



Workplace Skills Assessment Program

SET Nationals

2013

sponsored by Sendza

Project Requirements Document

LEGAL

This document is copyright © 2012 Business Professionals of America.

It may be distributed and reproduced only for use in the Business Professionals of America Workplace Skills Assessment Program competition.

AUTHORS

Todd Chartier, Duane Sibilly
SET National Judging Panel

ABSTRACT

BitBlit Interactive, a digital entertainment media publisher based in Austin, TX, has contracted your development team for a new interactive game project. Building on the success of their recent retro-inspired "Project Wayback" branding initiative, BitBlit wants to continue to capitalize on the surge of popularity in simple, 8-bit-style games by producing a turn-based strategy title. Your contract manager at BitBlit has referred you to Hero Academy (Robot Entertainment), Fire Emblem (Intelligent Systems), Civilization (Microprose/Firaxis Games), and Battle for Wesnoth (David White, et al.) as examples of successful titles in the genre.

VERSION NOTICE

Document Revision	Date	Details
Release 1.0	09/20/2012	First release

This document was created by the SET National Judging Panel for the Business Professionals of America. The SET National Judging Panel has made every effort to ensure that this document is accurate at the time of printing. Obtain additional copies of this document, as well as updated releases, from the website at <http://bpatechnical.org>.

TRADEMARKS

All trademarks contained within this document are the property of their respective owners.

INTRODUCTION

BBI's Project Wayback turn-based initiative will consist of no less than three new game titles for holiday release in Q4 2013. To participate, your team must complete a functional, playable turn-based 2D game that features original graphics, original sound evocative of the 8-bit era, and pleasing gameplay.

SYSTEM ARCHITECTURE

Hardware Requirements

While Project Wayback seeks to evoke the nostalgia and simpler aesthetics of the 8-bit era, the hardware requirements for these titles are by no means ancient. BBI expects Project Wayback games to run on modern Windows, Mac or Linux personal computers.¹ Assume absolute minimum hardware specifications of 1 GHz CPU, 1 GiB RAM, and several hundred MiB of hard disk storage.

Software Requirements

BBI is a fully cross-platform games publisher; as such they are not especially choosy about the software frameworks underpinning their titles. However, for the sake of rapid development, your team's submission must be restricted to the following technologies:

- Oracle Java 6 or higher
- Javascript²
- Python 2.6 or higher
- Ruby 1.8 or higher
- Microsoft C#
- Objective-C

- Oracle Express 11g
- Microsoft SQL Server
- Oracle MySQL
- PostgreSQL
- SQLite

¹ Applications should be developed for desktop operating systems *only*. Do *not* submit a project for a mobile device without prior authorization from the SET Judging Team.

² The use of JavaScript is limited to non-web applications. Browser-based usage is prohibited.

Use of game development frameworks (e.g. XNA, pygame, cocos2d, et al.) is permitted *if and only if* the framework is freely available for educational or non-profit use.³

The use of paid proprietary development frameworks is expressly prohibited.

If your team chooses to use a game development framework, you must *clearly* show the extent of your team's original work via source code comments.

DETAILED REQUIREMENTS

Common Requirements

Project Wayback titles must display publishing and development credits upon startup, followed by a title screen. The publisher credit for BitBlit Interactive must display first, followed by credit to your development team; be creative! The title screen should display the name of the game and present the player with options to begin playing, adjust options (if any), view instructions, or quit the application.

Gameplay screens should consist of a scrolling world map built of tiled sprites or textures, atop which sprites for a player-controlled avatar, and both moveable and immovable environmental objects should be placed. The gameplay perspective should be "top-down," wherein the player viewpoint is above the world looking down upon their avatar and the action that surrounds them.

Project Wayback titles should feature original sounds for various actions such as selecting a menu option, attacking an enemy, receiving damage, or player death. These sounds can be as simple as square-wave beeps in various pitches, but BBI encourages developers to be inventive and inspired in coming up with unique and compelling audio effects.

During gameplay, players should be able to access a menu screen. The contents of this menu should be contextual to the game your team creates, but at minimum the menu should allow the player to save the game (for loading and continuation of play later), exit to the title screen, and exit the application.

³ Use of Epic Games' Unreal Development Kit (UDK) under any circumstances is prohibited and will be grounds for disqualification.

Functional Requirements

Players should be able to interact with the world around them in meaningful ways, including conversing with peaceful NPCs and collecting items from the environment. Combat must be turn-based, with player controlled entities alternating in a sequential or interleaved manner with AI controlled entities in tactical or strategic combat. Such interaction should happen via a well-designed menu system.

User Interface Requirements

The gameplay user interface of the game should not only provide a player with a viewport into the game world, but it should also display vital information to the player. Data such as the amount of health or hit points remaining, items equipped, gold acquired, or lives remaining should be presented in a clear, useful manner. However, information overload is to be avoided. Only display information that is immediately useful and necessary for a user to play and enjoy the game with a minimum of confusion.

Performance Requirements

Given the minimum hardware specifications cited above, BBI expects that all Project Wayback titles be lightweight and performant. At no point during the runtime of your game should the frame-rate dip below 30 frames per second (FPS.)

Database Requirements

Each Project Wayback title should feature local file or database storage of play session data. A video game consists of many related objects, and a common way to persist the state and relationships of these objects is by serializing them for storage in a flat file or within a database. Should a database be employed, teams should familiarize themselves with normalized database design principles and at all times attempt to adhere to at least third normal form (3NF)⁴.

⁴ Wikipedia: Third Normal Form (http://en.wikipedia.org/wiki/Third_normal_form)

TIMETABLE

Date	Details
20 September 2012	Project registration opens
5 October 2012	Project registration closes
9 November 2012	Project timeline submission window ends
21 December 2012	Amended project timeline submission window ends
1 February 2013	Project submission period ends
22 March, 2013	Presentation scheduling closes

All submissions will be handled online via the website at <http://bpatechnical.org/>
If you or your team encounter any issues or have any questions about the event timetable or the submission process, please contact the SET National Support Team at support@bpatechnical.org.

SUMMARY

We hope that you choose to participate in BitBlit Interactive's Project Wayback program. In creating a fun, functional and retro-styled game for players of all ages, we feel that development teams will be engaged and inspired to meet and exceed our project requirements while honing their skills for further projects in the future.

About the Authors

Todd Chartier is Director of Operations at software-as-a-service firm Sendza, Inc., where he administrates IT infrastructure and manages software developers on small-to-medium engineering projects. He has over 15 years of experience in the IT field, working with Fortune 500 companies and small startups alike.

Duane Sibilly is an independent software developer and designer. He has 10 years of experience in web design, print design and software development.

Colophon

The text font is Microsoft Georgia. The heading font is Linotype Neue Helvetica.