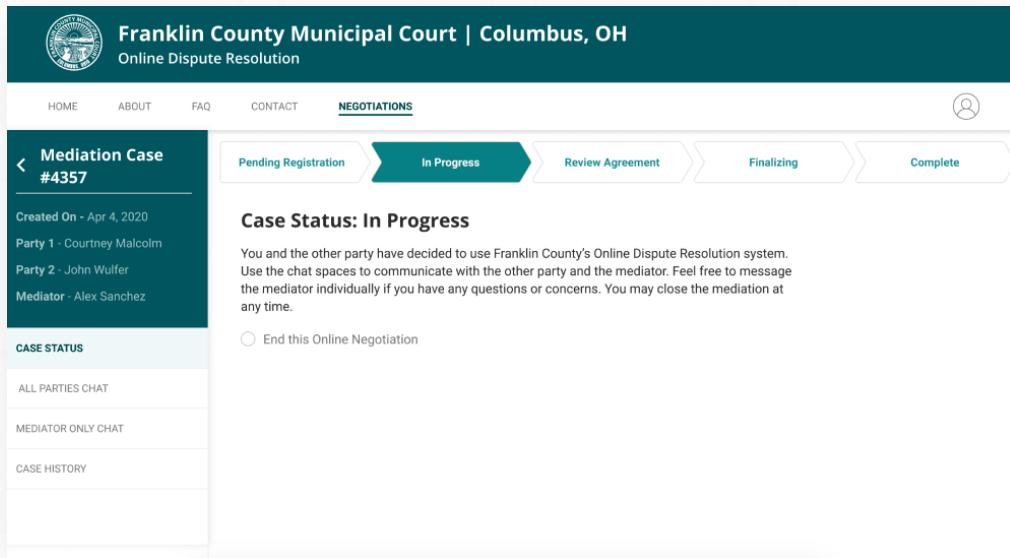
# HI-FIDELITY DESIGNS

## MEDIATION - OVERVIEW

### OVERVIEW

A progress bar was added so that users could see their current case status at all times as well as know how close they were to their goal of reaching a resolution.

A fixed side drawer was added to ensure the previewed case info on the negotiations page was carried over into the case itself and immediately visible to users. Moreover, the case navigation (i.e. case status, case history, etc.) were moved onto the side drawer. The top navigation on the platform is horizontal. Thus, the case navigation was made vertical to differentiate it from the top navigation since the case navigation doesn't redirect users to a page outside of their case. Additionally, moving the case navigation to the far left of the page, increased the vertical space for content on the right side of the screen.



# HI-FIDELITY DESIGNS

## MEDIATION - CASE STATUS

### CASE STATUS

A Case Status header was added so that it matched the label listed in the side drawer. This helps ensure users immediately know what the page is for and that it is tied to the Case Status cell they clicked on the side drawer.

An extension to the Case Status header was added that displays a more granular status than what may be shown on the progress bar (e.g. review and sign agreement, terminated, etc.). To extended status give users an idea of what their status is as well as what their actionables are prior to reading the paragraph of text on the Case Status page.

The screenshot shows the Franklin County Municipal Court Online Dispute Resolution website. At the top, there is a dark green header with the court's logo and name. Below the header, a navigation bar includes links for HOME, ABOUT, FAQ, CONTACT, and NEGOTIATIONS (which is underlined). A user icon is also present. On the left, a sidebar titled 'CASE STATUS' lists 'Mediation Case #4357', 'Created On - Apr 4, 2020', and participant names: Party 1 - Courtney Malcolm, Party 2 - John Wulfer, and Mediator - Alex Sanchez. The main content area features a horizontal progress bar with five stages: Pending Registration, In Progress, Review Agreement (which is highlighted in teal), Finalizing, and Complete. Below the progress bar, a section titled 'Case Status - Review & Sign Agreement' contains the text: 'The mediated agreement is now ready for both parties to review and sign.' A red 'View Agreement' button is located below this text. Further down, there is a note about signing the agreement and two radio buttons for 'Sign Agreement' and 'Decline Agreement'. A red 'Submit' button is at the bottom of this section.

