

WICN STUDIO 50 REFINEMENT

Audio Engineering & Music Technology (BS)

Major Qualifying Project at WPI



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WICN Studio 50 Refinement

A Major Qualifying Project
submitted to the Faculty of
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by

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This report represents work of one or more WPI undergraduate students submitted to the faculty as evidence of a degree requirement. WPI routinely publishes these reports on its web site without editorial or peer review.

ABSTRACT

WICN is a national public radio station, which recently integrated a recording studio, called *Studio 50*. While the studio was functional and provided excellent service, the workflow process of Brad Pierce, the only audio engineer at Studio 50, was not documented. Thus, new audio engineers may not have understood how to properly utilize Studio 50, as well as document consistently per the studio standards, and overall provide high-quality service. That being said, our objectives included developing an audio engineering guide and curating the Studio 50 website to enhance the client experience with a more simple, aesthetically pleasing design as well as a booking form that allows clients to include all necessary information to determine if they are a good fit. Research methods for this project were relatively simple given the demands of the studio, documenting and memorializing the practices of the existing audio engineer, as well as improving the client booking system. Thus, we spent time interviewing Brad to take note of his methods and procedures, and the website development was completed by working with WICN's software developer, Jacob Pelrah. Before approaching him, we first analyzed existing studios in the area, and took note of the features we wanted and didn't want to include in our design. As a result of our work, WICN was very excited and content with the guide and improved website design. The workflow guide will serve new audio engineers, and be accessible in the studio by a QR code. The new website design is already live and operational. In addition to the completion of our objectives, we presented the studio with potential future improvements that would allow the studio to keep growing and become more future proof. Once more, the purpose of this project was not to perfect an operational studio, but rather strive to be better because that is an essential piece to maintain relevance.

INTRODUCTION

As the art and science of audio engineering continues to evolve, it is important for the engineers to stay up-to-date with advanced techniques and technologies in order to produce the best possible results in the studio. This report aims to investigate the best

practices for audio engineers working in Studio 50, with a focus of preserving the tried and true methods from chief audio engineer, Brad Pierce. We will explore his most effective strategies, and document them to develop a comprehensive guide that assists future audio engineers produce exceptional results at WICN's Studio 50. In addition to this research, we will also develop a new design for Studio's 50 website, that will have a more professional and simplistic look, complete with a booking request form.

BACKGROUND

WICN is a national public radio station that broadcasts 24 hours a day from Worcester, Massachusetts. Studio 50 – which is a part of WICN – is a fully equipped recording studio headed by recording, mixing and mastering engineer, Brad Pierce. It is a versatile space capable of hosting several kinds of events including music recording sessions, podcast or audiobook recordings, live music live streams, and many other types of events. WICN's overall goal for Studio 50 is to establish it as a well-known studio for use by musicians in the Worcester area for various genres including and outside of Jazz, which it is currently mainly known for.

WICN currently does not possess a system for booking and managing clients efficiently, which could increase potential throughput of the studio therefore increasing its notoriety in the area. As of now, all current and potential clientele runs directly through contact with the studio manager, David Ginsburg. To make the process of managing clients more efficient, we aim to create a digital client booking system that expedites this process.

BOOKING NEEDS OF STUDIO 50

After conversing with the head of WICN, David Ginsburg, we were able to assess the necessary information to provide to clients, what information we would like them to provide, and how the booking process should function.

STUDIO INFO AVAILABLE TO CLIENT

There should be certain information that is available to the public that will give a full image of what Studio 50 provides and the quality of the work produced from it. In addition to an overall “About” description, there should also be some kind of video giving an overview or tour of the studio to give potential clients a good view of the studio space. Many clients have already passed through Studio 50 and have had products produced from it. Some of these media (audio, video, or images) and/or testimonials should be included to show potential clients that the studio is well-established and legitimate.

