## Connected Application Analysis - PlayerUnknown's BattleGrounds

Over the last few years, PUBG is one of the mobile games that I have spent hours in. It is an extremely connected mobile application where thousands of users interact with each other all over the world simultaneously. Whenever I am playing the game, my tech brain is just awestruck by imagining the amount of programming and development that lies behind the game. Every instance of the game has about 100 people playing together on a huge map. There are millions of possible interactions between the players among themselves and with their environment. There are many components to the game which all complement the primary objective, to be the individual or group to eliminate all other individuals or groups and be alive in the end. The game does a really good job at providing various maps and modes, each of which requires the making of extensive connection pathways and interactions. The graphics of the application are also extremely realistic and smoothly rendered. There are several interface screens that contain real-time game data including the amount of ammo available in the gun, the gun type, the vests, the person's appearance, the health bar, the inventory in the bag, the map of the place, and many more. The functionality of being able to play with friends adds a whole new dimension by allowing to be on voice call and chat in-game while simultaneously playing with friends.

But much like any other application, I also found certain areas where improvements could be used. To begin with, the biggest problem that I have faced sometimes is that of certain lags and glitches in the game. Many times they do occur due to network issues in the user's side, but sometimes there are problems on the server side. One of the funniest glitches I have seen is while driving a vehicle in the game which sometimes gets stuck in over a rock or a pit. Bombing the car with a grenade is a widely accepted way of making things right in such a situation.

One of the articles I had read about game development said that one of the most difficult parts of game development is to create the interactions of "opening and closing a door". This is a part where I believe PUBG really lacks behind in terms of other similar games. The animations for applying a health kit or a bandage could also be majorly improved. The algorithm for matching random players in a game, even though a very developed one, still requires some development especially while matching new players. Some of the game instances have also been observed to have a high number of bots (computer-programmed players), which lessen the game experience.

The final suggestion that I have for the application is more of a feature than a flaw. I believe to make the game more realistic, it should have uniform friendly-fire included. A bullet is a bullet and it shouldn't matter if it is from the gun of the enemy or a teammate. This way the game will be more closer to real life. Bombing a teammate, blasting a gas can near the teammate, blasting the car the teammate is riding, and even hitting the teammate with a pan are all ways where friendly fire is active in the game except firing them with a gun. I believe it should be made

totally uniform so that the game gives a close-to real-world experience. Decreasing the efficiency of a player having low health can also be employed to again make the game more realistic.

All this being said, the connected game application of PUBG is just phenomenal and I have deep respect for the creative minds that made it possible.

- Swostik Pati