

a means by which something is communicated

INTERVIEDIATE

to be between

**Megan Petitt** 

# INTERMEDIATE

An investigation & reaction to communication infrastructure in San Juan County, Utah.





Megan Petitt x Rural Utah Project Design Product Studio 3520 Fall 2020 Professor Elpitha Tsoutsounakis University of Utah Multidisciplinary Design Program Salt Lake City, Utah

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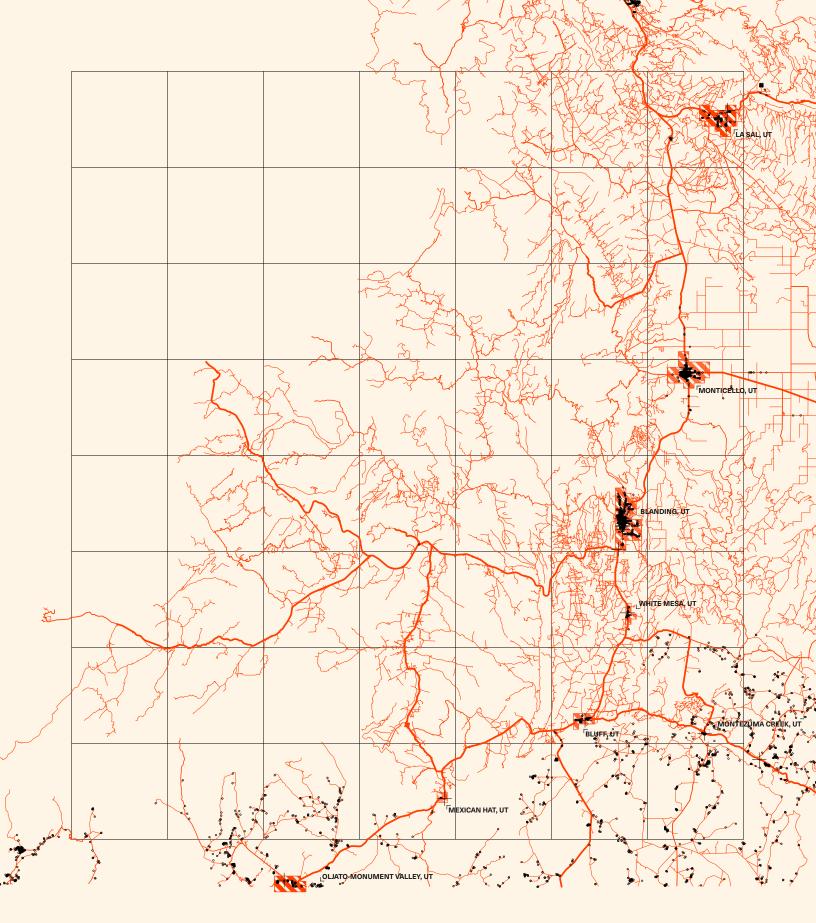
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Rural Utah Project Beyond San Juan County, Utah



# CONTEXT

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### RURAL UTAH PROJECT meets U of U DESIGN

"What does a rural activist need to feel successful?"

Introduced to the studio by Professor Elpitha Tsoutsounakis, Rural Utah Project (RUP) is a non-profit organization working in rural Utah communities "to identify, invest, and ignite a dialogue with voters... empowering them to take action and vote on the issues that matter most for Utah's future."

When tasked with reacting to the question "What does a rural activist need to feel successful?" the design product studio was given the chance to hear from RUP activists such as Madeline McGill, Ali Vallarta, Daylene Redhorse, and Sam Van Wetter on what it takes to organize in a rural space. Citing obstacles such as access to internet coverage, long and sometimes unpredictable work hours, and a general lack of connectivity, RUP detailed more than just the challenges they face. Presenting to the class their Addressing Program, RUP described the work they have done on the Utah portion of the Navajo Nation to assign plus codes- an alternative to your standard street address- to homes without a registered address. Ultimately working to mobilize under-represented voters, the Addressing Program allows for people to register to vote, the first step in reclaiming one's constitutional right. While being a registered voter is a necessary bureaucratic step, it doesn't mean that someone can cast a ballot. Entering into the project initially focused on this in-between space, one area in this gap struck me: What tools exist to inform a vote once a voter has been registered-particularly in an area where broadband internet coverage is so unreliable? Describing phone trees as a tool for dissemination of information, what space exists for further design when trying to communicate on a county-wide scale?

RUP states on their website, "We have to build tools that are uniquely designed to engage and mobilize rural communities. With limited access to broadband and a depth of local knowledge, the Rural Utah Project creates and employs tactics that allow our neighbors to organize themselves within rural communities for decades to come."

Using the statement from RUP above as a guiding principle for designing in this space, What does an effective communication platform look like in San Juan County, Utah (the birthplace of RUP) that can not only disseminate voter information but communicate information vital to all aspects of life in a rural community?

### EXISTING COMMUNICATION INFRASTRUCTURE IN SAN JUAN COUNTY

### Communication platforms built in/by/for urban communities aren't cutting it in San Juan County.



Only **one** printed news source circulates in the county.