The client website should include a list of the equipment available for usage at the Studio, including outboard equipment, microphone assortment, musical instruments, mixing console, and Digital Audio Workstation (DAW) information. This is common with many studio websites, such as Wellspring Sound’s website:

<https://www.wellspringsound.com/>. The client should also be able to see all of the services available for purchase through the studio, and full descriptions of each of them. Many studios have similar lists that describe these services, such as the list available on the website for Fontanez Recording: <https://www.fontanezrecording.com/services/>.

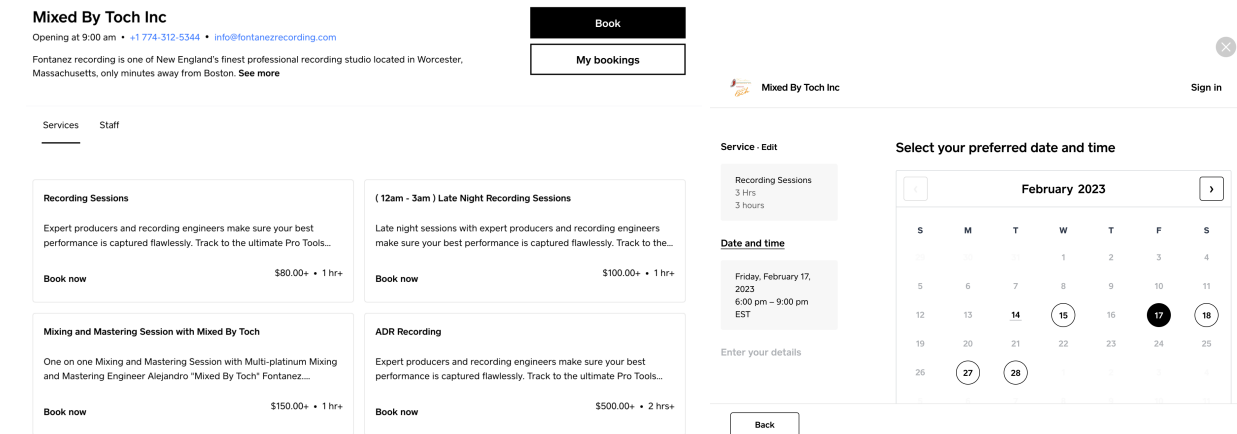
CLIENT INFORMATION

WICN needs to receive certain information from the client for logistical purposes as well as to gauge the nature of the client's request for using the studio. This information should include the following:

- Contact Information.
- Type of session (podcast, live music session, etc.)
- Overview of intentions & needs for the project.
 - Genre.
 - Equipment.
 - Need for recording, producing, mixing, and/or mastering.
 - Timeframe.

BOOKING PROCESS

Many studios use online methods to allow clients to purchase services, such as the following example from [Fontanez Recording Studio](#) in Worcester:



Images 1-2: Example of a booking system used by Fontanez Recording.

WICN wants to be able to negotiate pricing with potential Studio 50 clients in an attempt to secure business. David Ginsburg has stated he would like us to refrain from including pricing in the new website so that he can negotiate the final pricing with clients.

WICN also has expressed interest in wanting to avoid taking on clients that might not be a great fit for the recording environment or specialties of the engineer working on the projects. Because of this, making the booking available for direct purchase as shown above would be less optimal. Instead, there will need to be some sort of discussion or vetting process between WICN and potential clients, where they can submit information about their intended project that can be reviewed by the engineer that might take on their session.

WORKFLOW DOCUMENTATION NEEDS OF STUDIO 50

There are many pieces of information that audio engineers utilizing Studio 50 will need to have at their disposal to be able to utilize the studio in a consistent manner with the current established methods set by head engineer, Brad Pierce. This information is as follows:

- Procedures for different events
 - Live Events.
 - Podcasts.
 - Music Recordings.
- Rules & Regulations
 - Procedure with new clients.
 - Rider.
 - Stage Plot.
 - Details on ProTools and formatting files in a consistent manner.
 - Creating files.
 - File naming conventions.
 - Saving and exporting files.
 - Sharing files with clients.
 - Mixer setup and operation.
 - Computer setup and operation.
- Inventory list
 - Computer related equipment.
 - Outboard Gear.
 - Microphones.
 - DI boxes.
 - Headphones.
 - Cables.
 - Stands.
 - Instruments.

