Odysseus' Quest

Race to Ithaca

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Formal Game Description
(Rough draft)

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1 GAME DESCRIPTION

1.1 INTRODUCTION AND HISTORIC BACKGROUND

1184 B.C.: The battle of Troy is won, and the glorious Greek warriors are returning safely to their beloved families. Except Odysseus who had to struggle for 20 years on his Odyssey. Long forgotten by historians there was actually not only Odysseus but also his 3 brothers: Adysseus, Edysseus and Idysseus. All of them being in love with the beautiful Penelope of Ithaca. Knowing that only one can get her heart, they decided to compete in a sailing regatta. The first reaching Ithaca will marry her. To improve their chances, each competitor seeks to win the favour off an Olympic god. The gods, Zeus, Poseidon, Chronos and Hermes, being bored as always, make game out of the destiny of our 4 heroes. They give them the task to gather Ambrosia. In exchange they will granting them special abilities to solve their quests and defeat their enemies.

1.2 GOAL OF THE GAME

The goal of the game is to be the first one to reach Ithaca by getting through the course. The players have to pass all the checkpoints in a given order as fast as possible, only knowing the next target location at any time. To make it harder for the opponents each player takes advantage of using its god's power in the most clever way. As the game has, in contrast to a normal racing game, no predefined course, one challenge for the players is to find the "shortest path" to the next checkpoint. However there's no real best way, for some player it can be better to take a longer path and collect some ambrosia, or some player has a special ability (like flying) which allows him to take a shortcut and be even faster. Another challenge is the decision problem on how to spend ambrosia, use it in offensive way to stop an enemy in a more subjective way to put oneself in a better position.

1.3 GAME PLAY

1.3.1 PREPARATION PHASE

1.3.1.1 SAILING BOATS

There will be several types of sailing boats which have different penalties and bonuses on its attributes. The attributes that differ between the ship types are the speed, the maneuverability and the weight which has an influence on the effect of a collision between the sailing boats.
We define the following four types, where finding the exact factors/values of the bonuses and penalties is part of the balancing, but they will lie in a range of ~5%.

Type name	Bonus	Penalty
Clipper	Speed	Weight
Cruiser	Weight	Speed, maneuverability
Weasel	Maneuverability	Weight
Balancer	-	-

1.3.1.2 GODS

Each player can choose an Olympic god that will help him with special powers throughout the race.

God	Offensive ability	Subjective ability
Zeus	Blend (all opponents in some radius to you are blinded for a short amount of time)	Wind (be "immune" to collisions with opponents)
Poseidon	A wave is initiated directly below you and your opponents are flushed away (the closer, the more) **[sketch A]**	Shield (an opponent's offensive attack is parried)
Hermes	Steal energy from closest opponent	Fly **[sketch D]**
Chronos	Make your closest opponent disabled (can't steer) **[sketch C]**	Blink (short range teleport in direction of movement)

A)

B)

C)

D)

E)

