

BRAINWAIVE ETHAR PROJECT 1

Build the Ethar App



Ethar™ by Brainwaive is enabling the Augmented Reality ecosystem to create, control and monetize compelling content and experiences in a seamless visual continuum. Ethar provides:

- Easy AR content creation
- Discovery, acquisition and use of global AR content
- Fluid visual experience
- Monetary rewards for quality content
- Interactive 3D consumer and brand engagement
- Ability to assert rights to display content using geofences
- Instills trust through validation & certification
- Integrates 3rd party content to the Ethar continuum: chatbots, social media, news feeds

Overview

You will be inventing something that does not currently exist using state of the art technology. The objective of this project is to create an application on the HoloLens that will interact with services on the cloud platform to deliver augmented reality experiences to the user. The creation of these cloud services themselves is also in scope. These services must be integrated with the other projects, such as the Applet File System and the Geospatial Rights Engine.

Assumptions

- App created for Microsoft HoloLens, state of the art in wearable AR technology.
- The HoloLens app will be created using Microsoft technologies such as HoloJS or C#
- The app will have the following capabilities:
 - Create a user account
 - Set user preferences
 - Perform a search of available content (applets)
 - Take rights into account in search results
 - Select an applet
 - Load the applet from the server to the headset
 - Execute the applet experience
- A database on the cloud server will store the user account and preferences
- Azure Cloud services may be leveraged to implement some of the requirements such as index and search, natural language interface, machine learning, etc.

Goals:

- Setting preferences in the app and saving them to the platform database
- Performing a content search residing in the Applet File System (project 2)
- Selecting an applet from the search results and downloading it to the headset
- Checking to see if there are geofence restrictions for a given applet in a given space and successfully denying use (see project 3)
- Executing the downloaded applet and engaging in AR headset experiences
- Incorporating surface detection using HoloLens depth sensing



BRAINWAIVE ETHAR PROJECT 2

Build an Ethar Applet Dev Kit Module

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Overview

This is a very unique opportunity for someone to apply principles of UI and UX. The objective of this project is to build a development kit that will enable persons with minimal technical skills to systematically build applets within a given use case that can be experienced using the Ethar App. This development kit will be web based and utilize a drag and drop interface perhaps similar to that found in the Scratch 2.0 or a similar open source coding project. Upon completion the interface will require that the user complete certain metadata about the applet before compiling it and publishing it to the File System. The team will pick which AR use case they want to enable.

Assumptions

- Build a web-based development kit using HTML5 + CSS3 + JavaScript (or Adobe Flash)
- Store metadata in an Azure SQL database

Goals:

- Selecting a simple use case to enable such as a “how-to” process
- Creating a drag-and-drop or otherwise simplistic interface that will enable a creator to put together a solution
- Enabling the creation of metadata by the creator about the solution
- Enabling compilation of the program and metadata into an applet and publication to the platform file system
- Using the ADK to build an actual applet and metadata then publishing it to the file system



BRAINWAIVE ETHAR PROJECT 3

Build the Ethar Geospatial Rights Engines

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Overview

This is a great opportunity to apply skills of tremendous value in the marketplace related to GIS and database systems. A significant capability of the Ethar platform is for a property owner or steward to restrict what content can be used in their space. This is known as geofencing. Examples of the need for this in the context of AR include preventing gaming in a house of worship or other hallowed place (think Pokemon Go), showing explicit content on school grounds, or having a competitor's content displayed on the premises of a business (think Burger King promo game being accessible at McDonalds). The goal of this project is to produce a system to store information about property border location coordinates, preferences about what may or may not transpire in that space and associate it with ownership/stewardship.

Assumptions

- Build a web-based UI for registration and rights creation using a JavaScript library such as React
- Store geospatial and rights data in an Azure SQL database
- Explore using blockchain-type distributed ledger for transparent, immutable registry info

Goals:

- Creating a geospatial database that holds publicly available land plot and deed data
- Creating a related database that houses the rules about how AR can be consumed in specific land plots
- Creating a UI that allows a person to register a claim of ownership of a plot of land then input rules governing how AR can be consumed there
- Inputting rules for a geographical area and successfully prohibiting applet (from project 2) from executing



BRAINWAIVE ETHAR PROJECT 4

End-to-End Module Integration

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Overview

This is a key leadership opportunity. The three other projects are responsible for building components of Ethar. The objective of this project is to put them all together into an integrated solution. To do so you will need to coordinate with the other teams to understand and manage the interdependencies in the project. You must also drive the overall design, development and implementation strategy of the projects to ensure they are aligned. Finally, you will create the means to make the pieces work together and package the completed solution.

Assumptions

- Azure SQL Database
- JavaScript/React
- Azure cloud services for infrastructure

Goals:

- Establishing overall architecture to tie modules together
- Ensuring designs and development conform to the master architecture
- Coordinating integration points and data exchange between each interrelated module
- Establishing best practices for coding across projects including look and feel of UI / UX
- Testing and packaging the completed solution