

# One Person Software Development Project

Oct 9, 2010

Team Axe, LLC

<http://www.teamaxe.org>

Project managers:

Dates: Jan 21, 2010 - Jun 2, 2011

Complete: 50%

Tasks: 90

People: 13

---

This is the project plan of the first software creation from Team Axe, LLC.

The project itself will follow the OpenUP software development process, and as such is divided into four phases: Inception, Elaboration, Construction and Transition. The purpose of the project is to create a compelling and well-developed software creation utilizing the resources of only a single developer.

Quarterly progress reports and other information can be viewed at the URL supplied with this document.

---

## Tasks

Name	Begin date	End date
<b>Inception</b> 03/01/2010 Inception Phase of project lasting throughout first quarter. Familiarization with technology and feasibility. 03/06/2010 Expansion of Technological Familiarization to include Technology Selection and Developer Licensing. 03/12/2010 Creation of Initial Visual Design task. Added metaphor and process tasks. Added Project Timeline Task. 04/19/2010 Most Inception tasks complete. Objective-C training going more slowly than anticipated. In response, Objective-C training task added to all phases of project. 05/30/2010 Inception Complete.	1/21/10	4/21/10
<b>Project Definition</b> 03/01/2010 Outline scope of project. Begin Software Design Doc.	1/21/10	2/3/10
<b>Project Scope Determination</b> 03/01/2010 Determine general scope of software and ability to execute. 03/12/2010 Determined limited platform choice of only iPhone production. 04/19/2010 Further limitations in platform choice. No native iPad support in first release. iOS 3 and above support given to difficulty in acquiring iOS 2 hardware.	1/21/10	1/22/10
<b>Vision Statement</b> 03/01/2010 Prepare vision statement to prevent scope creep and outline purpose of software. 03/12/2010 Vision statement developed to focus development effort.	2/1/10	2/3/10
<b>Initial Requirements</b> 03/05/2010 Determine software requirements. 03/12/2010 Determined application limited to 4 screens at maximum in order to focus development effort on 4 discrete functionalities.	2/10/10	2/22/10
<b>Market Research</b> 02/12/2010 Research market for pre-existing product fulfilling requirements. 03/12/2010 Conducted extensive market research. No product in Apple Marketplace or overall software market that meets Use Cases. 04/19/2010 Continued research shows no compelling social networking component either.	2/12/10	2/17/10
<b>Use Case Creation</b> 02/12/2010 Create set of Use Cases to refine what software should deliver.	2/12/10	3/3/10

## Tasks

Name	Begin date	End date
<b>Use Case Template Creation</b> 02/12/2010 Determine format of Use Cases. 03/12/2010 Format and template of Use Cases created. Creation took longer than expected. End date increased by 2 weeks.	2/12/10	2/24/10
<b>Use Case Task Determination</b> 02/12/2010 Determine high-level set of functionality that will be achieved by Use Cases. 03/12/2010 Final set of product functionality set. Use Cases written to reflect this.	2/22/10	2/25/10
<b>Use Case Drafts</b> 02/12/2010 Create initial set of Use Case drafts before template completion. 03/12/2010 Use Cases of 4 primary functionality drafts completed. One feature under consideration for removal. 04/19/2010 Use Cases reduced to 3 primary functionality paths.	2/25/10	3/3/10
<b>Architectural Feasibility</b> 02/25/2010 Study ability to execute project on platform without any knowledge of platform. 03/12/2010 Developer background with C/C++ makes Objective C acclimation possible. Project feasibility granted.	2/23/10	3/1/10
<b>Initial Documentation</b> 2/20/2010 Create initial set of documentation to support development effort.	2/22/10	3/27/10
<b>Software Design Document Creation</b> 02/23/2010 Create Software Design Doc to solidify architectural decisions. 03/12/2010 Software Design Document framework completed with all sections drafted. 03/30/2010 Final Draft of Design doc completed. Each section will be added to as development continues. As such, Software Design Doc update task added to each phase.	2/22/10	3/9/10
<b>Document Templates Creation</b> 02/23/2010 Determine/Create document template types for business, technical writing and documentation. 03/12/2010 Document templates for all project documentation determined. Open Office chosen as exclusive tool.	3/2/10	3/6/10

