Assignment 2 submission

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Requirements

From the design brief from vertebral enterprises, we can concluded here are the requirements:

1.Functional Requirements

This project aims at design a standalone app for large display around the Pollex facilities to provide a pleasant experience for the clients (the older adults who need medical support) and contain the ability as an emergency display.

The Scope of the Work

There are several automatic process and manual process involve in this work.

We will show these processes as a diagram.
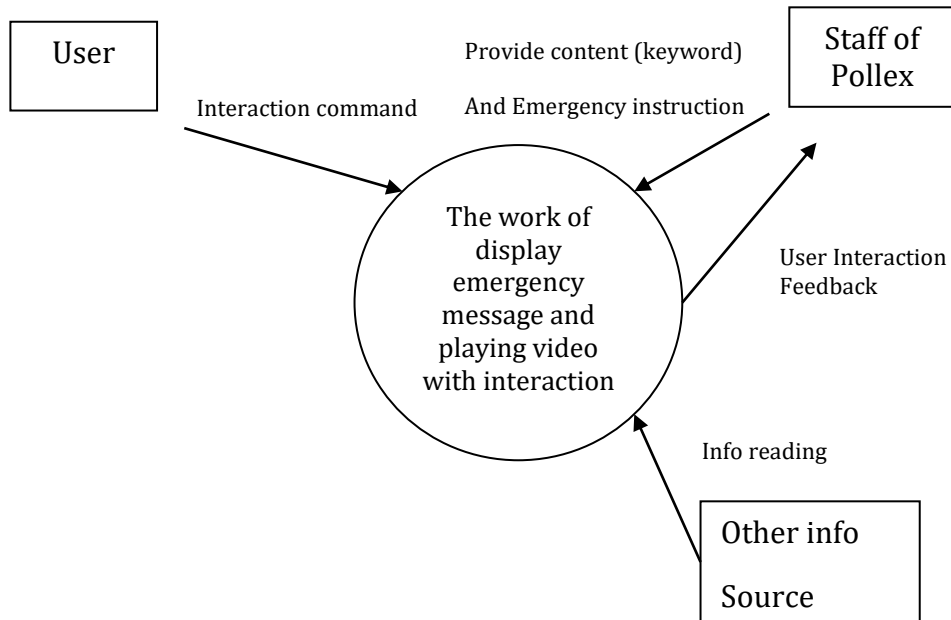
To be specific, if we categorized these processes into a table, and called it Event list:

Event Name	Input and Output	Summary
User Interaction command	Change in status of function	Read the user command, and change the function
Provide Key	Staff input the keyword	Change the play list of videos.
Emergency instruction	Staff input the emergency instruction	Change in the mode of screen display
User interaction feedback	Staff receive the feedback from user command	Feedback sending back to staff
Info reading	Input from other controllers or devices	Change in the status of UI

