

Cuprins

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An overview of MMORPGs

1 Introduction

Massively multiplayer online role-playing games (MMORPGs) are a combination of role-playing video games and massively multiplayer online games in which a very large number of players interact with one another within a virtual world.

As in all RPGs, the player assumes the role of a character (often in a fantasy world or science-fiction world) and takes control over many of that character's actions. MMORPGs are distinguished from single-player or small multiplayer online RPGs by the number of players able to interact together, and by the game's persistent world (usually hosted by the game's publisher), which continues to exist and evolve while the player is offline and away from the game.

Challenges Presented by Massively Multiplayer Online Role Playing Games

Building the software for this class of game represents a collection of interesting technical problems. First, role-playing games require the creation of a customizable world. Secondly, these games are played online where one player's actions affect another player's game state. Thirdly, the world and the player characters must be persistent over time, which may consist of several years. Lastly, but by no means the least, the game must be playable by a large number of concurrent users. This last point requires that communication be very efficient and secure.

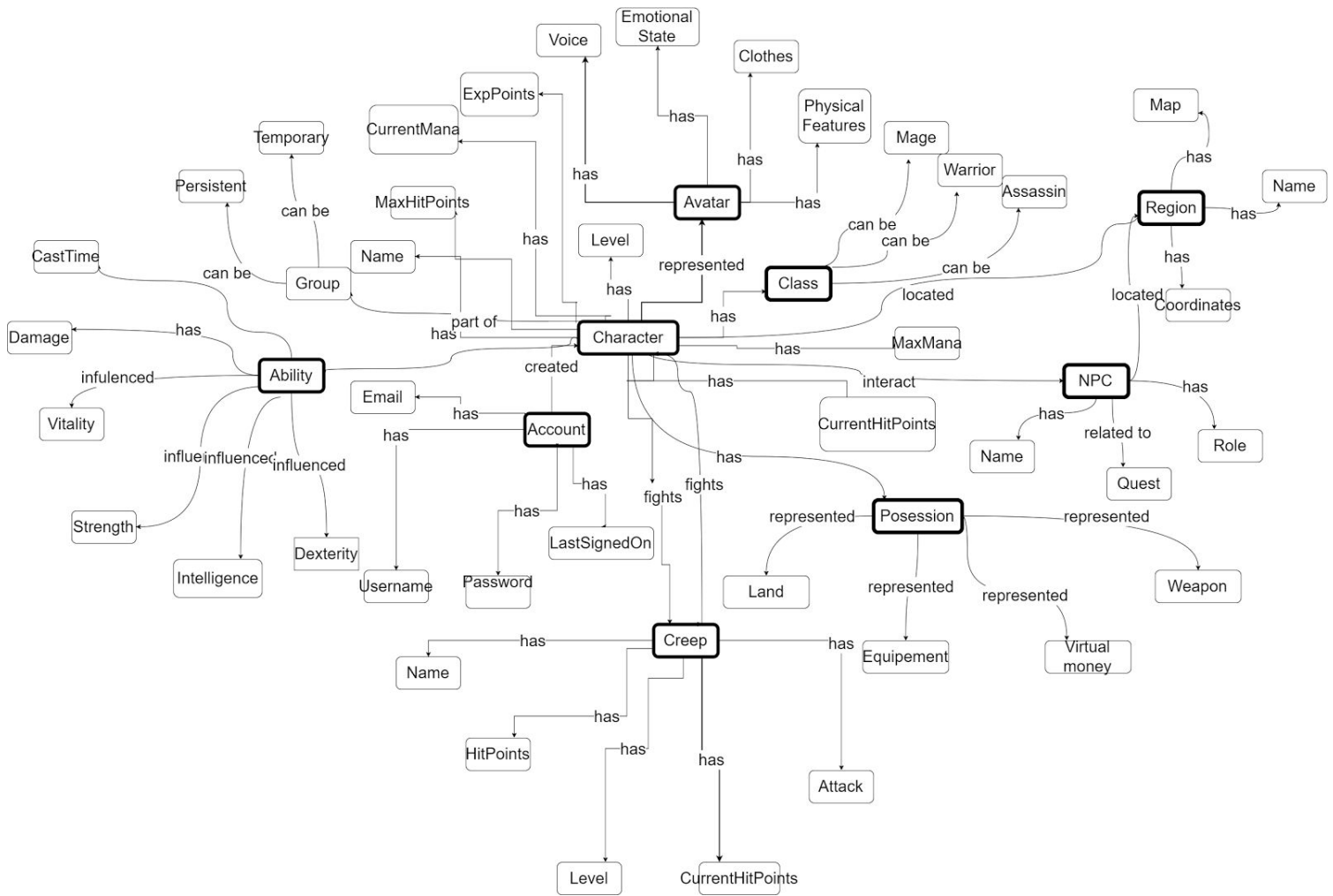
The user plays the game in a worldview. Each world has a consistent model of physical laws and rules that apply to all players within that world. During play, each player takes actions that have consequences that are appropriate to that world. Other players in the same game must be aware of the effects of actions taken by the rest of the players in the world. This constraint is true of all multiplayer games. One