## Tasks

Name	Begin date	End date
<b>Data Research</b> 02/28/2010 Begin research into system data for User Profile creation. 03/12/2010 Product reference material and data research determined to be greater than Inception phase endeavor. Will progress throughout Elaboration and Construction. 04/09/2010 Initial Data collection and archival completed.	3/6/10	3/27/10
<b>Technological Familiarization</b> 03/01/2010 Begin process of familiarization with XCode, Objective-C and Apple App Store/Developer resources.	3/7/10	4/21/10
<b>Technology Selection</b> 03/01/2010 Begin research into development toolchain (IDE, testing, debugging, prototyping). 03/06/2010 Determine scope of project to include platforms outside iPhone OS. 03/12/2010 Determined need for research into UIWebView vs. CoreGraphics display.	3/7/10	3/10/10
<b>Developer Licensing</b> 03/01/2010 Realized necessity of testing on actual hardware (performance). Apple Developer license needed for development effort. 03/12/2010 Applying for Apple Developer Program. 04/08/2010 Acceptance to Apple Developer Program.	3/7/10	3/14/10
<b>Objective-C Training</b> 03/10/2010 Began Stanford iPhone Developer online course. Intending viewing all course videos and completing each assignment. 03/12/2010 Underestimated time. Goal extended 2 weeks. 04/04/2010 Need for ongoing training identified. Entry level Apple tutorials/documentation finished. 04/09/2010 Research into Apple documentation/education complete.	3/13/10	4/21/10
<b>Development Environment Setup</b> 03/10/2010 Creation of development environment/workstation. Selection of IDE, placement of workplace, backup/change control procedures. 03/12/2010 Project setup completion. Test Unit Tests created. Need testable use cases. 04/08/2010 Apple certificates/provisioning profiles received. Test devices provisioned.	3/13/10	3/25/10

## Tasks

Name	Begin date	End date
<b>Toolchain</b> 03/03/2010 Finalize procedures and workflows in generating content for development/archival. 03/12/2010 Toolchain finalized.	3/13/10	4/7/10
<b>Project Codebase Creation</b> 03/08/2010 Creation of Proof of Concept XCode project. 03/12/2010 Project filesystem hierarchy established. Navigation hierarchy completed. 04/08/2010 Project codebase successfully tested on actual devices.	3/10/10	4/20/10
<b>Initial Visual Design</b>	3/12/10	4/18/10
<b>Determine Design Metaphor</b> 03/12/2010 Determine guiding design metaphor for UI. 04/04/2010 Visual design metaphor for UI identified and tested. Design for major project deliverable still undergoing revision. 04/09/2010 Major project deliverable initial visual design finalized.	3/12/10	3/30/10
<b>Visual Assets Prototypes</b> 03/12/2010 Determine ability to generate art assets in acceptable timeframes. 04/08/2010 Prototype visual assets exported and pushed to test devices.	3/20/10	4/18/10
<b>Project Timeline</b> 03/12/2010 Develop Gantt Chart. For project. Utilize Open Office Calc public domain Gantt Chart Template. 04/01/2010 Gantt Chart first revision complete. Inception Phase complete.	3/20/10	3/26/10
<b>Documentation Workflow Finalization</b> 03/01/2010 Create rough workflow guidelines for project documentation creation. 3/12/2010 Project documentation types determined. Software Design Doc, Vision Doc, System/User Data Model Doc, UI Model Doc, Assesst Licensing Doc, Use Cases. 05/30/2010 All project Documentation completed.	3/20/10	4/19/10