The Scope of the Product

In terms of product aspect, the model of product boundary can be shown as the diagram:
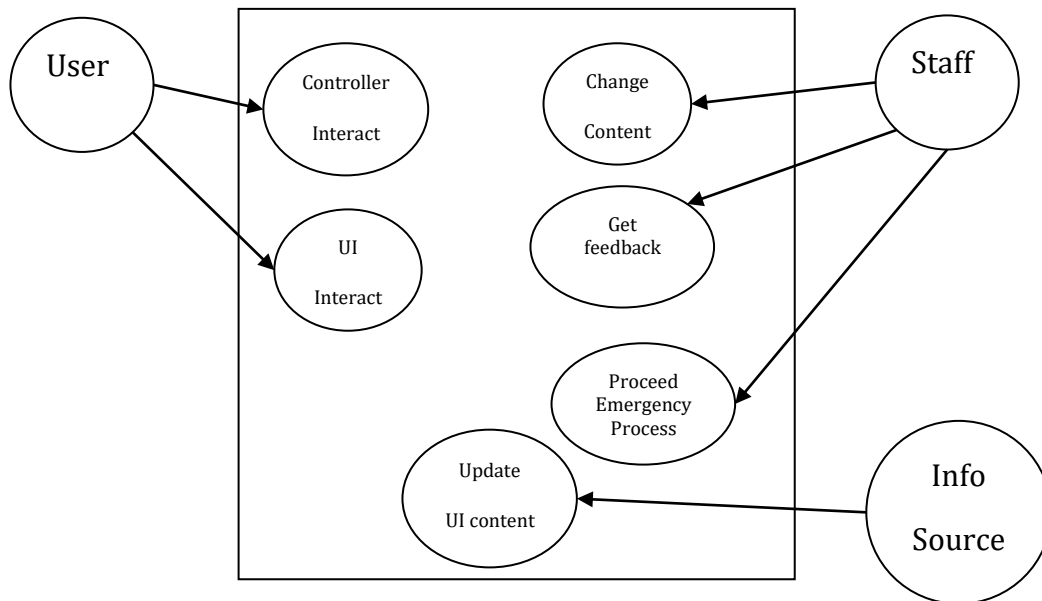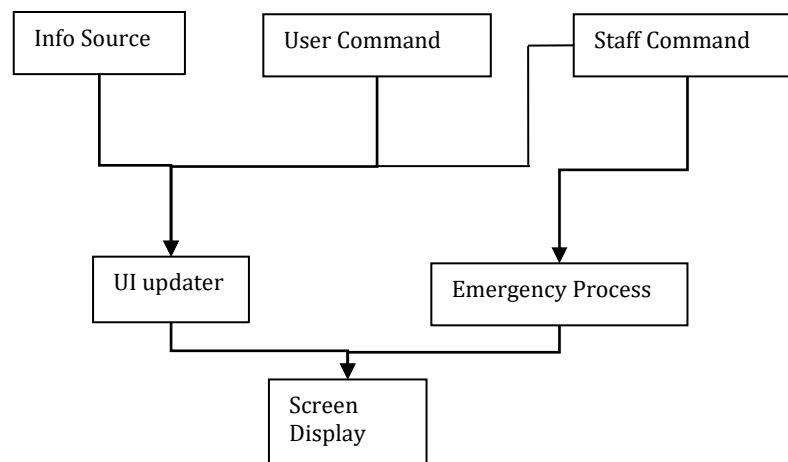
Functional requirement

With the Scope work a scope of product we can safely concluded a table of requirements showing below:

Requirement Name	Description
User Interaction	The user can interact with the product either using physical controller or directly interact with the UI.
Staff Interaction	The staff can change the product content via keyword, also they can trigger the emergency process, and they can get feedback from the user interaction.
Info source reading	The product can read info from the info sources.
UI update	The UI can update from several process: User Interaction, Staff interaction, and Info source reading.

Data requirement

The Data flow of the product can be shown as follow diagram:

2.None-functional Requirements

1) Look and Feel requirements

Appearance Requirements:

This Product should be in form of an app, which displaying videos and other information in a screen from the size of 48'' to 86''.

Style Requirements:

This project's display style should not be too complicated to understand, remain simple.

2) Usability and Humanity Requirements

Ease of use Requirements

This product shall be easy for older adults to get the desired content and interact with it.

Personalization and Internationalization Requirements

This product will mainly be using English as preference language. But other languages (French/Korean/Chinese/Indian/etc.) should be supported to display contents.

Learning Requirements

This product should easy for older adult to learn to use and staff to manage content.

Understandability and Politeness Requirements

This product should easy for older adult to learn to use and staff to manage content by using symbol and words.

Accessibility Requirements

This product should be partially usable for disable users.

3) Performance Requirements

Speed and Latency Requirements

This product is not speed critical, however, part of the product may need low latency

Safety-Critical Requirements

This product should do no harm to its user.

Precision or Accuracy Requirements

This product is not required accurate pointing from user.

Robustness of Fault-Tolerance Requirements

This product is not fault critical, that means if user give wrong instruction, they have chance to correct it.

Longevity Requirements

This product should last at least 3-5 years and depend on the quality of the display.

4) Operational and Environmental Requirements

Expected Physical Requirements

This product should mount on solid wall in dry environment.

Wider environment Requirements

This product should

Precision or Accuracy Requirements

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Robustness of Fault-Tolerance Requirements

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Longevity Requirements

This product should last at least 3-5 years and depend on the quality of the display.

5) Maintainability and Support Requirements

Maintenance Requirements

The parts of this product should easy to replace, and easy to maintain.

Supportability Requirements

A few staff needed to maintain the content of this product

6) Security Requirements

Access Requirements

The product can be access by anyone nearby, but only the authorized personnel can change the content.