1.3.1.3 ENVIRONMENT

Still to do

1.3.2 PLAY PHASE

1.3.2.1 CHECKPOINTS

At every checkpoint is for each player a buoy. An arrow in the interface indicates the direction to the next buoy. The player can collect they buoy by drive into it. The buoy will disappear and at the next checkpoint a new one will appear.
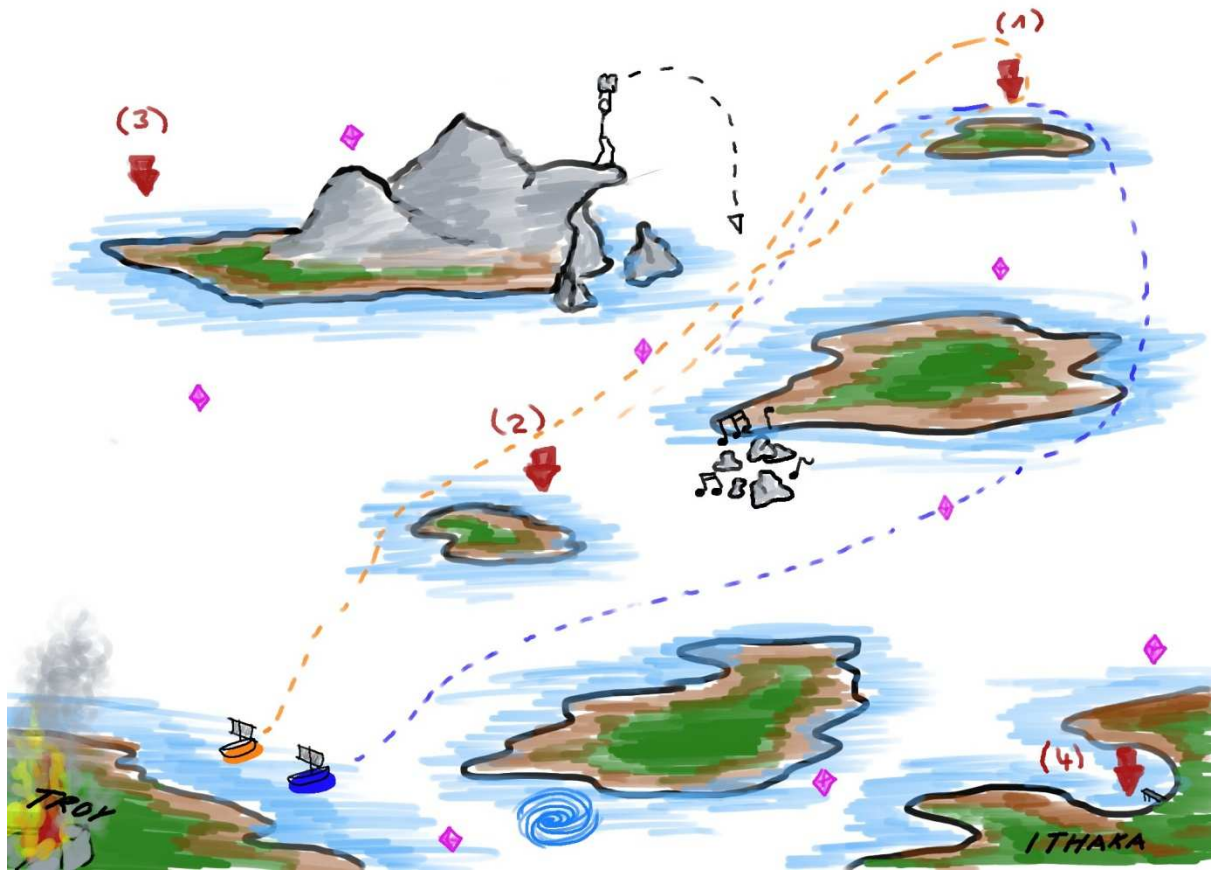
1.3.2.2 AMBROSIA (ENERGY)

Ambrosia, the exhalation of earth, appears from time to time at random points on the surface of the ocean. The players can collect it in the same way as a checkpoint. The ambrosia can then be used to activate the god's abilities.

1.3.3.3 STEERING

Left, right, forward, but no backward (no brake).

2 DEVELOPMENT SCHEDULE

2.1 LAYERED TASK BREAKDOWN

2.1.1 FUNCTIONAL MINIMUM

- Simple boat model
- Steering
- 1 player
- Camera setup
- Basic map (water and islands/boundaries)
- Checkpoints/way control

2.1.2 LOW TARGET

- Split screen
- Up to 4 players
- Basic menu
- Sailing boat models
- Rigid-body handling, collisions
- Ambrosia (energy)
- HUD (Head-Up Display)
- Basic God properties (blind, paralyze, sleep/stop/rotate/whirl, ...): logic

2.1.3 DESIRED TARGET

- Shallow water
- Sleeping
- Full menu (God selection, boat selection)
- Sound effects
- Shading
- Basic God properties: graphical representation

2.1.4 HIGH TARGET

- Reflection
- Advanced God properties (fly, water tower, steal energy, invisible, shield/immortal)
- Environment (Sirene, Hydra, ...)
- Mini-Map
- Different boat properties (acceleration, high speed, agility, strength/ramming)
- Intro screen
- Rigid Body - Shallow Water coupling

2.1.5 EXTRAS

- Generic/random map generation
- Minigames
- Egypt Lemmings
- Easter egg
- Refraction

2.2 TASK LIST

Task	Description	Notes	Person	Planned Time (h)	Actual Time (h)
0.1	Brainstorming		All	-	40
0.2	Formal Game Proposal		All	-	20
0.3	Sketches (Hand + Maya)		Thomas	-	10
Functional minimum					
1.0	Software engineering Technical setup	Threads, graphics, physics, …	All	25	
1.1	Simple boat model		Thomas	2	
1.2	Steering		Andi	10	
1.3	Camera setup		Andi	5	
1.4	Basic map (water and islands/boundaries)		Thomas/Remo	10	
1.5	Checkpoints/way control	Basic scene element, reusable for energy, extensions…	Thomas/Remo	10	
Low target					
2.1	Basic Menu		Thomas	4	
2.2	Split screen		Andi	5	
2.3	Up to 4 players		Andi	3	
2.4	Sailing boat models		Thomas	5	