# HI-FIDELITY DESIGNS

## MEDIATION - CONVERSATION SPACE

### CONVERSATION SPACE

Conversations is surfaced as two tabs, rather than one tab: All Parties Chat and Mediator Only Chat. This removed the extra click that was required for users to navigate into a specific chat interface.

The input field was fixed on bottom of the screen so that users wouldn't have to scroll all the way to the bottom of the thread to type out their message.

The most recent message appears by default when the user enters the tab. Users scroll up to bring more messages into view, rather than scroll down. This matches users' mental model for how messaging systems tend to behave (e.g. iMessage, Slack, Gmail).

Finally, the Mediator and Party 2 messages were further differentiated with color so that users could more quickly distinguish the two from one another.

The screenshot shows the Franklin County Municipal Court Online Dispute Resolution website. At the top, there's a dark header with the court's logo and the text "Franklin County Municipal Court | Columbus, OH" and "Online Dispute Resolution". Below the header, a navigation bar includes links for HOME, ABOUT, FAQ, CONTACT, and NEGOTIATIONS (which is underlined, indicating it's the active page). To the right of the navigation is a user icon. On the left, a sidebar displays case details: "Mediation Case #4357", "Created On - Apr 4, 2020", "Party 1 - Courtney Malcolm", "Party 2 - John Wulfer", and "Mediator - Alex Sanchez". The main content area features a "NEGOTIATIONS" progress bar with five stages: Pending Registration, In Progress, Review Agreement, Finalizing, and Complete. Below the progress bar is a section titled "All Parties Chat" with a message from John Wulfer dated 4/6/20 3:14 PM EDT: "I understand the stress that these damages may be causing, but I can assure you that the damage was there prior to me moving in." Another message follows: "It's unfair of you to put this all on me." At the bottom of the chat section, a message from the mediator states: "When the house was checked for repairs after the previous tenant moved out, none of the damage that exists now was documented. Thus, it's safe to assume that damage was created following your move in." At the very bottom is a text input field with a placeholder "Chat with all parties" and a red send button.

# HI-FIDELITY DESIGNS

## BUTTONS & TOAST NOTIFICATIONS

### BUTTONS

Colors were assigned to different states, signalling whether a feature was: inactive, default or hovered. The inactive state was added to signify to users that the action cannot be completed yet because they have not filled out the required information. It tells the user that there's still more left to do. When an inactive button is hovered over, a block icon will appear next to the user's cursor. When an active button is hovered, it will slightly change in appearance and will move upward 1 pixel.

Submit

Submit

Submit

### TOASTS

When users complete a flow and are automatically redirected to another screen, a toast notification briefly appears on the bottom of that screen to give users feedback that the action they carried out on the previous screen was successfully completed by the system.

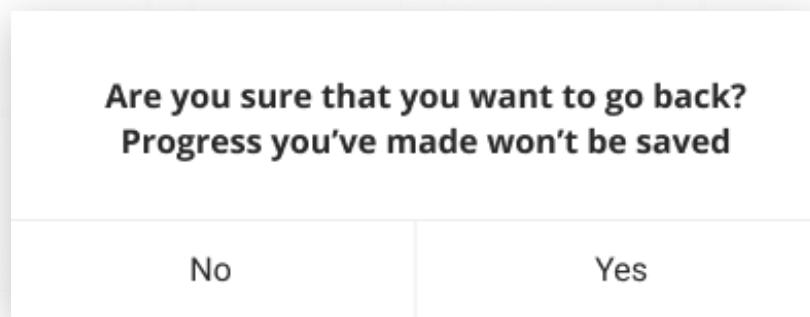
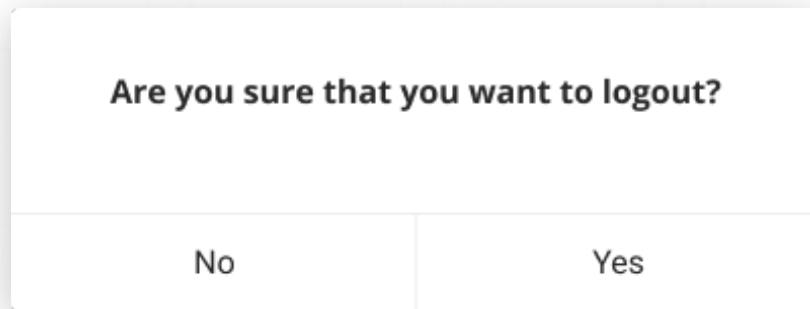
The screenshot shows the Franklin County Municipal Court website's login page. At the top, there's a dark header with the court's seal and the text "Franklin County Municipal Court | Columbus, OH" and "Online Dispute Resolution". Below the header, there are navigation links for "HOME", "ABOUT", "FAQ", and "CONTACT", along with a "LOGIN" button. The main content area has a "Log In" heading and two input fields for "Email \*" and "Password \*". Below the password field is a link "Forgot your password?". A green toast notification at the bottom left of the page says ">Password successfully reset" with a checkmark icon. At the very bottom of the page, there's a footer with links for "Home", "About", "FAQ", "Contact", "Privacy", and "Terms of Service", along with a copyright notice "© 2020 Court Innovations Inc." and the Court Innovations logo.