Supportability Requirements

A few staff needed to maintain the content of this product.

Privacy Requirements

This product use for display publicly content, so no strict privacy requirement.

7) Cultural and Political Requirements

This product should not involve in any culture or political sensation content.

8) Legal Requirements

All the content display on this product should follow the CC license.

User profile and persona

User profile

1. The average age of users in Pollex is between 56- 80. They are suffered from one or more medical condition and may need staff helping in certain circumstances. They are not so familiar with the current technology however can learn a new form of technologies like touchscreen, online videos and controllers. An interesting show may catch their attention and they will feel comfortable if necessary information (time/weather/etc.) is provided for them.

2. The user may have some emergency and need the staff helping immediately, they can simply hit the contact staff button and the staff will come immediately.

User persona

Tom, male,67, who just retired and choose to live in Pollex, he is energetic, as a former businessman he is quite interesting and willing to learn new stuff, he currently learned how to use the smartphone, also he used to enjoy some outdoor activity every day and still prefer to do so when he moved to Pollex. However, he suffers from light amnesia as the age growing up.

User Cases

The user cases can be generated from the User profile and user persona.

  User Normal course:

1. The product displays the video with a finite set of video lists

2. The user can choose the interact buttons (pause, next video,etc.)

3. The video will change due to the user command

4. The user chooses the "I need help" button

5. A message will send to staff

6. The user check for the weather, time or location information

7. The user will get the information in the weather section and location section

8. Weather and time information sources update

9. The local weather and time information update due to the information source update

Alternative course:

1. If the user uses the physical controller

   a) The user hit the physical button (pause, next video, etc)

   b) The video will change due to a user command

2. If user falsely hit the I need help button

   a) There will be prompt window says, "Please wait for staff" and hit the cancel button

   b) Staff stop receiving a message and marked as done

We can perform these cases with our User persona:

The product offers entertaining as well as solid information for Tom, when he gets passed the screen, it shows current about food, he is not so interested in it but the sports video in video list attracted his attention, he uses step 2, click the next video button and watch it, after a while he decided to go an outside walking, he use step 6 and 7 ,the current weather, date, and time provide him solid information.

Staff Normal course:

1. The staff enter a keyword for video

2. Video list update due to staff enter the new keyword

3. The staff entered the emergency process

4. An emergency display will show on the screen

5. The staff receive a contact message

6. The staff going to that location and help out

Documentation of the Low Fidelity Prototype

As the requirements, user profile and user cases suggest, this product is a video display as well as for older adults to interact with it.

The whole User Interface show as following:
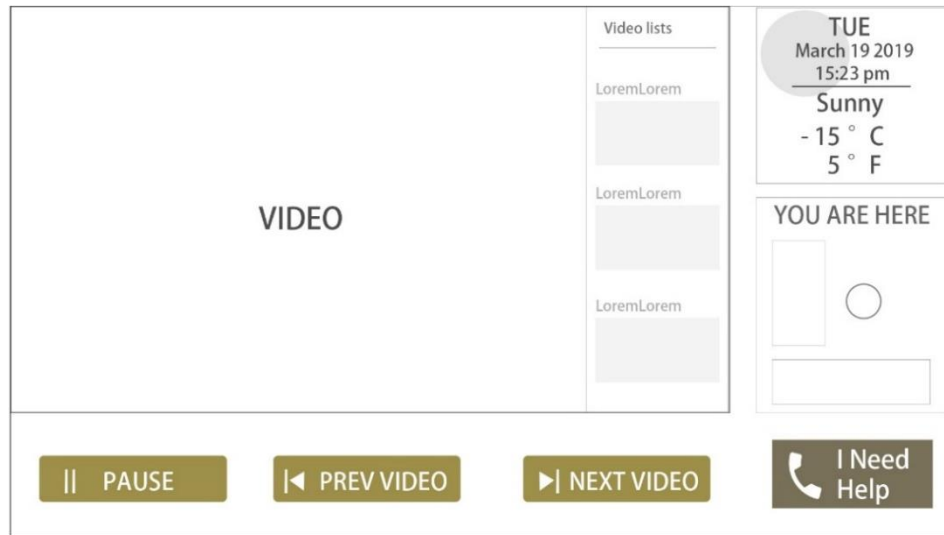
In the center of the screen is video displayed, with video lists that allow users to choose the videos from the lists.