There is no local TV news station in the region.



Only **39%** of the county has access to **25 mbps broadband** internet<sup>1</sup>.

Ultimately, existing communication infrastructures in the region lack **accessibility**, **dialogue**, & **dissemination of locally relevant information.** 

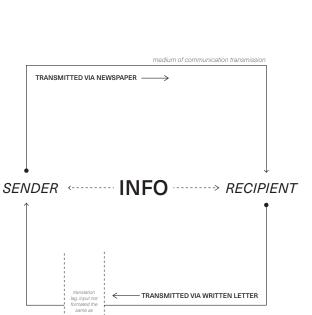
By analyzing the relationship between a local newspaper and its readers, a TV news station and its viewers, and a radio station and its listeners, the power the information sender holds over and the information receiver becomes dramatically evident.

If a viewer of a local TV news station wanted to provide feedback on a segment she has just watched, she must communicate back to the news station using a different medium of information transmission than the new station used to communicate with her. Given access to a news station of her own, said viewer could correspond with the other news station using a medium of transmission of the same caliber— many people can watch the same TV news segment, few can read a letter to a producer, or can listen in on a phone call.

The rise of social media has somewhat leveled the playing field. If a newspaper posts an article on their Facebook page, anyone can leave a public comment. Although the newspaper ultimately has the power to delete comments at their discretion, at least the transmission of correspondence occurred using the same medium: Facebook. However, the current state of San Juan County's broadband internet coverage makes county-wide interaction via social media an insurmountable obstacle.

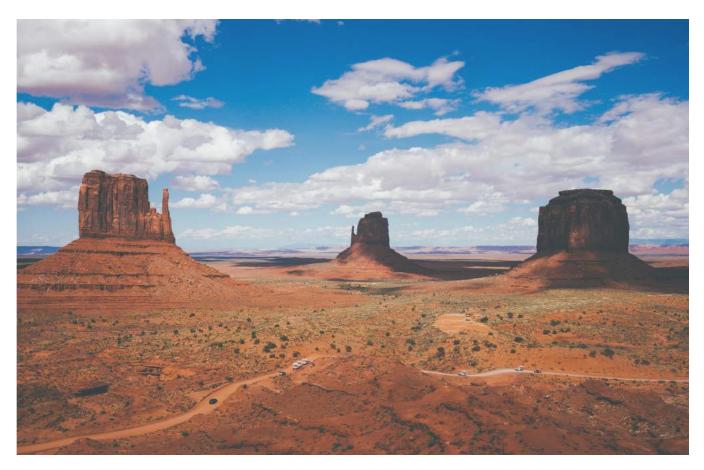
Ultimately, truly democratic communication platforms must facilitate a two-way relationship between sender & receiver via the same medium of transmission.

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### CAR TRAVEL AS A FORM OF DISSEMINATION

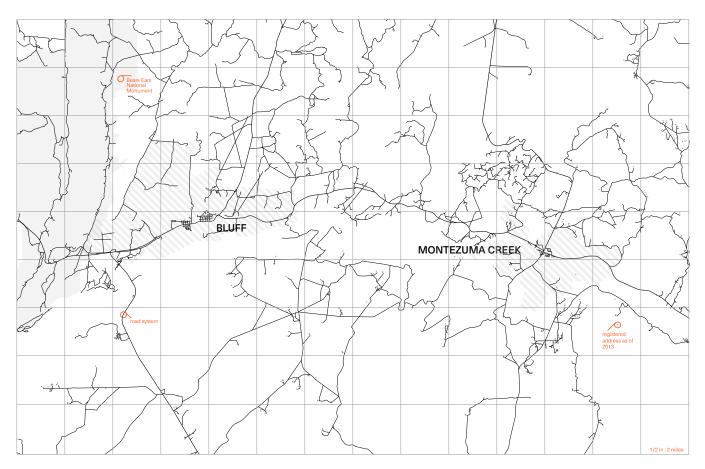
When looking into networks operating in rural communities, car travel as a system for the dissemination of people arose as an area of opportunity. Rural communities— many characterized by rugged landscapes and dispersed populations— rely on travel by car far more than their metropolitan counterparts. San Juan County is no exception.



With 1.9 people per square mile, 2,736 miles of road, and an average commute time of 32-35 minutes, car travel is an inherent aspect of life in San Juan County.

### THE ROLE OF TRAVEL IN SAN JUAN COUNTY

While 19% of Americans live in rural areas, 68% of the Nation's lane-miles are in rural parts of the Country according to the U.S. Department of Transportation. With 3,992 households in San Juan County and an average of 2.4 cars per household in rural America, an estimated 9,590 cars could be in use in San Juan County right now, not to mention those merely visiting the county.



As a result of the Federal-Aid Highway Act of 1956, the expansion of car travel within the United States has facilitated the rapid growth of easily accessible, larger, and cheaper housing than was available in central cities. Along with this trend came a dramatic expansion of tourism, resulting in more service stations, motels, and restaurants. Relatively overlooked before the Bears Ears National Monument made national news with its designation in 2016 by President Obama and its reduction in 2017 by President Trump, tourism travel within the county has grown dramatically in recent years, with 130,000 visitors to the Monument (plus their vehicles) in 2017 alone according to the Bureau of Land Management.