# HI-FIDELITY DESIGNS

## CONFIRMATION DIALOGS

### CONFIRMATION DIALOGS

Confirmation dialogs appear when users are attempting to carry out destructive actions (e.g. logging out, abandoning a registration form, etc.). Requiring users to confirm the action they signified they want to carry out is actually the action they want to carry out, reduces errors.



# HI-FIDELITY DESIGN

## ERROR STATES

### ERROR STATES

When a user clicks out of a field they've filled out, an error message will appear under that field if it has been filled out incorrectly. The error messages were written such that they assist users in understanding why their input was incorrect. Moreover, if a user attempts to submit a form without filling out all required fields, an error message will appear under each required field that hasn't been filled out.

### Log In

Email \*

Please enter a valid email address

Password \*

[Forgot your password?](#)

[Login](#)

### Reset Password

Password \*

Password invalid. See ⓘ for password requirements

Confirm Password \*

[Submit](#)

## Request Interpreter

An interpreter is provided to you at no cost. Please fill out the interpreter request form below to receive language assistance during your in-person dispute resolution.

First Name \*

Please enter your first name

Last Name \*

Please enter your last name

#### Preferred form of contact? \*

Email

Phone

Please select a preferred form of contact

# UX VALIDATION

## VALIDATION STUDY OVERVIEW

### STUDY DESIGN & METHOD

### GOALS & METRICS

### STUDY APPROACH

### PROCEDURES & MATERIALS

### RECRUITMENT

### DEMOGRAPHICS

### ANALYSIS & INSIGHTS

### ADJUSTMENTS TO FINAL DESIGN

### STUDY DESIGN & METHODOLOGY

Our team conducted seven user tests to ensure the usability and clarity of our design decisions regarding the Matterhorn platform. Despite the unforeseen circumstances surrounding the COVID-19 pandemic, our team conducted the user tests remotely using Google Hangouts and screen sharing capabilities.

### RESEARCH GOALS

Assess users' comprehension of the steps involved/the purpose of online mediation so they may decide if this is the option they want to pursue.

Ensure that users do not encounter difficulty or confusion when registering their small claim with the Matterhorn platform.

Gain a better understanding of how users communicate with the mediator (and other party, if necessary) while resolving their small claim so that we may place elements and interfaces where they are expected by the user.

# UX VALIDATION STUDY

## APPROACH & PROCEDURES

**Time:** how long it took the user to complete a specific task

**Page accessed:** which page the user accesses to access relevant information

**Success:** whether the user completed the task without intervention from the moderator

**Errors:** the number of errors users made while completing the task

**Ease of Completion:** After each task, we will ask the user to rate how easy the task was to complete on a scale of 1-5 (with 1 being very easy and 5 being very difficult).

**Expectations and Recommendations:** We will ask users if the information presented made sense to them according to their expectations with previous platforms. Additionally, we will be asking for further recommendations regarding the platform design to ensure that all information is easily accessible and comprehensive.

### STUDY APPROACH

**Testing Method:** Moderated Remote Usability Study

**Method Rationale:** Ideally, our team would have liked to conduct in-person usability testing sessions with our designs, as in-person testing with an ASL interpreter is needed for members of our target user group. However, due to the challenges presented by the COVID-19 pandemic, we conducted our tests remotely. Based on the current situation, our design is also a within-subjects design. All of our participants completed all user tasks included in the experiment. We utilized Google Hangout to conduct testing remotely.

