

# Assignment 2

“Tiny Empire AR” - Game Design Document

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# TINY EMPIRE

AR

# Short Description

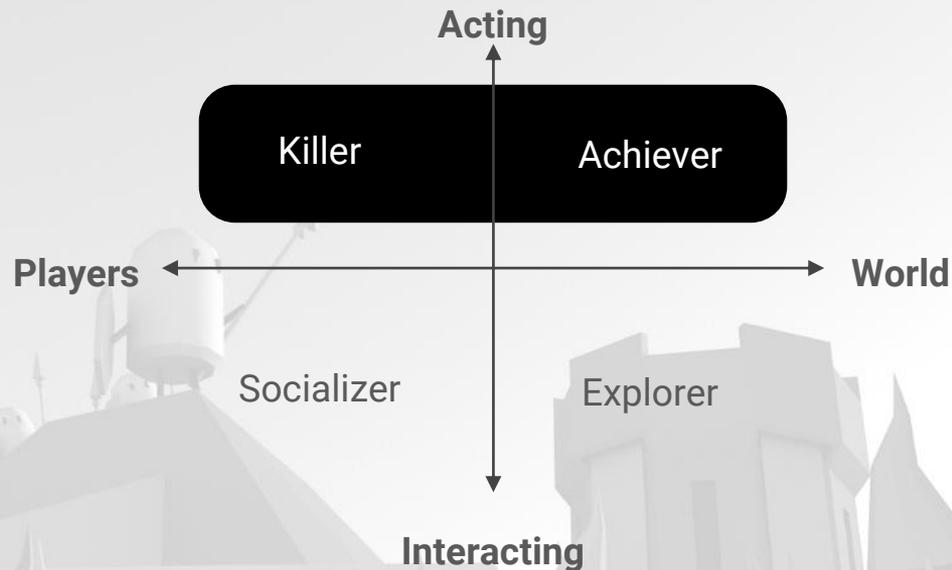
TinyEmpire is a real-time augmented reality strategy game for mobile devices.

You are the king of a tiny empire. Use the augmented reality to place the battleground wherever you want. Command your brave tiny soldiers with drag & drop to conquer other towers. With every won battle you earn points you can spend to increase the speed, health or damage of your own troops. When you have enough points collected you can buy events that can help you win a fight. Want a thunderstorm that destroys your enemies? Just place it on the map with drag and drop.



# MDA

# Player Types



# MDA

- Core Mechanics
  - Conquer new towers with drag & drop
  - Generate Units in own towers (→ more towers = more units)
  - (not yet implemented) Individualize own units by spending skill points on health, strength or speed.
  - Use Augmented Reality to make the small soldiers walk around in your real environment.

# MDA

- Difficulty (not yet implemented)
  - With every level the enemy units get stronger and faster.
  - Sometimes the enemy will have two start bases instead of one which gives them a significant advantage.
  - You have to apply the skill points depending on your playstyle. If you want to rush over the enemies apply the points to speed. If you are more like a strategic tanky player use the skill points for strength and health to make your towers invulnerable.

# MDA

- Storyline

- At the moment:

- very basic storyline: You are the king of the „Tiny Empire“. Expand your kingdom and defend it from other forces.

- Possible Future storyline:

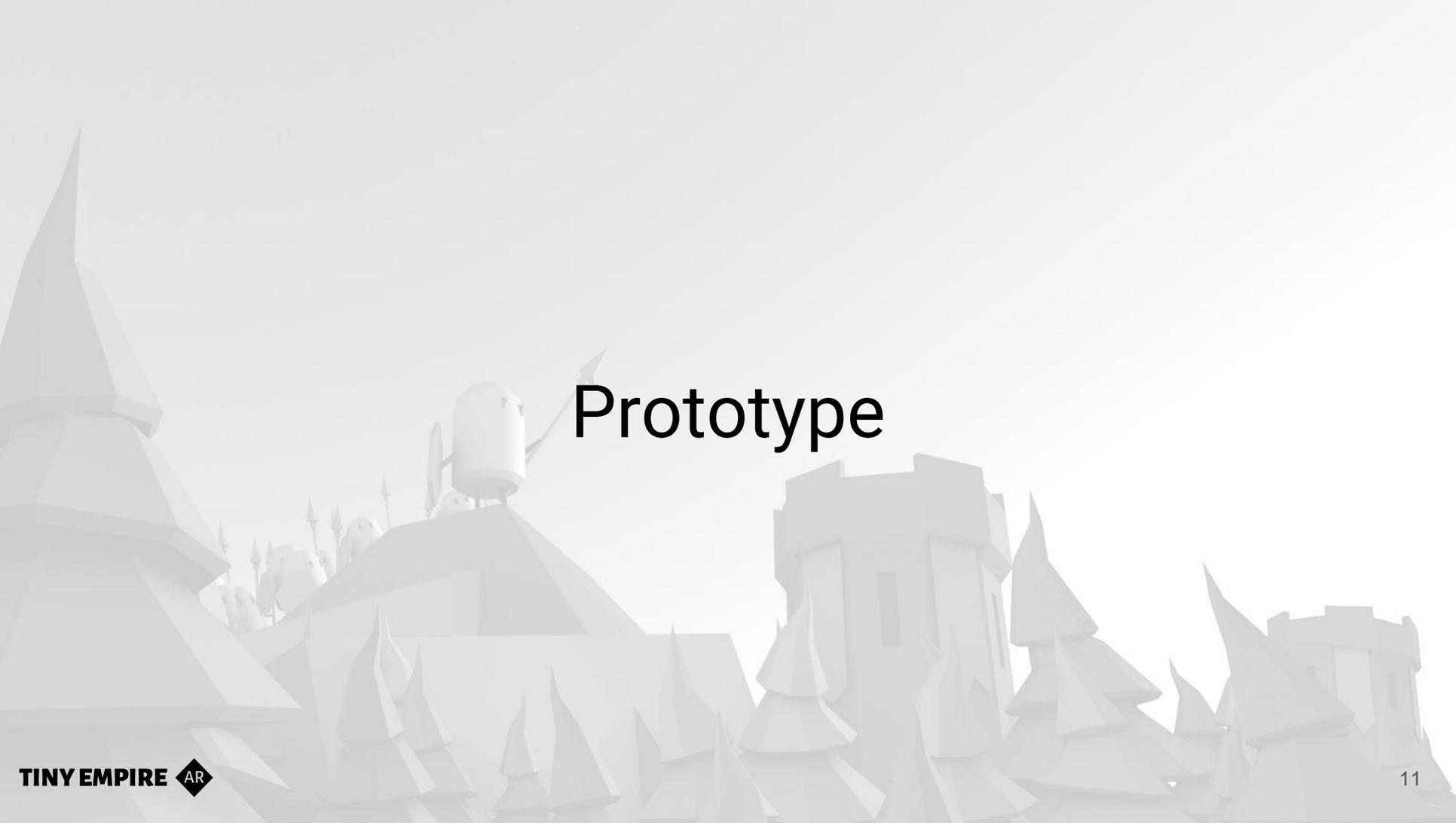
- The dark kingdom attacks your tiny empire. Defend your villages and towers against (tiny) monsters. Quests like „Save the town“ or „Rescue the princess“ are possible.

# MDA

- Winning/Loosing condition
  - The player that owns all towers on the battleground wins.
- Powerups (not yet implemented):
  - When a tower has 100 Units it can be upgraded to a special tower. The units inside will be reduced to 10.
  - Buying powerups in a ingame store like
    - potions that increase the strength of all units for 1 min

# MDA

- Game Aesthetics
  - The game gives you the feeling of commanding small soldiers in your living room, the office or the park. You can literally walk around the battleground and find the best way to fight your enemy. The game should be easy to use so only a single interaction is used: Drag&Drop.
  - The sound is 3D: The closer you get to the fights the louder are the noises. If you are far away you can only hear them fighting in the distance.



# Prototype



# Prototype V1 Screenshot

The first prototype was created to test the drag and drop mechanic. The original idea was to have 3 different units with different abilities.