## Tasks

Name	Begin date	End date
<b>Elaboration</b> 03/01/2010 Take decisions and templates from Inception phase and complete preparation work for Construction. 03/12/2010 Realized need for Usability expertise. Added task. 04/08/2010 Ongoing Training and Documentation tasks added. 04/19/2010 First external resource requested. 06/13/2010 Happy Birthday to me! Significant setback in visualization. Dates adjusted. 07/20/2010 Aside from visualization and usability setbacks, Elaboration phase complete. 09/01/2010 Elaboration phase considered complete will abandonment of external Usability study due to resource non-communications.	3/3/10	7/29/10
<b>Use Case Model Creation</b> 03/01/2010 Determine best doctype and template doctype for Use Cases. 04/08/2010 3 Primary Use Case scenarios developed. System setup Use Case need identified. 04/09/2010 System setup Use Case developed. 05/01/2010 Initial Use Cases finished. Awaiting Usability analysis. 05/30/2010 Use Case iteration moved to Construction Phase.	3/3/10	4/21/10
<b>Ongoing Training and Documentation</b>	3/3/10	6/17/10
<b>Objective C training - Stanford Class</b> 04/08/2010 Taking Stanford Online Classes. 1st set of assignments complete. 05/26/2010 Most Stanford Class assignments complete. All videos completed. Training iteration moved to Construction Phase.	3/3/10	6/17/10
<b>Software Design Doc revisions</b> 03/03/2010 Complete structure and rough draft of final Software Design Doc. 03/12/2010 Sections finalized. 04/08/2010 Task moved under Ongoing Training and documentation. 05/26/2010 Continued revisions to calculations.	5/5/10	6/6/10

## Tasks

Name	Begin date	End date
<b>Finalize Document Templates</b> 03/12/2010 Finalize documentation decisions. Entirety of project documentation created with open source tools.  All documentation - Open Office All bitmap asset generation - GIMP All vector asset generation - Inkscape 04/08/2010 SVG workflow/structure identified for parsing. Art workflow now seamless to code consumption. 05/26/2010 All document and asset templates complete.	3/6/10	4/24/10
<b>Initial Usability</b> 03/30/2010 Usability Expert consulted. Will contract initial Usability study to external resource. 09/01/2010 External Usability review abandoned. No response from resource. In-house Usability will commence during Construction Phase.	4/1/10	5/30/10
<b>Aquire Usability Resource</b> 03/30/2010 Gathering Use Cases and Software Design Doc for review by Usability Expert. 04/09/2010 NDA sent to Usability Expert. 04/19/2010 NDA returned. Project profile/Use cases sent. Timeline increased. 05/26/2010 Awaiting Usability Expert response. 09/01/2010 External Usability resource has never responded to repeated inquiries. Assuming resource attachment to project null.	4/1/10	5/8/10
<b>Review Usability Findings</b> 04/19/2010 Project profile materials sent to Usability resource. 05/26/2010 Awaiting Usability results. Move iteration to Construction Phase. 09/01/2010 External Usability non responsive. No review will take place.	4/30/10	5/30/10
<b>Software Development Plan Creation</b> 03/03/2010 Enhance Software Design Doc section to include specific development decisions. 05/26/2010 Software vision and design doc synced.	4/19/10	5/6/10
<b>Finalize Project Environments</b> 03/10/2010 Finalize development workspace including filesystem naming conventions, backup procedures and workflow facilitation.	4/19/10	5/10/10

## Tasks

Name	Begin date	End date
<b>Finalize Dev Environment</b> 03/01/2010 Complete creation of POC XCode project with general build targets, Unit Testing and project structure. 03/12/2010 Completed build targets, comment syntax, doxygen support. 05/01/2010 Development environment tool familiarization and profile setup complete (Instruments, XCode, etc.). 05/26/2010 Finalized Project filesystem structure.	4/19/10	4/26/10
<b>Finalize Art Environment</b> 03/03/2010 Finalized filesystem conventions and tool settings/preferences.  Raster - GIMP workspace, high resolution photography, high resolution assets stored, exported to low resolution iPhone assets.  Vector - Inkscape workspace, exported to low resolution iPhone assets.  Familiarization with Inkscape-specific svg file format. 04/08/2010 Codebase partitioned to accept art assets direct from Art workflow. 05/26/2010 Art toolchain finalized. 1 remaining issue with asset type.	4/22/10	5/10/10
<b>Finalize Test Environment</b> 03/10/2010 Setup of SenTestingKit with default Unit Tests included in build process. 04/08/2010 SenTesting initial test cases created and merged with Build Process. 05/26/2010 Testing suites difficult to setup as familiarization with environment is still ongoing. Add'l class structure fluctuations make constructing test cases difficult. 7/8/2010 Test cases complete, but given flux of class creations, unit testing is difficult. UIAutomation investigation underway as well.	4/23/10	5/10/10
<b>Visual Design Finalization</b> 03/07/2010 Finalize design metaphor and visual direction of project.	4/29/10	5/21/10
<b>Finalize Art Workflow</b> 03/09/2010 Determine best-practices in Art development environment and workflow. 05/26/2010 All initial prototype art assets generated with acceptable workflow.	4/29/10	5/21/10
<b>Finalize Initial Art Assets</b> 03/08/2010 Create first batch of prototype art assets for Proof of Concept. 05/26/2010 All initial art assets completed and installed into codebase.	4/29/10	5/8/10