2.5	Rigid-body handling, collisions	using a library	Remo	5
2.6	Ambrosia (energy)		Thomas	3
2.7	HUD (Head-Up Display)	target arrow, energy bar, skill icons (cool down)	Thomas	10
2.8	Basic God properties: Logic	blind, paralyze, sleep/stop/rotate/whirl, ...	Andi	10
Desired Target				
3.1	Shallow water		Remo	25
3.1.1	Sleeping	Cell activity control	Remo	15
3.2	Full Menu		Thomas	10
3.3	Sound effect		Thomas	10
3.4	Shading		Andi/Remo	20
3.5	Basic God properties: graphical representation		Andi	20
High target				
4.1	Reflection		Andi/Remo	20
4.2	Advanced God properties: Logical & graphical representation	(fly, water tower, steal energy, invisible, shield/immortal)	Andi	25
4.3	Environment (Sirene, Hydra, ...)		Thomas	25
4.4	Mini-Map		Thomas	15
4.5	Different boat properties (acceleration, high speed, agility, strength/ramming)		Remo	8
4.6	Intro screen		Thomas	5

4.7	Shallow water - rigid body coupling		Remo	20
Extras				
5.1	Generic/random map generation			
5.2	Minigames			
5.3	Egypt Lemmings			
5.4	Easter egg			
5.5	Refraction	water		

2.3 TIMELINE

Week	Assignment	All	Thomas	Time 107	Remo	Time 106	Andi	Time 111
1 (22.2)		Brainstorming						
2 (1.3.)	5 game ideas	Brainstorming Rough draft/ Pitch of Game idea						
3 (8.3.)	Rough draft Pitch of game idea	Final Game Proposal/ Prototype						
4 (15.3.)	Final game proposal	(16.3) 1.0 Software engineering Technical setup (finalize prototype?)	1.1 Simple boat model 1.4 Basic map (water and islands/boundaries)	8 2 5	1.4 Basic map (water and islands/boundaries)	8 5	1.3 Camera Setup	8 5
5 (22.3.)	Game prototype		1.5 Checkpoints/way control 2.1 Basic Menu 2.4 Sailing Boat Models 2.6 Ambrosia (energy)	5 4 5 3	1.5 Checkpoints/way control 2.5 Rigid-body handling, collisions	5 5	1.2 Steering 2.2 Split screen 2.3 Up to 4 players	10 5 3
6 (29.3.)			2.7 HUD (Head-Up Display) 3.2 Full Menu	10 10	3.1 Shallow water	25	2.8 Basic God properties: Logic 3.4 Shading	10 15
7 (5.4.)			3.3 Sound effect	10	3.4 Shading 3.1.1 Sleeping	5 15	3.5 Basic God properties: graphical representation	20

8 **(12.4.)**		Writing interim Report Bug Fixing First playtesting Time for things which take more than scheduled (Check schedule for alpha release)					
9 **(19.4.)**	Interim report		4.3 Environment (Sirene, Hydra, …)	25	4.1 Reflection	10	4.1 Reflection	10
10 **(26.4.)**			4.4 Mini-Map	15	4.7 Shallow water - rigid body coupling	20	4.2 Advanced God properties: Logical & graphical representation	25
11 **(3.5.)**		Alpha report Bug Fixing Preparing for playtesting	4.6 Intro screen	5	4.5 Different boat properties	8		
12 **(10.5.)**	Alpha release	Playtesting and evaluation Game Balance Tuning						
13 **(17.5.)**	Playtesting Playtest presentation	Finish for Gold version in-class presentation if everything works, do some extra stuff						
14 **(24.5.)**	In-class debriefing presentation	Make Video, Conclusion & public presentation						
15 **(31.5.)**	Public presentation Conclusion & video							

3 ASSESSMENT

Tell us what the main strength of the game will be. What part is going to be the most cool?

- Free world course (you have to pass the checkpoint, how you get there is irrelevant, choose your way).
- Trade-off between shortest path and collecting Ambrosia
- Dominate your friends
- Tactical use of powers
- Mediterranean flavor
- Realistic models of historic ships
- Greek feeling (without money problems)
- Heart-warming love story, your girlfriend will love it!

Who might to want to play this game?

- No prerequisites needed, sit down and have fun!

What do they do in the game?

- Re-experience the quest of Odysseus.

What virtual world should the system simulate?

- Pseudo-physical-realistic, historic based story, Mediterranean Sea.

What criteria should be used to judge if your design is a success or not?

- Entertainment
- Easy to learn, long-time fun
- Physically plausible