VIRTUAL TRIBE: GPS BASED MULTIPLAYER ONLINE MOBILE GAME:
Game Logic and Algorithm

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Abstract

This thesis is about how gaming industry can benefit or use a fresh idea, by using GPS technology and location based service, which brings a new dimension to mobile gaming.

Virtual Tribe is an online multiplayer mobile game, which used the GPS as location tracking and pointing, while adopting the PBBG (Persistent Browser Based Game) into J2ME application and online text-based game. The system integrates Bluetooth connection using JSR-82 J2ME library, HttpConnection to server application PHP and online database. In this game, Player has the role of an emperor, or the power, who rules a virtual tribe, where the location of its tribe is determined from the location, the user registers at the first place. Using available features, have the task to build their tribe stronger and bigger, thus aiming to be the number one tribe at the Vitrhe world. The competition arises when one tribe deciding to invade other’s tribe. Winning the battle will give the winner a right to take over conquered tribe or even might be able to take over unclaimed land. Training soldiers, recon missions, forge an alliance with other tribes, are just some ways to finally rule the world of Vitrbe.

The system starts when GPS device is connected to mobile application through Bluetooth and which will be the input for the gameplay and location, where then will be parsed, processed and calculated in server application which also handles the game logic. Online database saves processed data and transaction record history. Every process’ result are shown to the player through updated game display.

The system have gone through several testing regarding to the aspects of the game such as: functionality, compatibility, and performance. Author also conducted public survey to gather feedbacks which will be discussed, thus ensuring the game will be able to fulfill the expectations of the gaming market, while making sure it entertains and give a new experience to the mobile gaming industry.

**Keyword:** mobile games, GPS games, PBBG, text-based game, Location Based Services