## Tasks

Name	Begin date	End date
<b>Proof of Concept</b> 03/03/2010 Create Proof of Concept iPhone app proving out ability to create application and test initial screen layouts and design decisions. 05/26/2010 Proof of Concept feature complete (without data retention). However, performance is unacceptable. 06/13/2010 Proof of Concept completed, but primary development visualization deliverable performance is suboptimal ~15fps. A new, lower-level visualization engine (and workflow to generate appropriate assets) is needed.	5/3/10	5/18/10
<b>Create Software Development Model</b> 03/02/2010 Design the principle software systems of the project. 04/08/2010 Methods for generating Data/ER/Class models determined.	5/6/10	7/9/10
<b>Technology Research</b> 03/02/2010 Determine best practices and most efficient frameworks for use on Apple Devices. 04/08/2010 Apple HIG, Best practices and Programming guides reviewed. 05/26/2010 Most apple UI interfaces understood and implemented. CoreData and high-performing visualization still unknown. 06/13/2010 Visualization utilizing UIWebView suboptimal. Research into CoreGraphics visualization underway. 09/01/2010 Familiarization with CoreGraphics framework complete. Entire UI adapted to new toolchain. FPS acceptable with all tested devices.	5/6/10	7/7/10
<b>Data Research</b> 03/01/2010 Continuing research into software content and User customization. 04/08/2010 Core Data chosen as Model Framework over custom SQLite implementation. 05/26/2010 Determined best subset of data to include. Data asset retrieval (public domain licensing) will begin. 08/06/2010 Data retrieval nearing completion. Most assets found in public domain. Prototype datasets acceptable. Will finish data retrieval for production product.	5/6/10	6/6/10

## Tasks

Name	Begin date	End date
<b>Class Model</b> 03/01/2010 Construct Class Model diagram for high-level relationship determinations. 04/08/2010 Initial Class implementations from ER/Model work initiated. 05/26/2010 Initial design for primary deliverable visualization is unusable. Must re-write using more lower-level structures. 07/20/2010 Class models complete with exception of view models. 08/07/2010 Visualization routine re-written with CoreGraphics and SVG backend-import. 60fps attainable on both original iPhone models and current generation iPhones. @2x asset generation for UI elements in iPhone 4/iPad underway.	5/6/10	7/9/10
<b>ER Model</b> 03/01/2010 Create entity-relationship diagram for datastructures to hold both System data and User data. 04/08/2010 Basic Visual models generated via Eclipse-based ER software. CoreData model will be generated via XCode. 05/26/2010 Eclipse-based ER diagramming not efficient with build process. Abandoning after final visual ER generation. 07/20/2010 Beginning CoreData modelling.	5/20/10	6/3/10
<b>Functional Prototype</b> 03/01/2010 Create functional Prototype for usability testing based upon Proof of Concept. 05/26/2010 Visualization performance is unacceptable. Delaying Prototype delivery date by 1 month. 07/20/2010 View approach decided. Rough design applied to functional prototype. 09/01/2010 Functional prototype sans complete data retention model complete.	5/18/10	7/14/10
<b>Prototype Real World Trial</b> 08/14/2010 Real world prototype testing underway. Performance differences between original iPhone and current generation iPhone acceptable. Need to attain iPad and 1st generation iPod touch for support.	7/21/10	7/29/10