### **COMMUNICATON x TRAVEL**

Ways to digest information while driving that do not distract from the task itself are limited. With the first commercially successful car radio introduced to the public in 1930 by the Galvin Brothers, the auditory transmission of information in a vehicle has maintained its position as an appropriate way to not only entertain but inform drivers as they travel.



**84% of Americans still listen to AM/FM radio when commuting in their primary car as of 2018** *-NPR/EDISON study* 

What does the auditory transmission of information in a vehicle look like in a place where both geography and FCC regulation serve as a barrier to the resource of radio broadcasting?

# proposed **DESIGN INTERVENTION** 08/36



### PROPOSED DESIGN INTERVENTION



to be between

INTERMEDIATE serves as a supplementary information platform activated by the car travel inherent to the landscape via the transmission of auditory information. Using gas stations as distribution points for the dissemination of audio output/intake devices, INTERMEDIATE hopes to fill the communication gap in San Juan County.



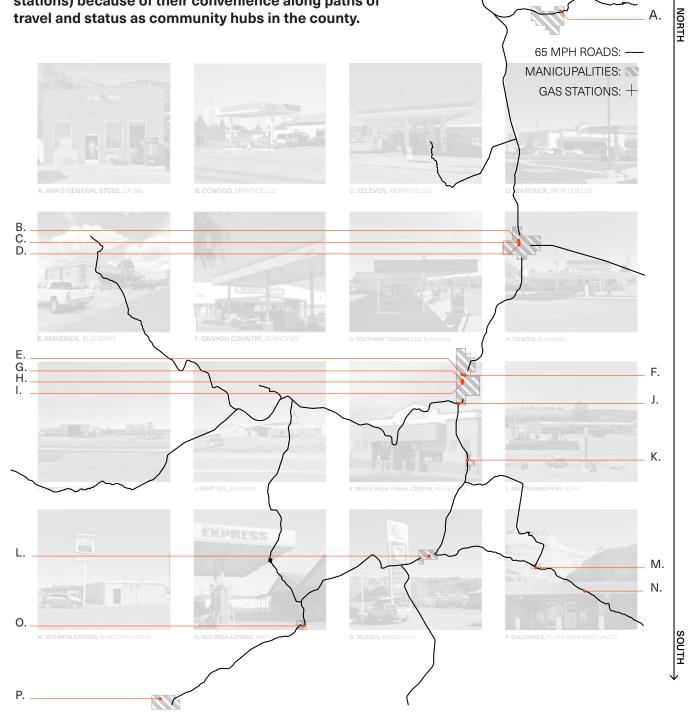


# **INSTRUMENTS** of platform

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### **GAS STATIONS**

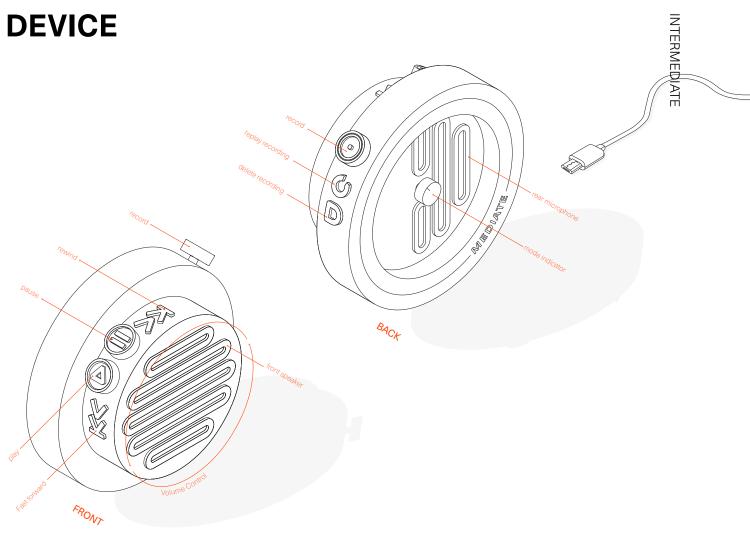
Gas stations act as distribution points for MEDIATES, and the home of MEDIATORS (upload/download stations) because of their convenience along paths of travel and status as community hubs in the county.



**RUP** x MEGAN PETITT

INTERMEDIATE

Α.



1 INCH : 3/4 INCH

The Device itself, named a MEDIATE, is designed only to perform the simple tasks of playing auditory information through a speaker or USB connection to a secondary speaker, and to record auditory information through a microphone.