In addition to these pieces of established procedure information, we will also need to provide a guide on navigating taking on new clients. New and existing engineers will need to know how to manage clients and make use of the information they provide.

OBJECTIVES

CLIENTS

- Create a clearer public image of Studio 50 by expanding on the current information available on WICN's website.
- Establish a system for clients to request a booking with WICN Studio 50 that will make management of clients easier for the staff.

WICN STAFF

- Create a centralized database of Studio 50's usage basics that can be accessed by WICN staff including new audio engineers.

METHODOLOGY

HOW WILL WE CREATE A CLIENT MANAGEMENT SYSTEM?

Our goal is to create a digital system that can be accessed and overseen by WICN and its audio engineers using it to schedule their clients.

Options

1. Integrate system into current website which was designed using Wordpress
 - a. WICN's current website – wicn.org – was created using Wordpress. It is already published, and according to David Ginsburg, is currently being updated to increase its speed to apply for a Google grant.

2. Create a new website: there are several services on the internet for creating websites that we can use to create the client system.
 - a. WordPress:
 - i. WordPress is a widely used content management system (CMS) for building websites and blogs. It simplifies content creation and management through its user-friendly interface. It offers a vast array of themes and plugins that allow users to customize the look and functionality of websites.
<https://kinsta.com/knowledgebase/what-is-wordpress/>
 - b. Wix
 - i. Wix is a cloud-based website builder that enables users to create a website with minimal technical background necessary. Users can easily add text, images, and other elements to their website. Wix also offers a wide range of design features and templates that help users create professional-looking websites effortlessly.
<https://www.pcmag.com/reviews/wix>
 - c. Editor X
 - i. Editor X is a website creation platform developed by Wix for users who possess advanced design skills and require more control over their website's design and functionality, and is marketed as such by the company. It also offers a drag-and-drop interface along with tools for creating responsive designs, customizing layouts, and integrating e-commerce functionalities like online stores and payment processing. Editor X also has a booking system that can be integrated into the website.
 - ii. <https://www.websiteplanet.com/website-builders/editor-x/#features>
 - d. HTML
 - i. HTML is a coding language used to create web pages. It provides a structure for defining the content and layout of a web page, including headings, paragraphs, lists, and links. HTML is a foundational technology for website development and works in conjunction with other technologies like CSS and JavaScript to create

interactive and responsive websites. Creating a website using HTML requires knowledge of coding and technical skills.

Decision: Integrate client management system into existing website on WICN's Wordpress as a condensed, on page format for optimal traffic and usage.

A few factors informed our decision to integrate the client system into the current website. Initially, our ideal option was to create a new website, separate from the main WICN site so that we would have total control over design and function. Upon speaking with David Ginsburg, we found there was no additional budget available to use on a separate website, limiting our options. The free versions of these website development services (excluding HTML) require additional fees for higher level functions, removing company brand advertisement, and creating a customized site domain. While this was still an option, the website would then appear very unprofessional. We decided that the information laid out in our website drafts fabricated using Editor X could be condensed down to one page and included in the "WICN Studio 50" section already in place on the website.

HOW WILL WE DOCUMENT THE STUDIO USE / WORKFLOW PROCESS?

Separately from the website for the client usage, we need to create a set of guidelines for audio engineers using Studio 50.

Options

1. Integration into WICN Website
 - a. We could integrate the information to be used by WICN into the current website. The information would need to be hidden from public view and require us to integrate some sort of back end or login for WICN Staff, which it does not currently possess. This would keep all our information consolidated to one central site.
2. Separate from client website
 - a. If we separate the information from the website, we could set up a QR code linking to the document and post it up around Studio 50 so it would be readily and easily available at any time when needed in the studio. There

would be no need for a back-end on the current website, and the effect would be the same.

