

B.U.B.O.L.O. Sprint 2 Requirements

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Threshold Requirements:

This list assumes Sprint 1 requirements are included

Populated Map -- Including examples of all elements of the game: All terrain types, trees, bases, pre-made wall and road structures, bases, pillboxes, pre-laid mines. Note that some objects may be non-functional and/or non-damageable

Collision Detection -- Tank will stop moving when it collides with a Pillbox, Wall, Enemy Base or Tank. Bullets will stop traveling when they collide with a Pillbox, Wall, Enemy Base or Tank.

Controllable & Armed Tanks -- Tank can move forward and/or rotate, Tanks can fire bullets. Tank speed will be dependent on Terrain type. Camera will be centered on Tank.

Map Parser -- Map parser is fully implemented. The parser must create the game world from a Tiled map file (Tiled is our map editor).

Images -- All gameplay images created

Sound Effect System -- Sounds will play when events occur: Bullet Fire, Bullet Hit (Wall, Tank, Pillbox, Enemy Base), Tree Gathered/Bullet Hit, "Building", Man Death, Tank in Shallow Water, Tank in Deep Water. These may use temporary sound effect files if the "Final Sound Effects" stretch goal is not completed.

Preference UI -- Sound Effects Volume, Music Volume, Disabled ("Gray") control for Resolution/Screen Size

Expanded "Start Game" UI -- Three available options: Start Single Player, Preferences and Exit. Two un-available options: Start Multi-Player, Join Multi-Player

Stretch Requirements:

Operable Bases -- Bases will recharge Tank (Some Allied Base will be provided to start)

Capturable Bases -- Bases will start as Neutral and become Allied when a tank rolls over them. Enemy Bases must be "captured" by depleting the Base of HP then rolling over it. Implies some Bases will be "Enemy" to start unless Multi-Player is functional.

Functional Multi-Player via Network -- Two instances of B.U.B.O.L.O. operating on different computers; at least allowing Tank movement. Includes UI required to start/join Multi-Player games.

Operable Mines -- Player can lay mines. Tank colliding with a Mine, or Bullet that explodes over a Mine, will cause the Mine to explode

Game Music -- Music is played at Menu UI and during game play

Final Sound Effects -- Final sound effects are created for the following events: Bullet Fire, Bullet Hit (Wall, Tank, Pillbox, Enemy Base), Tree Gathered/Bullet Hit, "Building", Man Death, Tank in Shallow Water, Tank in Deep Water

Damageable Tanks -- Tanks will take damage from Bullet collision, Mine explosion, or close proximity to an exploding Tank

Operating Pillboxes -- Pillboxes will fire at 'enemy' Tanks

Capturable Pillboxes -- Destroyed Pillbox can be picked up, re-build and will be allied with that player (will not fire at that player)

Persistent User Preferences -- Any customizable control on the UI is saved to disk and loaded automatically at application start

Organization:

Sprint 2 will dissolve the sub-team structure used in Sprint 1 in favor of individual timeboxed assignments which are accomplished by a single worker, or self-selected small group. Additionally, we have added a second Quality Assurance Manager so as to increase the speed of reviews. These changes enable the team to complete weekly "mini-Sprints" that are discussed at our Saturday meetings, which should increase our flexibility and output compared to our Sprint 1 structure. Assignments are issued on a volunteer/ability basis. If a task is not completed within the allotted time it is re-evaluated and re-assigned; depending on the cause of the task not being completed this may simply consist of pushing out the completion date, reassignment to another worker, or breaking the original task into parts if possible. Critical path tasks which block later tasks are given higher priority and resources.