# Throw-Away-Prototype

- Why am I evaluating?
  - What is needed for testing (MVP) Information required on screen for successful playing
- Which Game Aspect am I exploring?
  - Core Game Mechanics: Drag and Drop to conquer empty slots. Drag and Drop to fight enemy slots.
- What type of data do I want to collect?
  - Ideas, screen capturing, feedback on how much information does the player need.
- What am I evaluating?
  - Find out what information is required on screen to make a new user play the game.
  - Find out if the players are okay with the size of the map and the base size. (for finger tab)
- What constraints do I have?
  - No in-game tutorial (only paper prototype) to show basic mechanics

# Feedback

<b>Task/Mechanic</b>	<b>Result</b>	<b>Change Request</b>	<b>Rating</b>
Unit count is increasing	Was not clear in first place	Needs more indicators than just the number	Must have
Drag & Drop	drag and drop without introduction is unintuitive	Tutorial for moving units	Must have
Drag & Drop	People were unsecure if they managed to tap on the right base	Indicator and line that shows the tapped base and the direction the units are moving	Must have
Overall	A lot is happening and people were kind of overwhelmed with information	A few seconds countdown or „start“ button before the game begins	Must have



# Prototype V2 Screenshot

The concept changed to a 3D version and also to a more classical strategy game camera perspective. Also the environment was created. At this point the game was still a on screen only game. Therefore everything could be a little bit smaller.



# Prototype V3 Screenshot

The last prototype was created to test the AR functions and how the user would interact with the map. From this the final version of the game was created.

# Throw-Away-Prototype 3

- Why am I evaluating?
  - Will the player walk around the AR map intuitively or do they need some guidance?
- Which Game Aspect am I exploring?
  - Core Game Mechanics: Drag and Drop to conquer empty slots. Drag and Drop to fight enemy slots.
  - AR Technique/Interaction: Do people move around and try to find a certain perspective?
- What type of data do I want to collect?
  - Ideas, screen capturing, feedback on how much information does the player need.
- What am I evaluating?
  - Find out what information is required on screen to make a new user play the game.
  - Find out if the players are okay with the size of the map and the base size. (for finger tab)
- What constraints do I have?
  - No in-game tutorial (only paper prototype) to show basic mechanics

# Feedback

<b>Task/Mechanic</b>	<b>Result</b>	<b>Change Request</b>	<b>Rating</b>
AR Setup	Player did not know how to setup. Moved the device until something happend	Needs some kind of onboarding	Must have
Drag & Drop	Works surprisingly well in AR. People move the device more than the finger on the screen.		
Start base	As the player can have a completely unexpected perspective the home base was not detected right away by the player	Some kind of indicator where to start.	Should have



# Final Game Prototype

This prototype was the final prototype to playtest the working mechanics.



# Features

# Feature List

Feature	Owner	Rating
Drag & Drop to command troops to another tower/city		Must have
Augmented Reality		Must have
Skill Points to upgrade own units		Should have
Upgrades for towers		Nice to have
Special Events on Map		Nice to have

A low-poly 3D rendered scene in shades of gray. In the center, a cylindrical turret with a pointed arrow is positioned on a hill. To the left, a large, pointed structure resembling a tree or a tower stands. To the right, there are several blocky buildings with rectangular windows and pointed roofs. The background is a plain, light gray sky.

# Assets

# Assets

<b>Asset</b>	<b>Origin</b>
3D Models like unit, tower and forest.	Created and animated by myself.
Logo and menu background	Created by myself.
Sound/Music	Taken from freesounds.org



# Art Bible

Logo

**TINY EMPIRE**

**AR**

**TINY EMPIRE**

**AR**

**Alegreya Sans Extra Bold**  
for headings and titles

**ABCDEFGHIJKLMNOPQRSTUVWXYZ**

**abcdefghijklmnopqrstuvwxyz**

**1234567890**

**!“§\$%&/()=?**

# Font

## Alegreya Sans Light for normal text

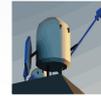
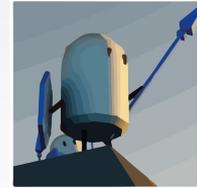
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# Icon