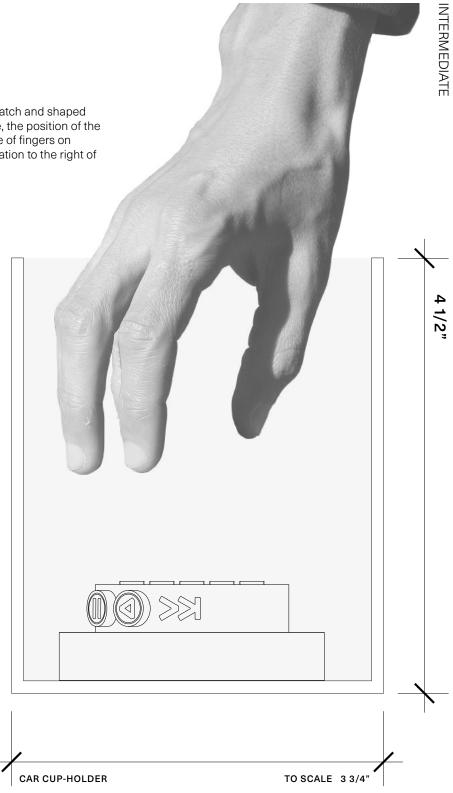
With these two functions, listen and record each with their designated side, raised buttons inscribed with their purpose to make the correlation between feel and function easier to identify, and a twist knob for volume control, the MEDIATE hopes to mitigate its potential to distract from the task of driving.

### DEVICE

Drawing inspiration from an old-time stopwatch and shaped with the car cup-holder as a potential home, the position of the buttons on the device correlate with the use of fingers on one's right hand due to the cup-holders location to the right of a driver.







### CONTENT

#### Designed to fit the average commute time in the county, the content on each MEDIATE is coordinated by the third-party non-profit organization running the platform.

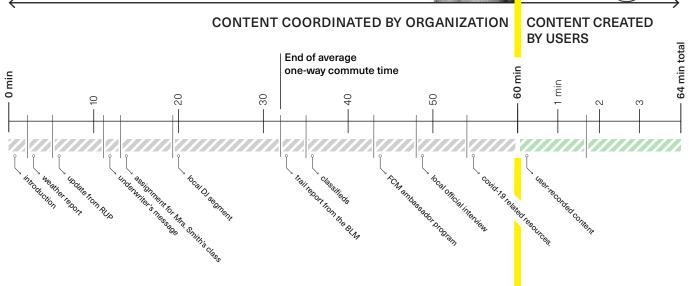
Platform administrators would act as coordinators of knowledge gained through reaching out to local organizations working in the area. Ideally collecting information relevant to the space, organizations would have the option to add their news or ideas to an edition of the content. Formated by platform admin. and censored according to organization by-laws, content could consist of resource-based knowledge, community gatherings, local interviews, and DJ spots.

Users themselves can also upload content to be listened to by other users. Ultimately checked by platform administrators for appropriate content according to organization by-laws, users could use this space to add to the resource section of the programming, share a thought, shout-out a local business, read a poem, etc.

EDITION 11.16.2020 \*Hypothetical

ADMIN CONTENT COORDINATORS USER CONTENT CREATORS



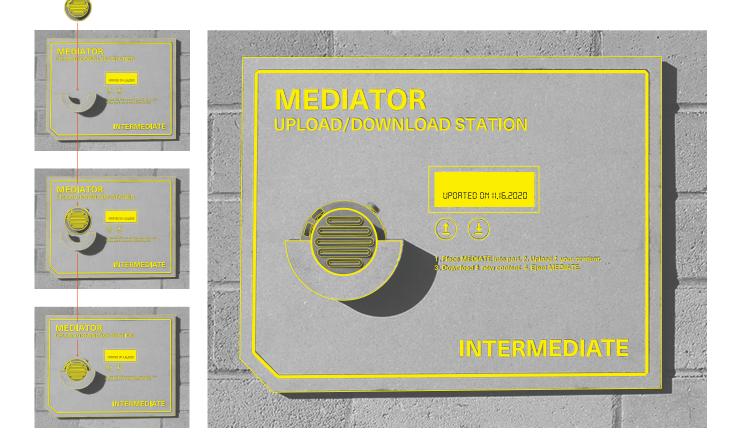


#### **RUP** x MEGAN PETITT

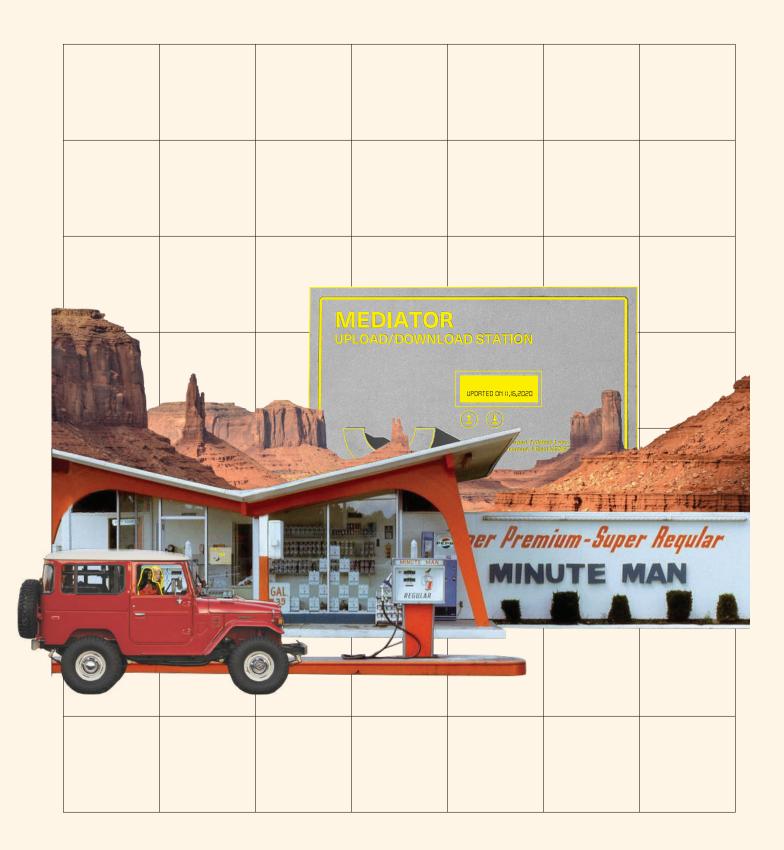
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### **UPLOAD/DOWNLOAD KIOSK**