## Tasks

Name	Begin date	End date
<b>Construction</b> 02/01/2010 Take assets/code generated in elaboration and build functional product. 03/12/2010 Added Visual design development/generation path. 05/26/2010 Added Public Presence tasks. 07/20/2010 Added Audio Engineering, delays to construction, delay to Usability. 09/01/2010 External Usability review abandoned. Moving forward with present UI. 09/12/2010 Timeline adjusted for delay for major personal engagement. 2 months of development time will be lost to prepare for engagement.	5/21/10	4/16/11
<b>Public Presence Construction</b> 09/01/2010 Architecture of public web-presence determined. Visual design prototypes underway.	5/21/10	7/31/10
<b>Blog Creation</b> 05/26/2010 Entertaining a blog about the process. Transition blog to fully-fledged public presence. 06/13/2010 First blog entry posted under old blog-site. 07/08/2010 Add'l updates written. 07/20/2010 Initial Blog and site branding complete. Iterations needed.	5/21/10	5/30/10
<b>Business Entity Creation</b> 05/26/2010 Decision to create LLC entity for purpose of production of this project. 06/13/2010 LLC research underway. 06/20/2010 LLC creation documentation. 07/08/2010 Articles of Organization received from state of MO. TeamAxe, LLC. created. 7/20/2010 Apple Developer account transferred from Adam Axe entity to TeamAxe, LLC. entity.	7/5/10	7/31/10
<b>Visual Design Finalization</b> 09/07/2010 Design look and feel finalized. Asset generation underway for final UI.	5/27/10	8/28/10
<b>Interface Asset Generation</b> 04/08/2010 Photography completed. Asset generation (lighting, cropping, resizing) commencing. 07/28/2010 Actual interface development underway, entry screen iterations commencing. 09/10/2010 Primary screen layouts finalized. Asset generation underway.	5/27/10	8/28/10

## Tasks

Name	Begin date	End date
<b>Project Asset Generation</b> 04/08/2010 Asset prototypes constructed. Performance issues noticed. 07/28/2010 Visualization issues corrected. Asset toolchain updated. Asset generation commencing. 09/01/2010 Final set of version 1 production assets determined. Visual asset generation nearing completion.	6/5/10	8/6/10
<b>Usability Review</b> 05/26/2010 Awaiting Usability results. 06/13/2010 Still awaiting Usability Resource response. Delay of 1 month. 07/20/2010 Still no response from Usability Resource after repeated communication attempts. 09/01/2010 External Usability review abandoned. Current use cases and UI assets approved for production. Usability review will be conducted prior to version 2 release.	5/30/10	7/16/10
<b>Audio Engineering</b> 07/20/2010 Realized the need for ambient sound effects and possibly a theme. Began research into audio design of peer software.	9/20/10	12/17/10
<b>Theme Composition</b> 07/20/2010 Previously composed pieces reviewed. Possible candidates identified.	9/20/10	12/11/10
<b>Effects Engineering</b>	10/17/10	12/17/10
<b>Primary Development</b>	7/9/10	2/22/11
03/08/2010 Primary class development 06/13/2010 Primary visual development deliverable unusable in current form. Undergoing lower-level rewrite to attain 60fps. Extension of 1 month to project for research.		
<b>Interface Development</b> 03/09/2010 Designing and implementing User feedback. Implementing visual design metaphor. 04/08/2010 3 Primary Screens constructed. Conducting initial user testing. 07/28/2010 Most interface NIBs constructed and linked with View Controllers. 09/01/2010 All navigation view controllers present in at least stub form. One additional set of screens will be developed as aggregate of several prototyped screens.	7/9/10	2/5/11