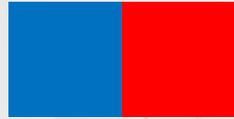
Icon

# Color Palette

User Interface



Team Colors



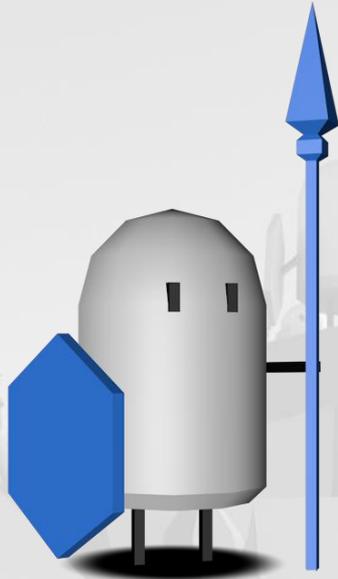
Forest



Tower



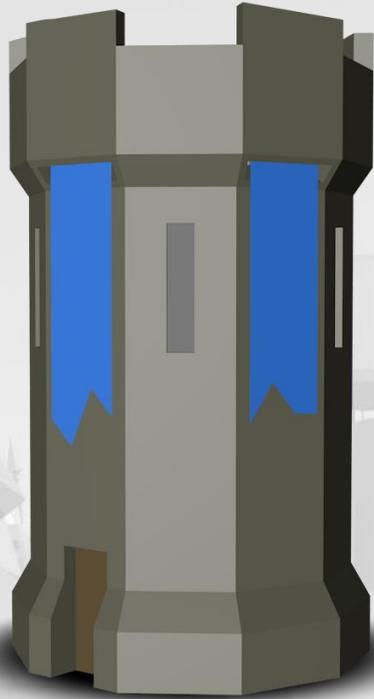
# Units



The shape of the units is very simple and should remind the player more of little walking marshmallows than humans.

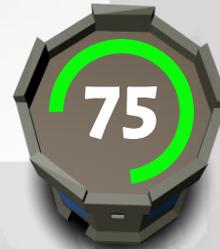
As units are very small on the screen they don't need to be so detailed. Also they need to be identified easily: Therefore their weapons are in the color of their team.

# Towers



Towers are the core element of the game. Inside a tower units are generated. As soon as a player owns all towers on the map they are the winner.

The team color is shown on the tower as flags.



On top of every tower there is an indicator of the amount of troops inside. Also there is a loading bar showing the max capacity of this tower.

# Environment

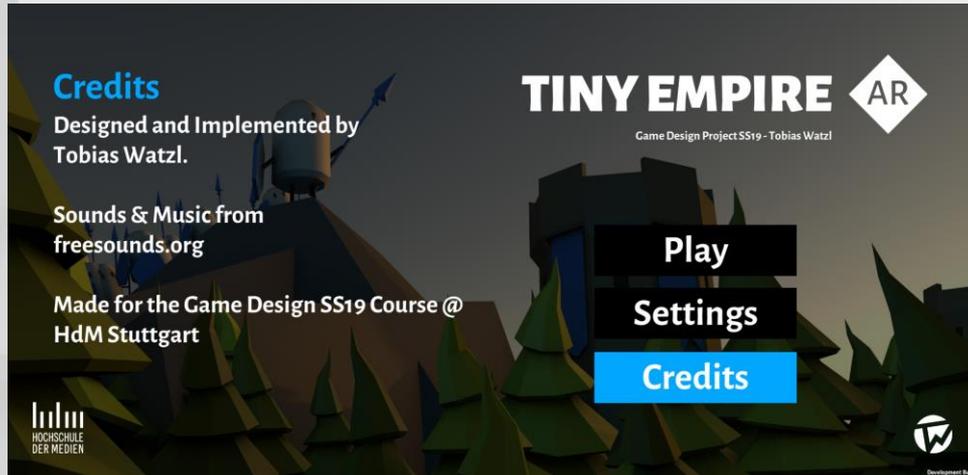


At the moment the environment only consists of the forest element that is randomly distributed over the map.

For future versions there can be several other elements that could be used as environment asset:

- Mountains/Stones
- Water (Rivers or little lakes)
- Cliffs or little holes.

# User Interface



Minimalistic User Interface in menu and during gameplay.

# User Interface



Pause Button

Minimalistic User Interface in menu and during gameplay.