Stationed outside gas stations, MEDIATORS (upload/download kiosks) serve as the mediation point where platform users come to upload and swap out the content they have listened to and created for new content through a usb connection between a MEDIATE and the kiosk.



Imagine a vending machine meets a charging station but instead of candy or more battery life, one gets locally relevant content formated for auditory transmission. With a small footprint, only 13 by 10 inches, MEDIATORS take up very little room in the context of the exterior of a gas station and run on lithium-ion batteries to not demand power from their host.



# platform **PARTICIPATION**

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### **INTENDED USERS**

Intended for both residents and visitors of San Juan County, INTERMEDIATE aims to communicate information that appeals to both those traveling through and those on their daily commute by using gas stations as distribution hubs.

There are 15,308 estimated residents of San Juan County as of a 2019 Census Bureau report. With 130,000 visitors to Bears Ears National Monument in 2017 alone, a 75% surge from the year before, visitation numbers in the county are only going up (BLM projections.) While it would be a missed opportunity to not communicate with the ever-increasing number of tourists coming to the area, INTERMEDIATE hopes to facilitate the dissemination of local knowledge most relevant and helpful to the resident. Using the platform as a tourist would give one needed knowledge about the space through the lens of living there, but for the most part, the programming would cater to residents of the county.

One service both a visitor and a resident of San Juan County will need along their journey across the 2,736 miles of road connecting the county is gas. Perhaps a visitor stops to top off their tank before heading up the Butler Wash or a resident fills up their car to get to work. In both cases, a gas station has served a vital role as an intermediate point between destinations. However, just because gas stations primarily serve those with the ability to drive/own a car doesn't mean they are the only intended users. Gas stations in San Juan County also serve as grocery stores, school bus stops, pizza parlors, and in one instance, a bowling alley. Due to the variety of services these businesses provide, a wider potential user group can be reached.

Jane

"Well we better stop for some cracker jacks."

Malia

"Malia I am getting

hungry, I need food

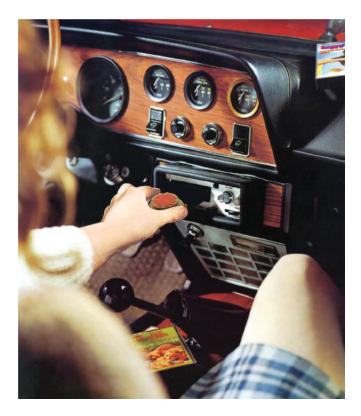
### **ACQUIRING THE MEDIATE**

The initial acquisition of the MEDIATE is facilitated through the gas station clerk by way of traveling to a gas station. Stocked like any other product but rotated out every 3 days to keep content up to date, MEDIATES would be packaged and ready for immediate use by users.

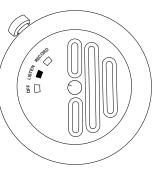


### **USING THE MEDIATE**

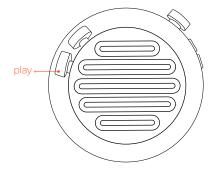
Designed to be used with ease in the comfort of one's car, a MEDIATE is ready to be played as soon as it is acquired.



A MEDIATE has three modes— off, listen, and record. To begin the playing of pre-coordinated content, a user would simply turn to the listening function on the back of the MEDIATE, press and release the play button, and set the device into the cupholder of one's car or any other location within easy reach of the driver.



1<sup>st</sup> switch to listen.



Then press play.

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### **CONTENT BEING PLAYED**

As detailed on page 14 the content being played on the device is designed to last the average two-way commute time of roughly 60 minutes.

watch the MEDIATE in use @ https://www.youtube.com/watch?v=jga0gfxqTDg



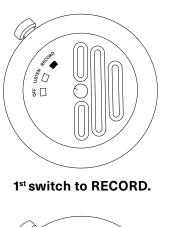
Able to be paused, rewinded, or fast-forwarded at anytime, the audio recording that plays through the speaker on the MEDIATE (or through a USB connection to another speaker), highlights local happenings, resources, and community updates.