### PROCEDURES & MATERIALS

**Procedures:** For our remote user testing, our team created 9 different tasks with 2-6 subtasks per task. After each task was completed, we asked the participant to rate how easy the task was to complete on a scale of 1-5. Additionally, we asked the participant if the information they were required to find was where they expected it to be. Finally, we asked the participant if they had any recommendations on how/where to visually represent the information to increase ease of access. After all tasks were completed, we provided the participants with a post-test questionnaire to better understand their experience with the platform and gauge whether or not they would use it in the future to resolve their small claim.

**Materials:** The materials needed for our UX validation study included our high-fidelity prototype (created in Figma), our user testing script with tasks and sub-tasks, our pre-test and post-test questionnaires, our data logging forms, and Google Hangouts (with screen capturing capabilities).

# UX VALIDATION STUDY

## RECRUITMENT

**Primary Users:** We recruited one primary user for our study who is proficient both in ASL and English.

**Secondary Stakeholders:** We recruited two secondary stakeholders for our usability study. These individuals are knowledgeable in the field of accessible, although they are not members of the Deaf community themselves.

**General Users:** We recruited four general users for our study. These users are not members of the Deaf community, nor do their needs reflect those of ASL users.

**Note:** When analyzing our results, our team took into consideration the average English reading and writing proficiency level of our participants', which may be higher than the average proficiency level of Deaf individuals. Our team also took into consideration the average technology proficiency level of our participants', which may be higher than the average proficiency level of members of the Deaf community.

### PARTICIPANT DEMOGRAPHICS

Participant	ASL User?	Technology Proficiency	English Proficiency	Understanding of Legal Documents
PU1	Yes	High	High	Highly comfortable
PU2	Yes (*ASL Professor)	Moderate	High	Highly uncomfortable
PU3	No	High	High	Highly comfortable
PU4	No	High	High	Mildly comfortable
PU5	No	Moderate	High	Mostly comfortable
PU6	No	High	High	Somewhat comfortable
PU7	No	High	High	Highly comfortable

**Note on participant bias:** Because we are focusing on our secondary stakeholders, we are aware that our design may not be 100% accessible for Deaf or hard of hearing individuals. However, we have been consulting with individuals who are familiar and active with the Deaf community, in order to make sure that our designs meet the minimum accessible standards set by the ADA or WCAG.

# UX VALIDATION STUDY

## ANALYSIS & INSIGHTS

### DESCRIPTIVE STATISTICS FOR DEPENDENT VARIABLES

Below are the results from our remote usability testing sessions. It can be noted that there is a different number of tasks for participants; this resulted from technical issues where certain tasks could not be completed due to technical difficulties with the Internet and/or the prototype.

Participant	Moderator	Time Taken to Complete Usability Test	Successful Tasks Completed	Would Recommend ODR Services	# of Correct Pages Accessed First
PU1	Michael and Felipe	~40 minutes (tech issues)	6/7	Yes	7/7
PU2	Shannon	10 minutes	4/4	Yes	4/4
PU3	Shannon	~30 minutes	9/9	Yes	8/9
PU4	Shannon	12 minutes	7/9	Yes	6/9
PU5	Jamie	~1 hr 30 minutes (extreme tech issues)	7/7	Maybe	5/7
PU6	Michael	~30 minutes	9/8	Yes	9/9
PU7	Felipe	40 min	8/9	Yes	9/9

### INSIGHTS

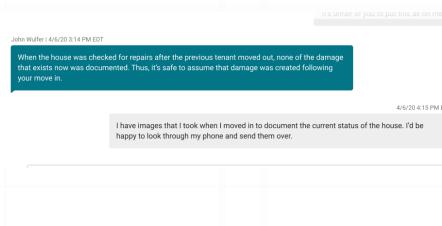
1. Several users tried clicking on the icons explaining the online dispute resolution process (even though these icons were not clickable)
2. Users preferred the long registration flow as opposed to breaking the flow up into categorized groups of questions
3. In the all-parties chat interface, the background color of chats from the mediator and other party should be different colors so the user can easily differentiate a message from the mediator and a message from the other party
4. The “Send” button in the chat interfaces presented difficulty for users due to its small size and ambiguous visual design
5. Users experienced difficulties finding specific questions on the FAQ page due to the lack of categorization