The video display will not provide full-screen function as the requirements says the display not intended gather groups in any length of time, also not suggest user stay too long before the display, immersive experience is trivial in this situation.

The video display can be controlled by buttons. As for the older adult to use this product, the button on the screen will be set to a large scale with both symbol and word to recognize. The buttons will gape enough space to prevent false touch. Also, the button will consider color-blindness design and the color of the button will be color-blindness recognizable.

A physical controller with the same buttons also applied, considering some users are not familiar with the touchscreen control.

A section called Location is lying on the right side of the screen, as many users may not good at memory the location, and this product is placing throughout the facility, this section can be a good indicator to tell the user where they are. Also, this color is set to Colorblindness adaptable.

A section called weather and time lying on the right up corner of the screen, this will show the user current date, time, weather and temperature in Celsius and Fahrenheit.

An "I need help" button is lying on the right down corner in the largest scale of all buttons, in case user need help, as the user profile suggested most of the users need medical support, they simply hit the contact staff button, the staff will immediately know the location of the device and come to help, a large scale massage displayer will show on the screen with message "Staff is coming ".

Also, if the user falsely triggers the button, they can cancel it at any moment.
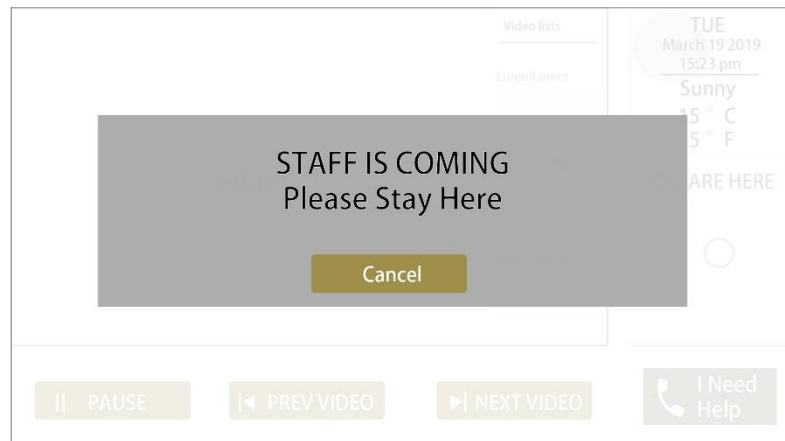
As for staff members, they can use the admin system to monitor and command the product, they can monitor the currently available video lists, and change them by entering new keywords. They also can monitor the list of location that activates "I need help" button and marked them as unfinished/finished. Also, in the emergency control section, they can input message, activate, de-activate the emergency display.
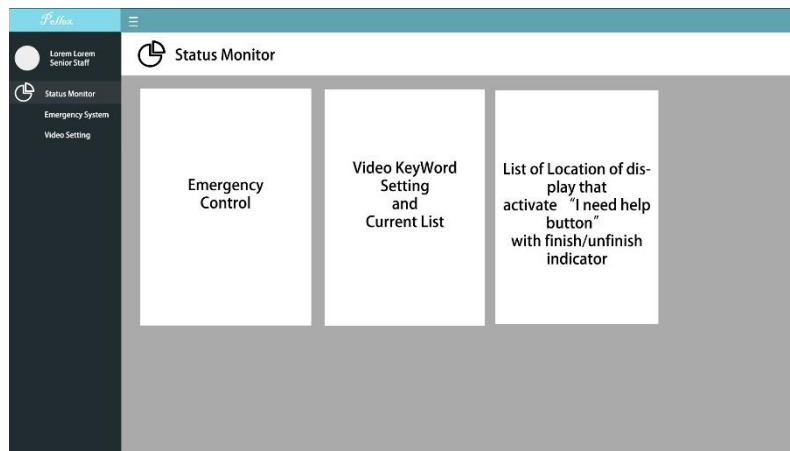
Once in an Emergency situation, they can set start the emergency process, for all the displayers, the whole screen will replace with an emergency message displayed, which will also display the nearest safe exit.

EMERGENCY
_____

MESSAGE HERE

YOU ARE HERE

EMERGENCY EXIT