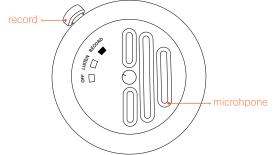
### **RECORDING OF USER CONTENT**

After listening to the pre-coordinated content, users have the ability to record their own content to be shared with other users or added to the classifieds section of the programing.



By holding down the record button and speaking into the backside microphone, users record their contribution. With the option to replay and delete, users can review what they have recorded. Ultimately censored by platform administration according to organization by-laws before being dispersed again, users have 4 minutes to share appropriate content with other users.

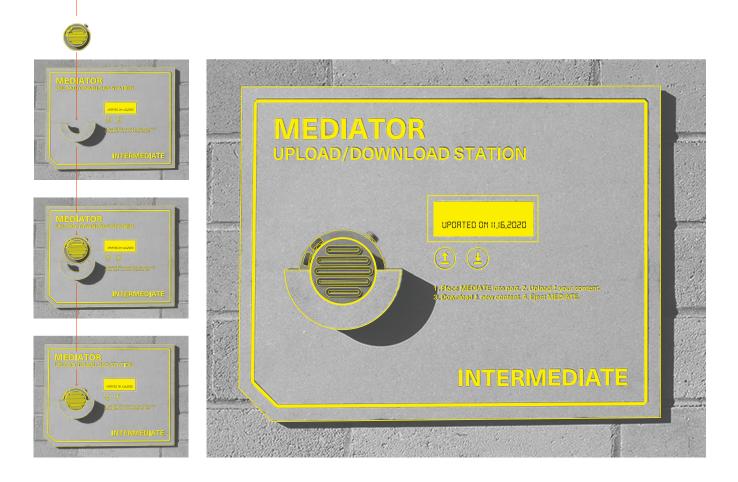




Then hold down record and speak into microphone.

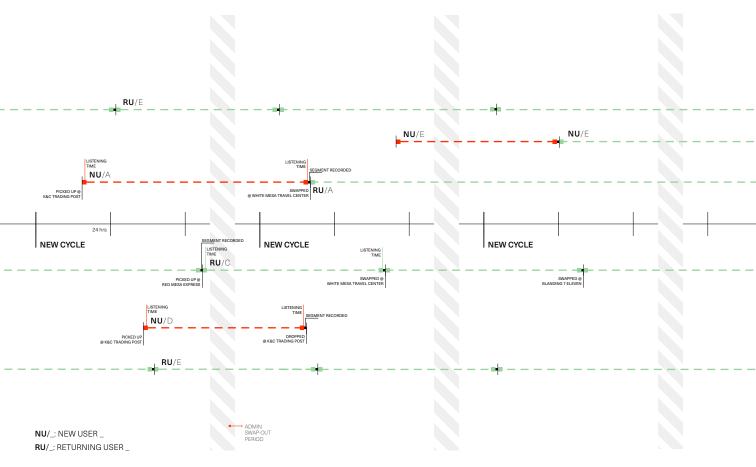
### **SWAPPING OUT CONTENT**

Once finished with the content on the MEDIATE, users can go back to gas stations in the county to upload the content they have recorded and download the newest edition of programming at MEDIATOR kiosks.

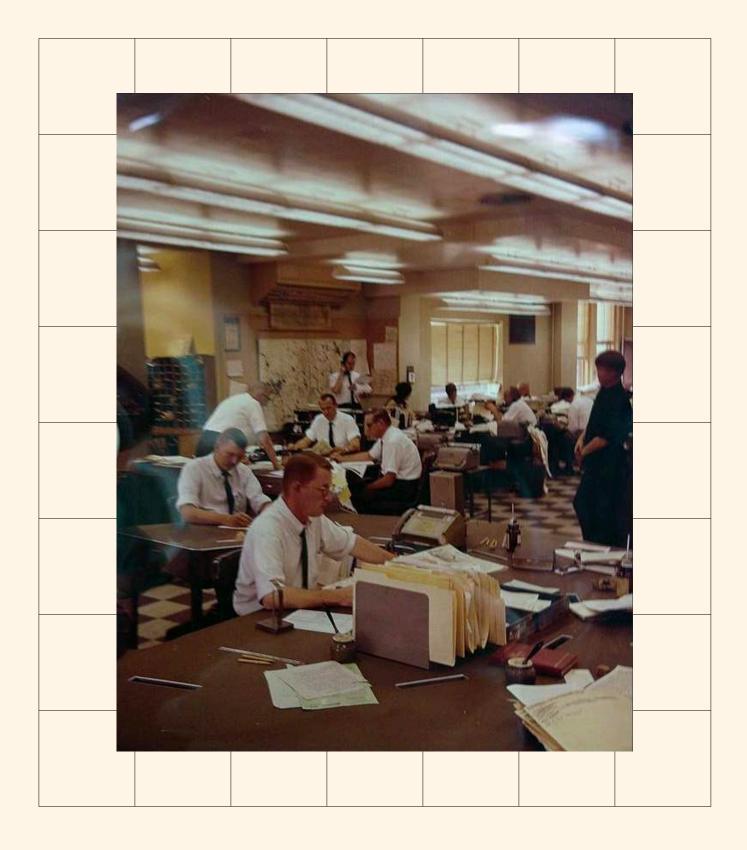


### **CYCLE OF USE**

Ultimately, the user exists within a pattern established by platform administration. With new content editions published and dispersed every 3 days, users have the opportunity to swap-out content at their discretion, but if so inclined, can obtain every new edition within the 3 days that it is available.



