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Software Requirements for Fallout Live Radio (FLR)

Definitions

The Wanderer – term for the video game character from Fallout 3 who is the main subject for the news reports.

Quests –In the application it’s a chunk of required time that unlocks a news segment, or a radio station, and is randomly selected.

Background

FLR is an emulation of the radio from the video game Fallout 3. In this video game, the radio provides the soundtrack for the entire game, and has news that report on the players actions and has lots of world-building segments to make the radio seem alive. It’s a 24/7 radio that is constantly growing and getting more complex the more the player progresses through the game, which will be emulated 100% in FLR.

System Overview

The focus will be to release the application on android phones running with at least version 6.0. The expected RAM of the phones running this application will be 2 GB, which means realistically a user will have multiple applications running so this application should not use more than half a GB.

References

An example of how a radio will play out - https://www.youtube.com/watch?v=BHftBzfKT7w

System Interfaces

Androids allow applications to run in the background, but they are easily and suddenly closed. There are built in libraries that keep track of time, which will be used to keep the feel of a live radio even if the application is suddenly closed and opened later.

User Interfaces

There will be 2 main user interfaces in the application: The settings menu, and the radio screen. The settings menu will allow the user to select save slots, and alter certain options for the application to be implemented like Wanderer speed, rate of news reports, and developer menu. The radio screen will only have two things to change: Changing radio stations, and volume.

Software Interfaces

There will be two categories for running processes in the application, and one static process: The Wanderer, Radio Stations, and User Interface. The Wanderer process will be the most complex running process, where it stores all possible quests, available quests, running quest, and completed quests. Settings from the User Interface may affect the Wanderer processes. Radio Stations will have different running processes, one for each radio station. Each radio station has a simple algorithm that chooses the next song/report, and will keep track for when to cut the music and play any reports. The simple algorithm is so it is not truly random, and to keep songs and reports diverse, and to cut the possibility of the user hearing the same things repeatedly. The User Interface will keep track of possible variables, and will display possible Radio Stations to switch too, which include unlocked radio stations from The Wanderer completed quests.

Memory Constraints

Due to the small memory of phones, it may be required for certain running processes to be turned off when not actively on. The Wanderer process must be running on all times, and the current Radio Station process must be running as well, but it may be required for other radio stations to be stopped, which will require a “startup” to track when it was last switched to, and current time, and calculate what’s happened since then. This would save on background memory required, but will require a spike of memory when switching.

Product Functions

The function of this application is very simple: a radio station you listen to, and can switch from a handful of radio stations, starting at only 2. Because The Wanderer can create different stories, FLR will allow saves so you can keep and change stories on a whim.

User Characteristics

The expected user for this application will be a fan of the Fallout 3 videogame, and wants to listen to the music of the game while having nostalgia from the news reports from when they played the game. However, the popularity of the music used in the game could allow someone to play it as background noise for a group of people, and could provide some interesting interruptions.