forwARdgame
Senefelderstraße 16
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# SPLASHAAR

## Short description

SPLASHAAR is an AR monster painting fight.

In this game, we demonstrate the type of new experiences becoming available with the emergence of new technologies, such as 5G, Mobile Edge Computing, Augmented Reality and possibly MR glasses.

We aim to make those technologies (and the advancements they bring) be more tangible and easier to comprehend.

The goal of the game is to control your monster and move them around the world.
Everywhere they go, they leave a trail of paint behind. The monster who covers more surface with his paint - wins.

This is possible thanks to Google's 2020 newest technology called Depth API. This technology is Android exclusive.

forwARdgame was among select collaborators to contribute and gain early access to Google's new generation of AR, Depth API.

Google featured this game when they launched Depth API:
developers.googleblog.com/2020/06/a-new-wave-of-ar-realism-with-arcore-depth-api.html

## Long Description

As monsters move, they are leaving a trail of color behind, painting the surface and adding points to the player who controls it. The monster can climb up walls or furniture but will always move within 1 - 1.5 meters from the player, therefore making the player stretch up to paint a wall higher. Sometimes the monster would "sticks" to non-horizontal surfaces and needs to be "dragged" off them -- faster movement of the camera (imagine trying to unstick a sello-tape of a box), if player didn't move the camera fast enough, the monster stays on the surface and slowly "slimes" towards the floor.

A monster can surround an area of his color, and it will completely fill with the color of the monster. If a monster of one color intercepts a trail of another, the monster who got intercepted “explodes” and player needs to return to the “color base” to. Monsters cannot be interfered when within their surrounded color area.

Monsters can collect powerups, which are randomly generated on the floor, only in the places where players scanned and low level surface “floor” was detected.

Players battle over color-cannons, that throw color in the air (they grow only in places where players previously colored, making sure they are accessible) - the color of a monster who conquered a cannon for a limited amount of time (so players need to continue battling for the cannons).

Players fight by throwing color at the opponent’s monster (color ammo runs out). When within 3 meters radius from a cannon players can battle. When more than 80% of the monster surface is covered in opponent’s color (or they were hit more than 10 times), they “explode”.

Players can obtain “cleaning bugs” and get clean from the opponent color and also “color capsules” that they throw at each other.

## Low latency


This is a real time multiplayer and it requires a very low and stable latency (up to 30 ms) in order to synchronise every action and movement of the players. This is why SPLASHAAR is an ideal candidate for showcasing 5G connectivity.

Both players and up to 5 spectators need to get every single change as frequent as 50 times per second. Since players see each other physically in the real life - the digital sync needs to be perfect in order to preserve the immersiveness.

We’ve walked an extra mile to make this game feel as real as possible, with the physical game control and the realistic no-lag gameplay.

We see the low latency technology as a necessary enabler of this and many similar gaming experiences and look forward to improving them.

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The Android-based implementation of the game is vulnerable to high latency caused by standard WiFi connectivity. Therefore, integrating an MEC solution, significantly improves the game experience.

We have a plan of using 5G technology for taking Shared AR further towards Remote Shared Active AR gaming, when people from different locations around the world, take part in experiences being represented to other participants as acting holograms, having their interactions with the shared game elements perfectly synchronized between all the players across vast distances.


## Availability and localization

In the first version, it will support English (and probably more languages) and will be available in USA, Canada, Germany and Japan.

## Business model

Free with in-app purchases.

## Marketing

We are planning to start an ad campaign on YouTube and Instagram, Targeting 9-15 years old players in Western Europe, North America and East Asia. We are also planning a pre-launch event in Berlin and to partner with influencers' communities to help us promote the game.

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## Our story

Our company's vision is to make young people more active by creating Active Mobile Games for them. We believe that kids are less active today only because they don't have enough active playing opportunities within their favorite gaming world – the mobile. We see it as our mission to use the tool that drew the young people away from actively playing together – to do the exact opposite and allow them to use their mobile devices for a much healthier playing.

forwARdgame is a gaming lab based in Berlin, making mobile games for different audiences, activities and locations.

## Links

These links show the handheld Android-based ARCore implementation for the game:

youtube.com/watch?v=ix99iss5jLQ

drive.google.com/file/d/1Hnf9eUBsT7_sciEHmzLn_jfGbzobOZxm/view