Jeopardy 2.0

DESIGN DOCUMENT

THE LITTLE BEIGE BOX

Contents

1: Behind-the-Scenes

1.1: Overview of Programming Language, Source Control, Bug Tracking, Branches

Jeopardy 2.0 will be written in C# (.NET 4.7) using the Windows Presentation Framework (WPF) for enhanced animation and hardware acceleration which WinForms lacks. Source control is to be provided through GitLab on the private Beige-Box server and bugtracking will be handled through MantisBT on the private Beige-Box server.

Branches are as follows:

- **master:** The master branch containing the current stable release of the Jeopardy 2.0 code.
- **integration:** The Integration branch is where code from the development branches will be merged into. Integration will then be used to fix bugs introduced by the merging of the development branches.
- **<*your initials*>dev:** This branch will be used for your own individual development, then will be merged into Integration when sufficient milestones are reached. **Please** update the build string in BuildString.cs to assist in keeping track of who wrote what code.

1.2: Project Roadmap

- September 2019 – October 2019: Initial development, basic functionality implemented
- November 2019 – Early December 2019: Alpha stage; all features implemented but may be buggy/incomplete
- Late December 2019 – Early January 2020: Break for Christmas/New Year's
- Late January 2020 – March 2020: Beta stage; refine all implemented features
- April 2020 – May 2020: Final beta stage
- June 2020: Feature freeze, prepare for release
- July 2020 – August 21, 2020: Prepare for Megaplex 2020

1.3: Storage of Clues

All text clues will be stored in an XML file utilizing the XML Engine developed by Beige-Box for use in AAHA eHours. Clues will be read from the XML and displayed in a TextBlock to minimize application overhead. Video and audio clues will not be supported in Jeopardy 2.0 initially to reduce programming overhead.

1.4: Ring-in Device Integration

The Ring-in Device is a Raspberry Pi with custom software running to allow contestants to ring in on clues. Samba will be running on the Pi and the ring-in software will be extended to write a file on the fileshare when a contestant rings in, which Jeopardy 2.0 will look for in order to see which player rang in.

1.5: Remote Display

Jeopardy 2.0 will support remote displays. The Master computer will be in charge of controlling the game and will write a file on the Ring-in Device's Samba fileshare to indicate to the Slave/Remote Display computers which clue to display. This will allow us to work around network limitations we discovered at Megaplex 2019 by not having a live video stream from one computer to another in a crowded wireless environment.

2.0: The Master Control Program

Figure 2.1: The Master Control Program

2.1: Category and Clue Value Buttons

These buttons will all start Disabled until a Round Control is selected. The Category buttons, when pressed, will reveal the categories on the Main Game Board and will disable themselves when clicked. The Clue Value buttons will reveal the selected clue on the Main Game Board and then disable themselves when clicked. However, the Clue Values can be enabled again by right-clicking their button.

2.2: Clue Window

The Clue Window will show the currently displayed clue and the correct response to the board operator. This information will be pulled from the game XML file.

2.3: Player Controls

The three Player Control groups allow the board operator to control each player's score through normal clues, Daily Doubles, and Final Jeopardy wagers as well as make adjustments to a player's score if

appropriate. The main Score display will also be saved on the Ring-in Device's fileshare so the Remote Display can set the correct scores on-stage.

The Add buttons will cause the selected clue value/wager to be added to the player's score and the displayed clue to be hidden, while the Lose button will subtract the score and leave the clue displayed. The Hide Clue in the Clue Control group will be used to hide the clue if all players miss the clue.

2.4: Load Game Control

This button allows the board operator to select a game file to play and will display that game's title.

2.5: Round Control

This group is where the board operator will select which Jeopardy round is currently in play. All radioboxes will prompt the operator if they would like to switch to that round before making the switch to ensure they do not switch to the wrong round accidentally.

Final Jeopardy will cause the Category and Clue Value buttons to be disabled, and the Reveal Cat, Reveal Clue, and Start buttons in the Final Jeopardy group (2.x) to be enabled.

2.6: Clue Control

This group is where the board operator can hide the currently displayed clue if all players miss or time out of the clue. When the Hide Clue button is pressed, the out-of-time sound effect will play. This group is where audio controls will go in Jeopardy 2.1.

2.7: Daily Double

This group is where the board operator will reveal the Daily Double on the main game board. The button will be disabled until the Daily Double is uncovered at which point the button will be enabled. Upon either the wager being Added or Lost, the Daily Double will be hidden on the main game board and the button disabled until the next Daily Double is uncovered.