## Tasks

Name	Begin date	End date
<b>Class Development</b> 03/03/2010 Primary development of codebase. 04/09/2010 Production codebase started. 07/28/2010 Most ViewControllers, View and Model structures created. Iterations underway. 09/12/2010 All view controllers and non-CoreData model objects created.	7/9/10	2/22/11
<b>Data Development</b> 03/10/2010 Primary development of data structures 04/09/2010 Data divided into 2 partitions, System and User. 09/10/2010 Dissection of data model into System and User data finalized for ease of Core-Data migration issues with subsequent app versions.	7/9/10	2/8/11
<b>Performance Development</b> 03/10/2010 Troubleshooting, leak management, performance improvement. 04/08/2010 Major performance issues discovered in Mobile Safari with custom webkit JS engine. 09/01/2010 Apple Instruments tool researched and now heavily utilized during development process. Identification of major memory leak in primary application visualization asset. Investigation underway. 09/10/2010 Low Level Core graphics asset import and generation toolchain completed. All memory leaks with import and CoreGraphics visualization stopped. Primary application visualization asset causes crash in intra-screen navigation. Investigating.	7/9/10	2/20/11
<b>Ongoing Training and Documentation</b> 06/20/2010 WWDC10 Videos downloaded. Training ongoing. 07/28/2010 WWDC10 Videos extremely useful. UI automation and Instrument utilization are to be implemented soon in project. 09/01/2010 Instrument implementation into development workflow completed. UI automation appears to be buggy and timing of screen navigation on script is not assured. Researching.	6/17/10	11/1/10
<b>Quality Assurance</b> 03/01/2010 Finalization of testing before alpha release. 09/01/2010 Definition of alpha/beta releases created.	12/17/10	1/18/11

## Tasks

Name	Begin date	End date
<b>Final Usability</b> 03/03/2010 Review of usability study and last iteration. 06/13/2010 Usability has not become due to non-response from resource. Delaying 1 month. 07/20/2010 No response from Usability Resource. Delaying 1 month. Troubling. 09/12/2010 External Usability abandoned. In-house usability interview conducted.	12/17/10	1/18/11
<b>User Documentation</b> 03/12/2010 Creation of User documentation. Leverage Use Cases. 06/13/2010 Must focus on visualization rewrite. Documentation delayed.	1/30/11	2/16/11
<b>Alpha Release</b> 03/12/2010 Alpha release to testers.	2/17/11	3/20/11
<b>Gather Tester Information</b> 07/20/2010 Identified need of Alpha Testers and process.	2/17/11	3/20/11
<b>Alpha QA Iteration</b> 03/12/2010 Iteration of Alpha test back to testers.	2/22/11	3/10/11
<b>Beta Release</b> 03/03/2010 Beta release to testers.	3/20/11	4/3/11
<b>Gather Add'l Tester Information</b> 07/20/2010 Identified need of Beta Testers and process.	3/20/11	3/28/11
<b>Beta QA Iteration</b>	3/20/11	4/3/11
<b>Release Candidate</b> 03/03/2010 Complete changes from Beta release. Release to larger testing audience.	4/3/11	4/16/11
<b>Transition</b> 03/01/2010 Rough outline of Transition tasks. Further elaboration upon reaching Construction Phase. 09/12/2010 Timeline adjusted for delay for major personal engagement and usability loss.	11/1/10	6/2/11