The graph above displays potential user timelines. Whether a new user or a returning one, both can freely obtain a MEDIATE, swap-out content, or return the device on their schedule.



# platform **ADMINISTRATION**

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### **GOVERNING BODY**

The INTERMEDIATE platform is administrated by a third-party non-profit organization tasked with coordinating with other organizations in the county in order to create content for the purpose of making an auditory news source.

Governed by a Board of Directors representative of their county and held accountable according to organization by-laws, it is important that the platform is formed, run by, and ultimately serves the interests of all of San Juan County.



#### Administration **RESPONSIBILITIES**

INTERMEDIATE administration is responsible for...

#### Coordinating Content

Formating content

Admin are tasked with<br/>reaching out to other<br/>organizations working in<br/>the county in order to<br/>collect content.After con<br/>collected<br/>format/e

After content has been collected, admin must format/edit content so it exists in an audio format.

# Organizing content

Now in an audio format, the content must be organized into a edition of programming to be put on the memory of MEDIATE devices.

#### Uploading edition to devices

After an edition of programing is created, admin must add the programming to MEDIATE devices to be added into the circulation system.

#### Distributing editions & devices

The distribution of loaded devices to gas stations and the loading of editions to MEDIATOR kiosks must occur.

# Collecting user recorded content

Admin must collect all user recorded content from MEDIATOR kiosks.

#### Monitoring user recorded content

Once collected from Mediator kiosks, admin must monitor user recorded content to make sure it is appropriate before it is distributed back out in to the community.

#### Maintaining platform functionality

Admin must insure all devices are running smoothly, partnerships are maintained and respected, and that content continues to be locally relevant.

### **FUNDING**

The DEVICE would be paid for upfront by the gas station patron, but can be returned at any time for one's money back as long as the device is in working condition.

The platform would be subsidized and sustained by grants such as the USDA Rural Business Development Grant and through local program underwriters.



#### **RUP** x MEGAN PETITT

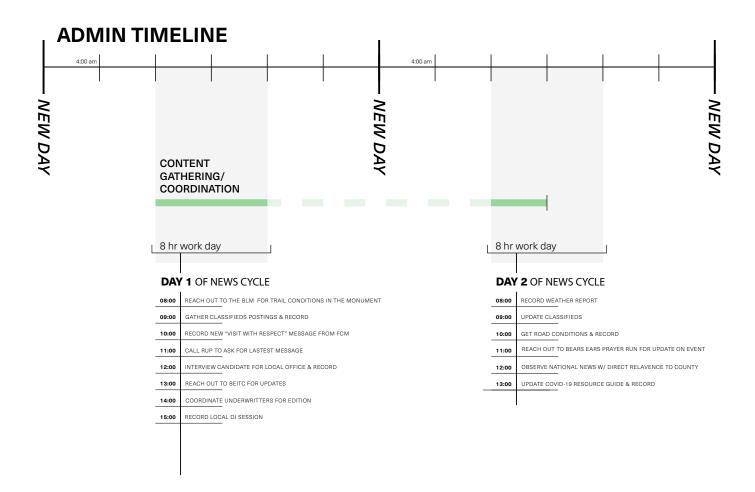
# EDITION CREATION CYCLE

The process of gathering content, organizing it into an edition, placing the edition onto devices, and distributing devices and editions to gas stations and MEDIATOR kiosks exists on a three-day repeating cycle.



### phase 1 GATHERING OF CONTENT

Tasked with reaching out to other organizations working in the county, admin collect and record content that organizations want to be included in the programming.



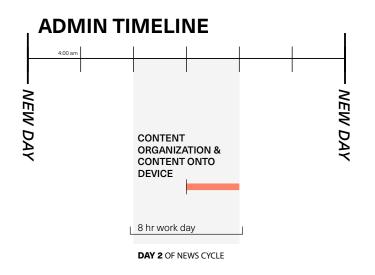
Requiring 1 & 1/2 workdays to complete and record, admins must obtain enough content to fill roughly an hour of programming. Contact with organizations can exist in many forms— telephone calls, in-person visits, emails, etc. While hearing the voice of an organization representative is encouraged, admin can also step in to vocalize content that has been collected in written format.

#### **RUP** x MEGAN PETITT

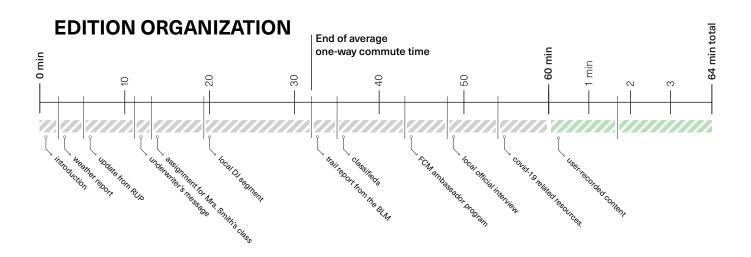
INTERMEDIATE

### phase 2 ORGANIZATION OF CONTENT

Once content has been collected and recorded, it is ready to be organized into a single "edition."