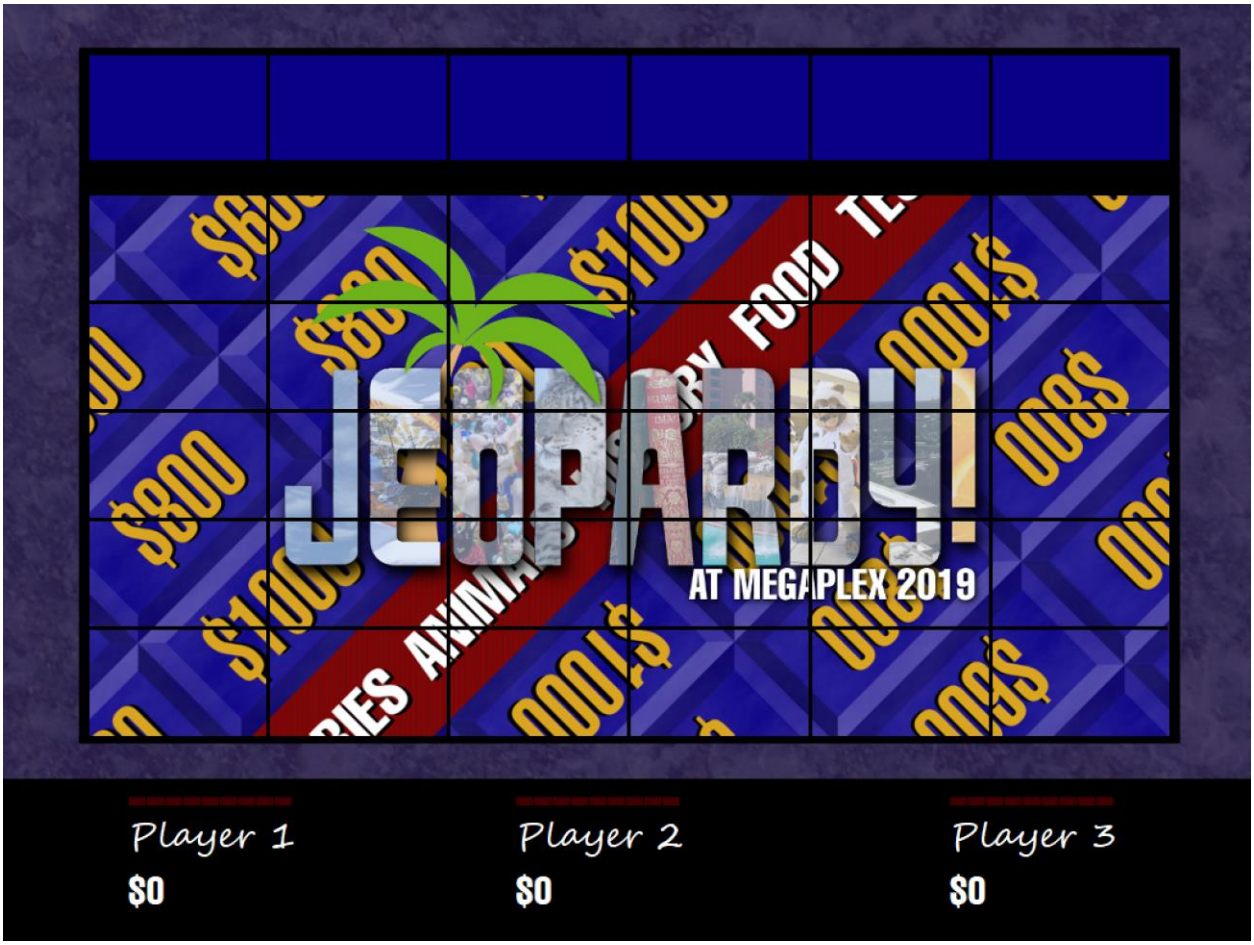
2.8: Round Timer

This group is used for the main Jeopardy rounds. The textbox will count down in MM:SS and can be adjusted manually. The Start button will change to Stop when the Round Timer is running.

2.9: Final Jeopardy

This group controls the game when the board is set to Final Jeopardy mode. The Reveal Cat button will display the current Final Jeopardy category on the main game board. The Reveal Clue button will reveal the current Final Jeopardy clue on the main game board. Finally, the Start button will start the 30-second countdown and start playing the Jeopardy Think music.

3.0: The Main Game Board



3.1: Main Game Board (using Jeopardy 1.0 as a placeholder)

3.1: General Overview

The Main Game Board will remain mostly the same as the Jeopardy 1.0 version with the biggest change being that it will run at 1920x1080. The main game board will start on Display 2 and occupy the entire screen with no window controls.