Decision: Separate from website

We will be creating a separate document that can be accessed separately from the client side so that it can be accessed exclusively by WICN staff. We believe that the most efficient way to do this is to create a google document that lays out everything necessary to guide new users of Studio 50, and then create a QR code that links to the document. This would require no extra cost from WICN which aligns with their budget. Also, there are several forms for events like the Rider and Stage Plot that need to be accessed on google drive as it is, so these could be kept together with the guide and connected with one another. Sheets of paper with the QR code linking to the document on it can then be posted in the performance space and control room for easy access at any time with any phone camera.

DATA AND ANALYSIS

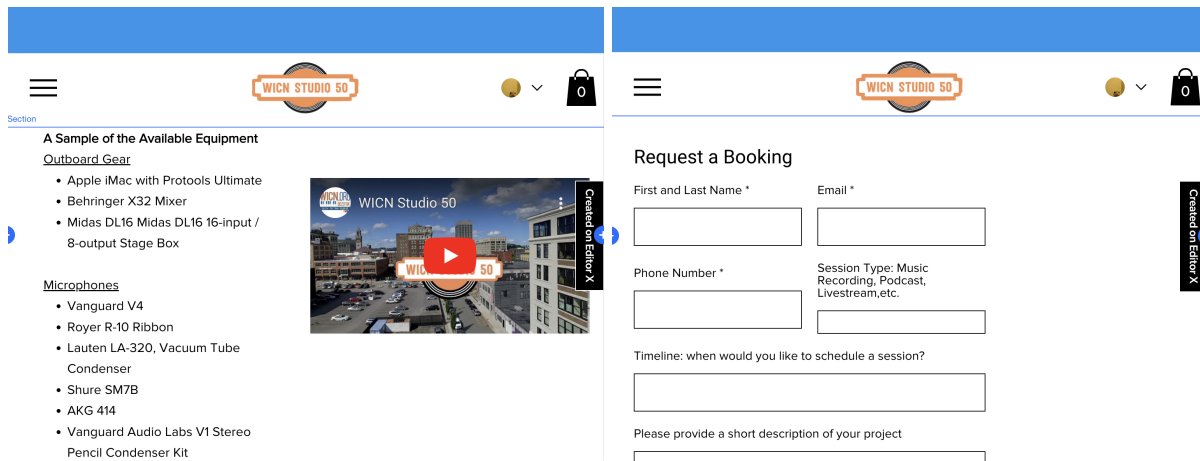
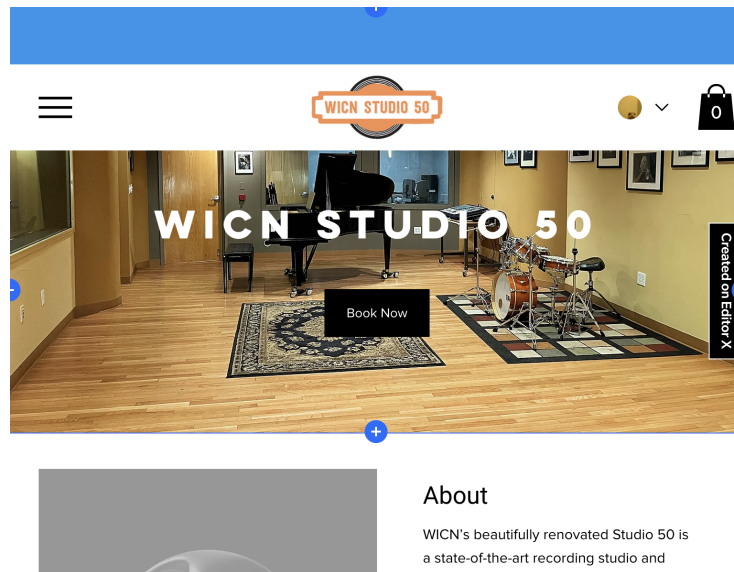
CLIENT EXPERIENCE

We went through much trial and error over the course of enhancing the client experience, trying to incorporate all of our intended improvements as well as staying within the constraints given to us by WICN.