difference between these games and other multiplayer games is the fact that these are role-playing games. This means that each player takes on a customizable role within the game's world. The role adopted by a player defines and/or constrains what a given player may do during the game. Thus an architecture for a MMORPG must provide a world; the rules for that world (basic physics, the universe of possible actions and so on); and customizable roles for the players.

This genre of game is designed to remain active for long spans of time; a good game may be played for years. Players will enter the game, play for some period of time, and then temporarily leave the game. When a player returns to the game, his or her game state must persist. This includes the role that has been adopted, the player's position in the world and other state information that is pertinent to play.

Since the game is played online, users must identify themselves and be authenticated as legitimate players. Only then will they be allowed to join the game. Online play makes it imperative for the game to act and react very quickly while minimizing the amount of network traffic generated in doing so. To avoid cheating, all communication must be secure. To achieve this speed of play, the architecture must specify which parts of the game will be resident on the player's machine and which parts will reside elsewhere (such as on one or more server machines). The need for performance and security is further complicated by the desire to allow large numbers of concurrent players. The architecture must be scalable and easy to distribute over multiple processors.

2 General Concepts



Avatar

Avatar is the user's representation in the virtual world, most often under the shape of a 3D or 2D animated character. The avatar is visible to both the user and other users. The user has the ability to control his own avatar in a more way or less advanced, the basics present in most games being:

- Avatar movement
- performing specific actions, for example: greetings, dance, etc.
- setting the emotional state of the avatar: cheerful, sad, attentive, etc.

There is also the possibility to customize avatar representation by:

- setting physical features: height, body shape, facial, color hair, eyes, etc.
- changing the avatar's clothes, choosing the voice, etc.

Character

Very close to the concept of avatar is that of character or personage. This represents the user from the point of view of the logic of the respective virtual world.

A character is represented by an avatar and is generally characterized by aspects such as:

- class
- level: generally a numeric value indicating character advance on a value scale
- abilities
- possession: equipment, money (virtual), etc
- belonging to certain groups, etc

Generally, much of the game time is dedicated to improving the level, skills and possessions of the character.

Mobs / Creeps

The term "mobs" refers to entities with which the user is somewhat bound by the logic of the game to confront them to meet certain objectives or get some resources.

For example, at the time of destroying a monster, one user can get a certain amount of gold or virtual objects on which the monster contains them. Destruction of monsters may be a prerequisite for advancement quests, etc. Monsters have the most varied representations: animals, aliens, characters humanoid, etc. Also, monsters can have different levels, strength and abilities, making it harder or more easily destroyed.

The actions of these entities are coordinated by the system, generally with the help very simple decision-making elements.

NPC (Non-player characters)

NPCs are entities that populate the virtual world and are not under control user. NPCs are not generally enemies that have to be destroyed, but have a more varied role for example, they may be used to: Implementing certain dialogs with predefined variants within its quests to assist the user to offer certain products or services within the game companions that help the user.

Virtual possession

Each avatar may have certain virtual possessions that he or she has absolute or limited rights in that game.

E.g:

- Weapons
- special equipment
- money
- various resources
- land
- etc.

He may use, modify, sell or destroy his possessions. The concept of virtual possession also led to the creation of systems exchange / trading, most MMOG games including markets virtual or auction systems ("auction-house"), etc.

Quests

A quest is a suite of actions that the user has to accomplish to get a reward within the virtual world. Actions can be removing a number of monsters of a certain type, removing one a very powerful monster, going out of a labyrinth, searching for and finding an object in particular, assembling an object from components, etc. As a rule, during quests, the user is guided by an NPC, explaining what he has to do, and sometimes giving him help. Quests can be individual, team-level or guild.

User groups

Users can organize in different types of groups to collaborate within such as monsters, quests, competition against other users, etc.

Players' groups may have:

- temporary (teams / teams / party)
- persistent (guild)

In general, any group has a leader who decides to admit or exclude from a member's team.

Skills

Every player character is defined by its achieved skills and it's given character statistics measured in points spent on some of character traits, such as Strength, Intelligence, Agility, etc. Generally three categories of skills: basic skill, magic skill and focus skill.

3 Bibliography