3.2: Fonts

The Main Game Board uses the following fonts which can be found in the Jeopardy 1.0 source:

- Category Titles & Player Score: Helvetica LT Compressed
- Clue Values: Swiss911 UCm BT
- Clue Text: Korinna BT
- Player Names: Segoe Script (included with Windows, not in Jeopardy 1.0 source)

3.3: Animations

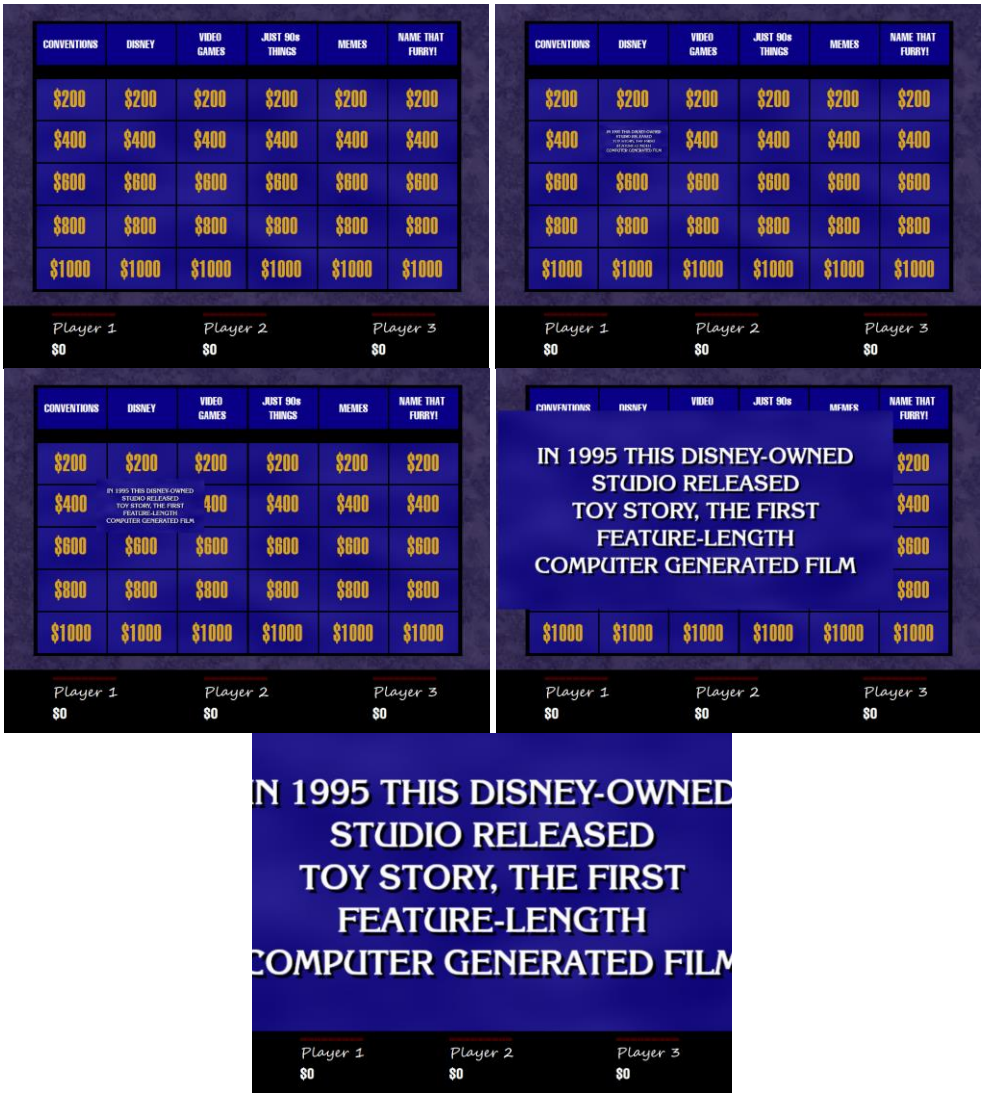
Jeopardy 2.0 will have three animations shown on the main game board.

3.3.1: Board Fill

When the Jeopardy radiobutton on the MCP is clicked, the board will fill in by selecting six random clue values on the main game board to display, then repeating that process five more times while the board fill sound effect plays. The best example of this is to watch Jeopardy 1.0 when the Jeopardy round button is clicked.

3.3.2: Clue Display

When the board operator selects a clue, the image of the clue text will start in the Main Game Board small, then zoom to full screen as is done on the actual TV show. The following figure below is a mockup based on Jeopardy 1.0 to illustrate this effect:



3.2: Clue Reveal Scale Mockup (Based on Jeopardy 1.0)

3.3.3: Daily Double Uncovered

When a Daily Double is uncovered, the Daily Double graphic will start in the main game board, then zoom to cover up the main game board EXCEPT for the player scores. The Daily Double graphic should flip end-over-end. The following figure below is a mockup based on Jeopardy 1.0 to illustrate this effect:

3.4: Jeopardy Telestrator Integration

Jeopardy 2.0 will add support for a “telestrator” for Final Jeopardy. Jeopardy Telestrator is a separate piece of software running on separate computers that is used so the players can write down their Final Jeopardy wagers and responses. Jeopardy Telestrator will then store the wagers and responses as image files on the Raspberry Pi Samba Server, and Jeopardy 2.0 will display those images on the main screen when the board operator clicks the appropriate button.

4.0: Appendices

Nothing has been added or changed yet.