PRELIMINARY DESIGNS

Initially, we wanted to create a self-contained website dedicated to Studio 50. We began to use Editor X because of its simplicity as well as capability for more than one person to work on the site at once. We formatted our site to be similar to the formatting of the main WICN site. We wanted navigation of the site to be intuitive and easy to get straight to booking, so we made a “Book Now” button that took the user straight to the booking form. We kept our informative sections concise and straightforward as the goal of the

site was to display the reputability and quality of the studio as a way to entice clients to book their event or session there.



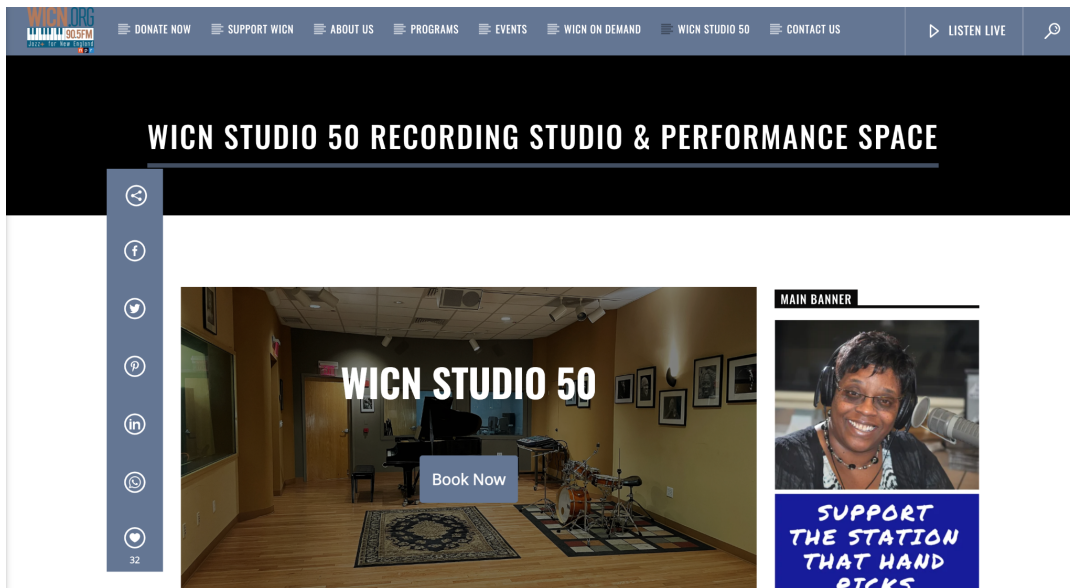
Images 3-5: Images of our draft of the Studio 50 website in Editor X.

CURRENT WEBSITE ENHANCEMENTS

After designing the layout of the website in Editor X, it became apparent that the information could easily be condensed to one page. We turned our efforts to creating a centralized information page for clients on Wordpress, the service that the main WICN

site was created with. Not only was this a possibility, but it also turned out to be necessary due to the lack of a budget for hosting a new website.

Through working with the admin and developer of the original WICN site, Jacob Pelrah, we were able to incorporate all of the necessary information for potential clients visiting the WICN site, including new pictures of the studio space, an about description, a sample of the studio equipment available for use, a studio tour walkthrough video, video examples of past live events from previous clients, and finally a concise booking form.



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- [in](#)
- [v](#)
- [32](#)

ABOUT

WICN's beautifully renovated Studio 50 is a state-of-the-art recording studio and performance space.

You can record your band, podcast or audiobook here. Every session includes a professional engineer to oversee your recording.

WICN Studio 50 is available for virtual events too! Half and full-day rentals are available. We have room-only packages as well as room + digital audio/video production packages available.

LATEST NEWS

WICN ARTIST OF THE MONTH, MARCH 2022: MARY JAYBLIVERSON

WICN VENUE REVIEW: BLUE NOTE TOKYO

WICN FEATURED WRITER: DOUG HALL

WICN ARTIST OF THE MONTH, FEBRUARY 2022: DUKE ELLINGTON

WICN ON DEMAND ARCHIVES

NOW ON AIR

COLORS OF JAZZ

Colors of Jazz provides a diverse mix of smooth jazz, rhythm & blues and showtunes that groove. White...