## Tasks

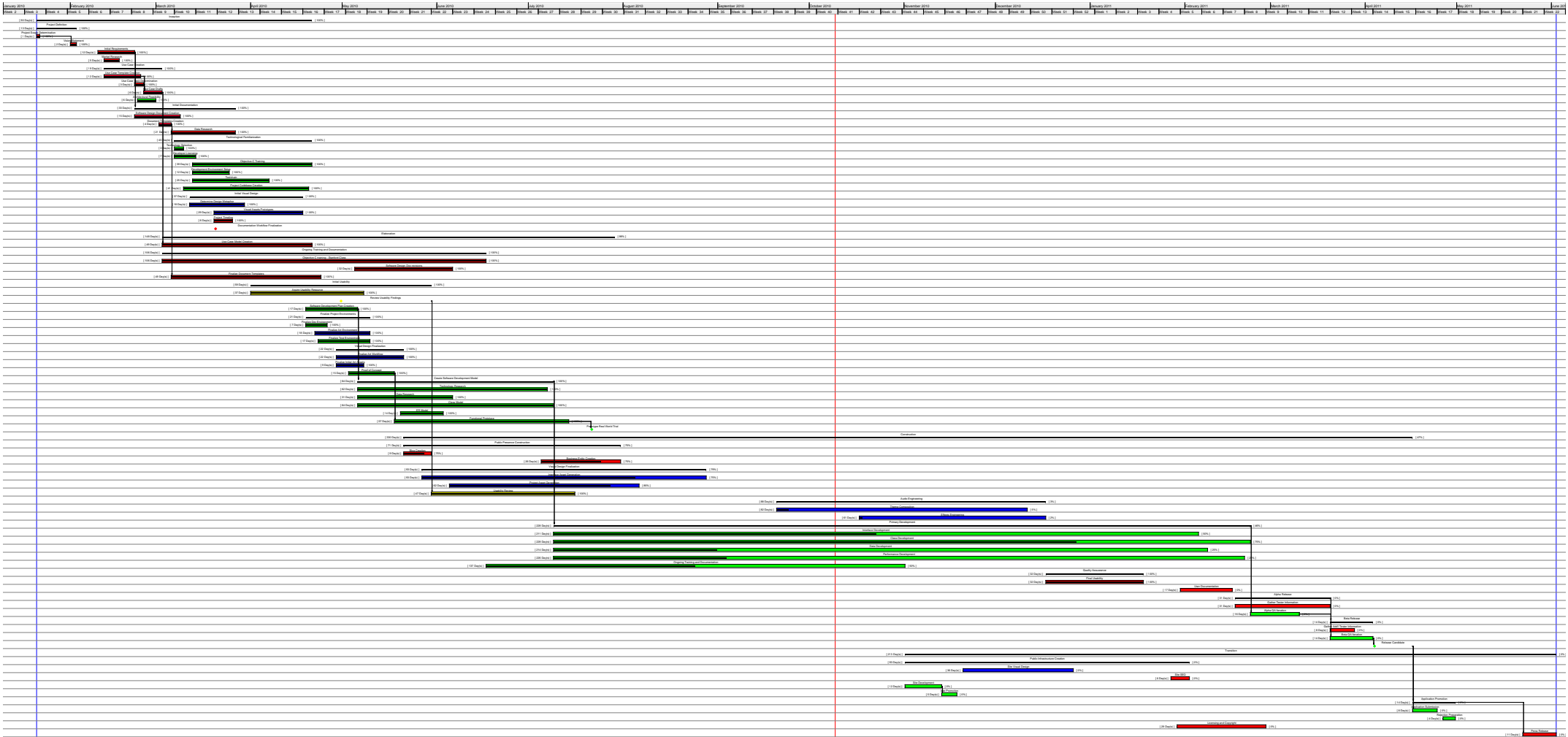
Name	Begin date	End date
Public Infrastructure Creation <small>03/12/2010 Establish public hosting, DNS, technology vendors for public site.</small>	11/1/10	2/2/11
Site Visual Design <small>03/12/2010 Leverage project visual design assets into web assets.</small>	11/20/10	12/26/10
Site SEO <small>03/12/2010 Optimize site for aggregation on various public and social sites.</small>	1/27/11	2/2/11
Site Development <small>03/12/2010 Develop site framework and pages.</small>	11/1/10	11/13/10
Site Promotion <small>03/12/2010 Promote site.</small>	11/13/10	11/18/10
Application Promotion <small>03/12/2010 Finalize application and submit for approval.</small>	4/16/11	4/30/11
Application Submission <small>03/12/2010 Prepare project for submission to iTunes Connect.</small>	4/16/11	4/24/11
Rejection Preparation <small>03/12/2010 Prepare for application rejection. Document code, eliminate bugs/leaks.</small>	4/26/11	4/30/11
Licensing and Copyright <small>03/12/2010 Submit product logos, procedures and project for licensing, copyright and patenting.</small>	1/29/11	2/27/11
Press Release <small>03/12/2010 Write press release for publishing on public/social sites.</small>	5/22/11	6/2/11

## Resources

Name	Default role
PrjMgr	Project Manager
DevMgr	Development Manager
ArtMgr	Graphic Design Manager
QAMgr	Quality Assurance Manager
MktMgr	Marketing Manager
Dev	Developer
Arch	Architect
Art	Graphic Designer
QA	Quality Assurance Tester
Ed	Editor
BA	Business Analyst
Con	External Consultant
Audio	Audio Engineer



Gantt Chart



Resources Chart