# UX VALIDATION STUDY

## ADJUSTMENTS TO FINAL DESIGN

**01.**

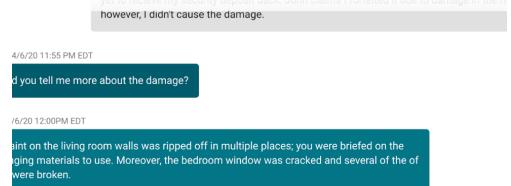
Enlarged text in  
mediation chat  
interfaces



**02.**

Changed the  
background color  
of the mediator  
messages

ies Chat



**03.**

Organize the  
questions on the  
FAQ page to create a  
more categorized  
and cohesive design

A screenshot of the Franklin County Municipal Court FAQ page. The page has a dark header with the court's name and a navigation bar with links for HOME, ABOUT, FAQ, and CONTACT. Below the header is a section titled 'Frequently Asked Questions'. Under 'Register', there is a list of questions: 'What is Small Claims Court?', 'How does Online Dispute Resolution work?', 'Why Online Dispute Resolution?', 'What does Online Dispute Resolution mean legally?', 'How do I prepare for Online Dispute Resolution?', 'What if I'd like to request an interpreter?', and 'What if I don't have access to a computer?'. Under 'Negotiate', there is a list of questions: 'Who can see my "conversation" in the negotiation space?', 'What if resolving the issue online is just not working?', and 'How do I respond to an offer?'. The page uses a clean, modern design with a white background and black text.

**04.**

Altered the design of  
the "Send" button in  
the chat interface to  
increase clarity.



# FINAL RECOMMENDATIONS

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## USER TESTING

Due to the challenges presented by the COVID-19 pandemic, our group could not receive feedback from ASL users, our primary user group, as much as was necessary to fully address our research questions. Therefore, future user testing sessions should involve ASL users wherever possible to test the design of the platform from this perspective.

## COMMUNITY OUTREACH

To connect more strongly with the ASL community, we recommend that the Matterhorn team engage in outreach efforts. This could include conducting webinars with ASL interpreters, providing brochures and flyers to local recreation centers, and utilizing social media to spread the word about ODR services.

## DESIGN & FUNCTIONALITY

All of our designs have been compiled into an asset guide. Only Dunrie Greiling and Alex Sanchez currently have access. However, ownership has been transferred to Dunrie and she should be able to share the guide with other members of the team. Link to the board: [Style Guide](#)

# APENDICES

## Appendix A: Figma Prototype

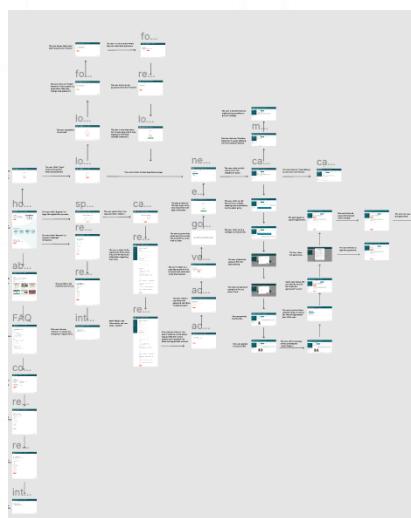
Link to [High Fidelity Prototype](#)

## Appendix B: Style Guide

Link to Zepplin board: [Style Guide](#)

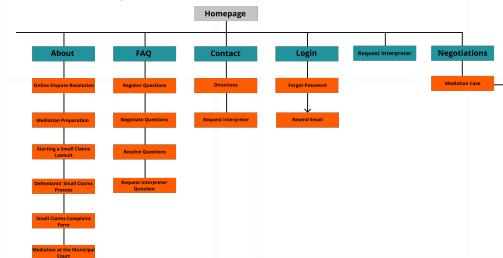
## Appendix C: Interaction Flows

Link to Wireframe: [Wireframe Design](#)



## Appendix D: Site Map

Link to Site Map: [Figma Site Map](#)



## Appendix E: Detailed Page Specifications

Linked to Detailed Page Specifications: [Detailed Page Specs](#)