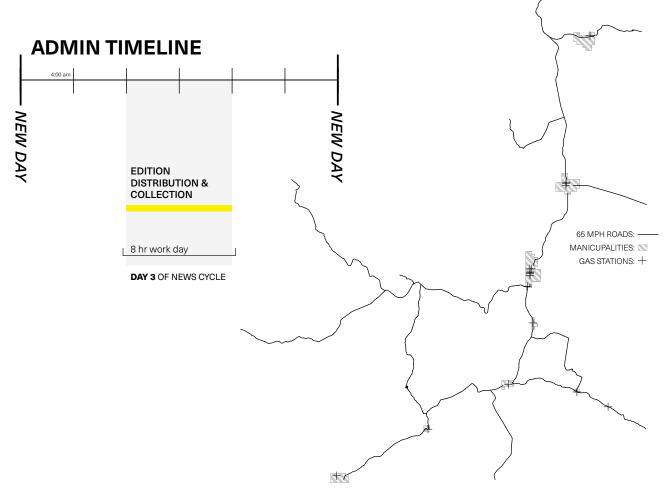
Requiring half of a workday to complete, admins should organize the content around commute times. With an average one-way commute in the county of roughly 32-35 minutes, the organization of content should include a natural transition between segments around this time.



INTERMEDIATE

### phase 3 **DISTRIBUTION OF EDITION**

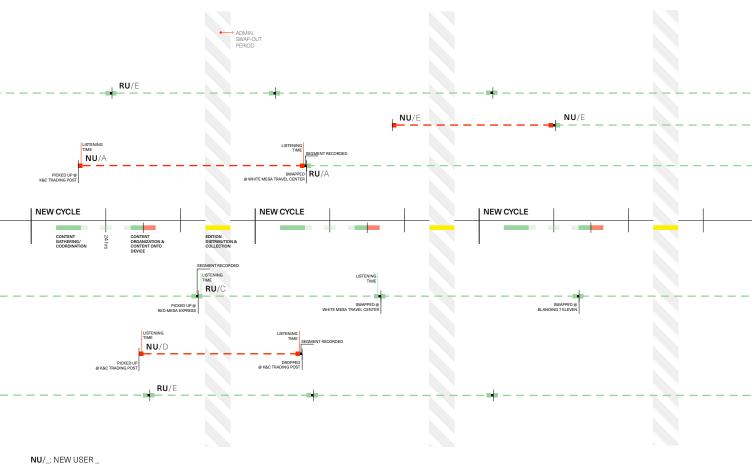
Editions must now be uploaded to MEDIATOR kiosks for users and devices stocked at the gas must be swapped out with a device obtaining the newest edition of content.



With 16 gas stations in the county, 12 minutes allocated to upload the edition, collect user recorded content and swap out devices within the gas station, and 5 hrs and 55 mins of required driving time, the last day of the news cycle is a busy one.

### **ADMIN x USER**

Platform administration and users exist within a 3 day turnover cycle. with new content distributed every three days to gas stations, users have the ability get content on the same time table, or can take shorter or longer to obtain a new edition (the visual below examines such use patterns.)



RU/\_: RETURNING USER \_







### **TOOL FOR RUP**

The INTERMEDIATE platform would ultimately act as a dissemination tool for Rural Utah Project, fulfilling a goal of the organization that describes one of their tasks to be the building instruments "that are uniquely designed to engage and mobilize rural communities."

While the platform is not run by RUP to reach a wider range of potential content-creating organizations and to stay as objective as possible, INTERMEDIATE is a partner to RUP, helping them, and every other force for good in San Juan County communicate with the inhabitants of the space, whether that be residents or visitors.

By giving RUP a platform to communicate on a bigger scale with the people they are trying to help, RUP will save time, be able to allocate funds away from expensive media promotions, and be able to do more work to mobilize local knowledge for the good of the community. But to look back at the original prompt, "What does a rural activist need to feel successful?" I believe that one needs to know they have been heard. The fullness one feels from being truly heard and listened to with intent is immeasurable, but the feeling none-the-less provides all of us, rural activists or not, the satisfaction of knowing we are not working in a bubble, but instead in a receptive community.

### **TOOL FOR THE COUNTY**



The potential outcome of implementing the INTERMEDIATE platform would ultimately supplement a lacking communication infrastructure, providing rural residents and visitors resources and information necessary to the health, community, and prosperity of the space.

INTERMEDIATE is not the final solution and with the eventual implementation of widespread broadband internet coverage, INTERMEDIATE would no longer be necessary in its current form. In the meantime, it is a tool rural communities without access to internet, TV, or radio news can use to stay informed and connected. INTERMEDIATE hopes to restore balance and equity to a communication platform by facilitating a relationship between sender and receiver who both use the same medium of transmission to communicate, wherein which one informs the other, not from above or below, but from car to car.

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