INFO AND EPISODES

UPCOMING SHOWS

RADIO DELUXE 4:00pm	
WORLD RHYTHMS 6:00pm	
MEDITERRANEAN MUSIC 8:00pm	
INQUIRY 9:00pm	
BUSINESS BEAT 10:00pm	
PUBLIC EYE 10:30pm	
PUBLIC HEARING 11:00pm	

STUDIO EQUIPMENT

For a complete list of studio equipment, please contact david@wcn.org

Outboard Gear

- Apple iMac with Protools Ultimate
- Behringer X32 Mixer
- Midas DL16 Midas DL16 16-input / 8-output Stage Box

Microphones

- Vanguard V4
- Royer R-10 Ribbon
- Lauten LA-320, Vacuum Tube Condenser
- Shure SM7B
- AKG 414
- Vanguard Audio Labs V1 Stereo Pencil Condenser Kit

Instruments

- Baldwin Grand Piano
- Tye Drum Kit

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STUDIO WALKTHROUGH

Watch on YouTube

Watch later

Share

RECENT STUDIO EVENTS

Mark Mandeville & Raianne Richards

Kala Farnham

BOOKING

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- [in](#)
- [v](#)
- [32](#)

Record your next album, audiobook, podcast, or use the studio to livestream your next event! Let us know below how we can assist your next recording project.

Name *

First Last

Email *

Phone *

Session Type: Music Recording, Podcast, Livestream, etc. *

Timeframe: When would you like to schedule a session? *

Please provide a short description of your project. *

I'm not a robot

Images 6-9: Reference images of the new Wordpress page integrated into wcn.org.

The new booking form can be used to vet new clients before they schedule a booking, as it requires them to give WICN not only their contact information, but also the type of session they wish to book, their intended timeframe, and a short description of their project. Engineers can use this information to gauge whether clients are a good fit for the studio before even reaching out to them, which will save time for them in the future. The output information from the form is sent directly to the email inboxes of the station manager David Ginsburg, the head audio engineer Brad Pierce, and the inbox on the computer in the control room for ease of access. Both members of WICN were pleased with how the site looked, saying it appeared very “clean and professional.” The site went live on Thursday, March 2nd.

STUDIO 50 GUIDE

Over the course of this term, we spent time assisting WICN’s head audio engineer, Brad Pierce with a few live events and recording sessions at Studio 50. Through shadowing and interviewing him to understand his processes, we compiled a comprehensive guide for future audio engineers using the studio. We utilized the outline feature in Google Docs to keep the document organized. Included in the guide is a complete inventory of WICN’s recording equipment including their mixer and outboard gear, general studio use procedures, session procedures including live events and podcasts, and general file conventions for the computer in the control room. We purposefully did not go into some of the more precise details with the setups for live events or music recording because general recording and setup techniques like micing up a drum set or setting up mixer connections are part of the expertise of the individual engineer using the studio. While this cut down on the content of the guide, it also simplified it to a more specific look at the unique aspects of Studio 50 usage as opposed to more general audio engineering skills, which would be expected from new employees regardless.

After presenting the guide to David Ginsburg and Brad Pierce, they were both very pleased with how it was organized and how accessible it is via the QR code. We created a separate page with the QR code generated for the document and gave it to David to print out so they could post it up in Studio 50’s performance space and control

room to be easily accessible. The guide is now in a google drive belonging to WICN and can thus be edited in the future should any new adjustments need to be made.

CONCLUSION

Overall, the project was successful. We set out to curate a guide for new engineers at Studio 50, and improve the client's booking experience. The final result for both the guide and website were more simplistic however more accessible than our intention, per David Ginsburg's preferences. Both this guide and site shall serve Studio 50 well for its next steps in recruiting new audio engineers and providing high quality service as WICN continues to build Studio 50's reputation as an excellent recording studio for use in the Worcester area.

LIMITATIONS OF THE PROJECT

- No budget for client management system / website.
- Lack of schedulable time with WICN employees.
- Limited number of WICN clients during C-Term.
- Limited types of clients, most clients were assisted with doing live shows.

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