**Project History**

**Summary**

<GAME NAME> has been under development for 20+ years off and on, and much more off than on since the early 1990s. It was organized into its current project form in early November 2015.

The most recent trigger bringing the project back to life was my recent work on making a disk image backup of a 5.25" floppy original copy of Ultima III that I purchased (all disk images I could find at the time had bugs that made the game almost unplayable), my favorite game of all time. This proved quite challenging and before long I realized that I had learned enough 6502 assembly language to write the Apple II RGP game that I always wanted to write.

**The Backstory**

My prior attempts were in Applesoft BASIC and Quickbasic (4.5?) run on a 386 PC with MS-DOS. While these attempts were never technologically feasible, I was successful in creating a tile based graphics engine and worked out the logic to facilitate the map moving around a player icon at the center of the screen. The Applesoft version crashed with a memory error. The QuickBasic version ran, I could issue move commands and watch the map redraw around the player. The problem was, I was to watch the map redraw around the player. It was just too slow.

I knew then that the solution, at least on the Apple, was assembly language and I had wanted to learn it for many years. However, as a young teenager my access to resources was limited. I talked to everybody I could find who knew anything about computers including a few people who worked in the computer industry (typically with main frames, not much help). I checked out the only 6502 assembly language book our school library had. I couldn't figure out where to start. What I needed was an assembler (I had never heard of such a thing, or even a compiler back then) and a book that gave examples for a specific assembler. Unfortunately, the book the school library had was very general and it made a lot of assumptions about what the reader knew; not a good book to start with. Our school really had a very good library, books on this subject were just hard to come by.

**Modern Era: Pulling It Together**

The learning challenge in the modern era was formidable as well, but I brought to bear the benefit of 20+ years of experience in IT companies (though ironically not in programming) and the determination associated with seeing a life long goal within reach for the first time.

This time, I knew how to start. I knew the type of book to look for and found it: "Using 6502 Assembly Language" by Randy Hyde. It is written specifically for use with the Liza Assembler, one of several popular assemblers used in the 1980s (others include Merlin, Big MAC, Apple DOS Toolkit).

I read the book cover to cover, and type in most examples. It provided a very good foundation on things like flow control, basic arithmetic, I/O (except for disk).

I felt very confident at this point even though several key components to make a tile-based RPG were not addressed at all by the book. For example, reading/writing to disk, random numbers, graphics, and a mysterious thing I didn't even know I needed called a bootloader.

Figuring out these remaining pieces was an exercise in following a trail of bread crumbs. There is a lot of information about 6502 assembler available online, but it is very fragmented and spread out. There is no book I've ever seen that explains how to write a tile based RPG game, for example. The closest are a couple books (which are very good IMO) that talk about the basics to write arcade games. I tracked down a couple of these books, one of them I had to purchase at an online rare books auction, and used them as my foundation for learning Apple graphics. Even though my goal was to write a tile based RPG game, I had the benefit of having figured out the tile engine mechanics many years ago. I figured all I really needed was the specific information on how assembly language interfaces with the graphics screen. Fundamentally that assumption was correct, but wow. Learning the Apple Graphics screen is like entering the twilight zone. <expand on this, insert reference to the Magic Scroll of Cheating>

The rest of the information needed, I had to find piece by piece in old forum posts, dusty old technical reference manuals (I still had a few from back in the day), and a fair amount of experimentation, especially to write the bootloader.

What is this bootloader thing anyway? I had never heard of it until starting this project in November 2015. <insert info from email to Mike on this topic>

<mention Beth, ask her if she prefers whether to be mentioned by name or, in context of being a great sounding board on key concepts like darkness and wrap around map architecture, or maybe ask her if she prefers >