

# Engaging Game Characters: Informing Design with Player Perspectives

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**Abstract.** The behavior of characters in current computer games is generally scripted and predictable. This paper discusses some issues related to creating game characters that enhance player engagement and identifies the need for a more player-centered approach to game character design. This paper reports the results of a focus group that was carried out with experienced game players to determine what game character behaviors would enhance their engagement in a game. The four general areas of concern that came out of this discussion were consistency with context, player expectations, social interactions and consistency with the environment. This paper discusses these issues and their implication for game character design with a view to creating engaging game characters.

## 1 Introduction

Non-player characters (NPCs) are a significant part of most computer games. They fill a wide range of roles, such as shopkeepers and barkeepers, and are an important aspect of making a fantasy game world seem more realistic to game players. NPCs can also take on more substantial roles that revolve around the player, such as the player's team-mate or opponent. NPCs are also an important aspect of Massively Multi-player Online Games (MMOGs), as there are many roles in these games that human players do not want to fill, such as blacksmiths, alchemists and other non-hero positions.

However, most NPCs have predictable behavior and completely scripted dialogue, which is not updated to take into account events that occur in the game world [1]. NPCs rarely show emotion or consistent personality, the lack of which can be enough to remind the player that they are playing a game, thereby lessening their engagement in the game. The importance of having engaging NPCs, as well as the recent growth in game-related research means that NPCs have become an interesting new field of study. The focus of most previous work on NPCs has been on realism not engagement. However, the assumption that people prefer playing against realistic NPCs has not been examined in detail. There is anecdotal evidence (for example, the proliferation of MMOGs discussed in [3]), as well as some recent empirical evidence [2], which indicates that players prefer playing games with human allies and opponents. This evidence is indicative of the assumption that players prefer realistic

NPCs. However, it is not enough to ask players if they prefer realistic NPCs, as realism may not be the most engaging behavior for the player. The underlying premise of this paper is that research needs to be undertaken to determine the types of behaviors and characteristics of NPCs that create the highest level of engagement for game players.

This paper describes the first step in a more player-grounded approach to designing NPCs. This step involved a process of eliciting player opinions through an online focus group. The focus group is part of a larger project that involves a range of player-centered studies, using a combination of qualitative and quantitative data gathering approaches. The end result of this project will be a detailed design guideline for creating engaging game characters. The aim of the focus group was to gather game players' opinions on and experiences with non-player characters (NPCs). In particular, players were asked to discuss those behaviors of NPCs that add to or detract from their engagement in a game. This paper reports on the issues that were raised during this focus group, and discusses research that needs to be conducted to further explore these issues.

## 2 Focus Group

Six experienced game players were asked to discuss the behavior of NPCs in a variety of computer games and how this behavior affects their engagement in a game. Each of the players considered themselves to be experienced players, stating that they had played computer games for five or more years. The genre preferences of the participants included First Person Shooter (FPS) games, Role Playing Games (RPGs), Strategy and Sports games, with many of the players indicating a preference for more than one of these types of games. There were five males and one female participant, aged between 22 and 26 years. All of the focus group participants were experienced computer users in general, as well as being experienced game players

The focus group was carried out online, via a private Internet Relay Chat (IRC) room, and lasted for approximately an hour and a half. Players were initially given an informal definition of engagement as "a feeling of deep emotional involvement in a game, where they tend not to notice time passing". They were then asked to discuss the behavior of NPCs in relation to engagement. The conversation was mostly open ended, although the moderator occasionally prompted the group members to move onto different genres of games, in order to make the discussion as broad as possible. The topics that were covered in each genre (such as combat and conversation) were not prompted by the moderator. Although the participants in the group expressed interest in a range of genres, the conversation generally centered on the NPCs in RPGs and FPS games.

The participants of the focus group felt that an NPC needed to have motivations, a range of actions, a variety of responses and a believable manner in order to add to their immersion in a game. In contrast to previous work on the design of NPCs, realism wasn't particularly important to the group. The group didn't focus on intelligence – they generally didn't mind if a character was stupid or smart - as long as the behavior of the character was consistent. During the conversation it became

necessary to define what the group meant by engagement. The trend amongst participants was to mention frustration and annoyance, and when asked directly, they confirmed that they equated these emotions with disengagement and lack of immersion.

### 3 Outcomes

Based on the opinions of the participants in the focus group, the key points where engagement breaks down are:

- **Consistent with Context:** the actions, behavior and dialogue of a character should be consistent throughout the game, demonstrating personality and motivation. The character's behavior and dialogue should also be consistent with their purpose in the game
- **Expectations:** NPCs should behave competitively, have access to the same amount of information from the game environment as the player does, and meet certain stereotypes. Smarter NPCs should be more powerful than less intelligent characters.
- **Social Interactions:** NPCs should remember previous interactions, have a wide range of responses and display different behavior when interacting with other characters that are more or less powerful than them. They should also have goals and then act in a way that seems aimed at achieving their goals.
- **Consistent with Environment:** the behavior of the NPC should be suitable to the physical game environment, and their actions and reactions should demonstrate awareness of events in their immediate surroundings.

The information gained from this focus group has informed the development of a set of tentative guidelines for increasing player engagement:

- Determine the personality profile for an NPC and ensure that their behavior is consistent with this profile throughout the game
- Make sure that any actions or interactions that the NPC is involved in during scripted scenes are available to the NPC during interactive play
- AI for NPCs needs to be able to effectively perform actions such as intelligent pathfinding, looking for cover, accurately assessing combat situations, and not accidentally engage in friendly fire
- NPCs need to display the same level of intelligence throughout the game
- Social hierarchies of NPCs should reflect real-world dynamics, for example, smarter NPCs should have a higher status than less intelligent NPCs. NPCs should be able to display different demeanors to demonstrate their awareness of these dynamics
- NPCs should be able to display a wide range of human emotions and behavior and should also have a wide range of interaction possibilities
- Smarter, tougher NPC opponents should clearly have better AI than lesser opponents, instead of having more hit points
- Less repetition in the scripts used by background NPCs, ensuring that they have the appearance of memory of previous interactions

- NPCs should have goals and motivations and behave in a way that is clearly aimed at achieving these goals
- NPCs should respond appropriately to sights, sounds and events in their environment, by signaling awareness of the player or other characters.
- NPCs should be able to modify their approach to combat situations

Importantly, these guidelines are clearly grounded in the preferences of experienced game players. While further player-centered research activities are planned, this first step has produced a wide-ranging list of NPC behavior characteristics which have the potential to improve the overall quality of the game playing experience.

## 4 Conclusions and Future Work

The four major themes that came out of the focus group were that NPCs should be consistent with their context, meet player expectations, engage in a variety of social interactions with the player, and also be consistent with their environment. While these ideas need to be explored further through continued adoption of a player-centered approach, the design criteria generated as a result of the focus group are significant.

The next step in exploring these issues, following the player-centered process, is a questionnaire that is aimed at gathering more detailed and quantitative data on these issues. The questionnaire will be designed to confirm or deny whether these issues are important to a large percentage of game players. Following on from the questionnaire a number of observational studies will be carried out involving people interacting with NPCs in a game environment, to provide in-depth observational data to support the self-reported data from the focus group and questionnaire.

The combination of focus group, questionnaire and observational studies provides a multi-perspective approach to the problem of creating engaging NPCs. The reason for adopting this approach is that it leverages all the advantages of the different qualitative and quantitative methodologies involved. The data gathered during this project will be used to create detailed design guidelines for engaging game characters.

## References

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