
Bad News: A Game Of Death And Communication

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Abstract

Bad News is a game about death notification that combines deep simulation and live performance. After discovering a dead body, the player is tasked with tracking down a next of kin to inform him or her of the death. To do this, the player must discover the identities of both the deceased and next of kin, as well as the current location of the latter. Gameplay is underpinned by a rich simulation of a generic small town inhabited by several hundred non-player characters (NPCs) who build up subjective knowledge of one another as the simulation proceeds. The player interface is serviced by Wizard-of-Oz techniques, and the core gameplay interaction is embodied conversation with live-acted NPCs. Stationed out of sight from the player, a ‘wizard’ executes his or her commands (as they are spoken aloud) by live-coding modifications to the simulation. When the player encounters an NPC, an actor reveals himself to perform the character live. Crucially, the actor’s improvisation is constrained to the underlying simulation—particularly the personality, life history, and knowledge of the character he is portraying—which is expressed to him via a discreet interface.

Author Keywords

Deep Simulation; Live Performance; Wizard-of-Oz Techniques; Mixed Reality; Emergent Narrative; Death in Videogames

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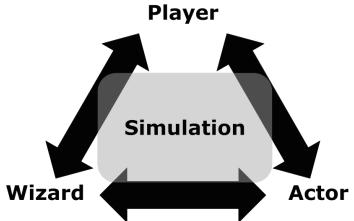


Figure 1: *Bad News* utilizes three communication channels that are each mediated by the underlying simulation.

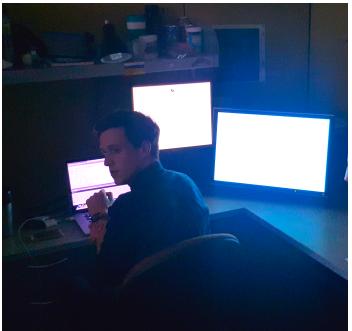


Figure 2: Stationed out of sight, a wizard executes spoken player commands, manages the player and actor interfaces, and queries the simulation for narrative fragments that he may dispatch to the actor via live chat.

ACM Classification Keywords

H.5.2 [User Interfaces]: Voice I/O; I.2.0 [Artificial Intelligence]: Cognitive Simulation

Introduction

The treatment of death in videogames is notoriously flip-fant. Over the course of a typical shooter game, thousands of non-player characters (NPCs) may die, and these deaths will have little impact on the player. Even the demise of a player character is often insignificant, a mere setback that places them at the last save point. In the human experience, however, death is an important, tragic, and unavoidable event that is greeted with solemnity and respect. In this paper, we introduce *Bad News*, a game that explores the impact of the death of a loved one via an innovative design combining deep simulation and live performance.

Bad News is a game about *death notification*: after encountering an unidentified dead body in a small town, the player is tasked with locating and notifying a next of kin. This requires that he or she ascertain the identity of the deceased, as well as the identity and location of the next of kin, so that she may deliver the news in person. In pursuit of these aims, the player navigates the town and interacts with its residents, tracing interweaved social and family networks to construct a theory of who exactly has died and who exactly should be informed.

Underpinning the entire experience is a rich simulation of an American small town. Specifically, each playthrough takes place in a procedurally generated town that has been simulated from its founding in 1839 until the summer of 1979, which is when gameplay takes place. Out of this procedure emerges an elaborate tapestry of family history, friendship, rivalry, love, and enmity. Additionally, and cru-

cially, NPCs in these towns form subjective knowledge of the businesses, homes, and residents that surround them.

During gameplay, the experience utilizes three communication channels: *player-wizard* interaction, *player-actor* interaction, and *wizard-actor* interaction. Stationed out of sight, a wizard executes the player's commands (as they are spoken aloud) by live-coding modifications to the simulation. When the player encounters an NPC, an actor reveals himself to perform the character live. Crucially, the actor's improvisation is grounded in the underlying simulation—particularly the personality, life history, and knowledge of the character he is portraying—which is expressed to him via a discreet interface maintained by the wizard.

In this paper, we briefly outline the game's underlying simulation before proceeding to describe its three communication channels. *Bad News* was first performed at the *2nd Experimental AI in Games workshop* [7].

Simulation

Bad News is fueled by a simulation of character knowledge phenomena that we describe in [8]. Just as *Dwarf Fortress*'s rich game worlds are generated prior to gameplay [1], each playthrough of *Bad News* follows a procedure that simulates an American small town from its founding in 1839 up to the summer of 1979, when *Bad News* takes place. This procedure yields the town's physical layout, with businesses and homes, and also an array of social and family networks. Crucially, characters build up mental models of one another (and of locations in the town) as this simulation proceeds, and they may propagate beliefs to one another during social interactions. As an operationalization of memory fallibility, character knowledge may deteriorate with the passing of time, and characters may also lie to one

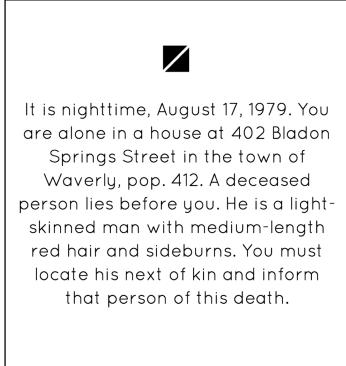


Figure 3: An initial gameplay prompt, as displayed on the player interface.

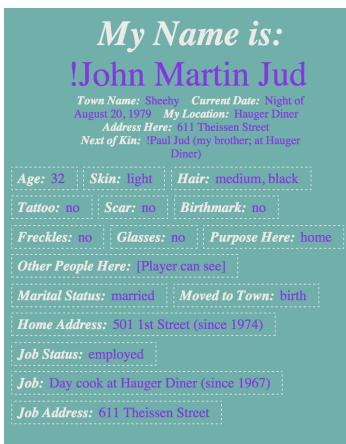


Figure 4: The actor interface displays information about the character he is currently playing.

another. As such, the player quickly learns that not all information given by characters is reliable.

Player-Wizard Interaction

We provide the player with a tablet displaying scene descriptions and prompts that evoke a text-adventure interface. As gameplay begins, an initial prompt is displayed to express the narrative framing (see Figure 3). The player is also provided with a sheet of paper listing a basic set of supported interactions:

- View a residential or business directory (listings of the names and addresses of homes and businesses)
- Go to a location (by providing its address or name)
- Knock on a door/buzz an apartment
- Enter a nearby building
- Initiate conversation with a nearby character

To target an interaction, the player simply speaks out loud; out of sight, the wizard interprets the command and live-codes modifications to the simulation to execute it. If the player requests to carry out an action that cannot be accommodated in the simulation, the wizard displays text on the interface expressing that such action is not supported.

Wizard-Actor Interaction

Before engaging in embodied conversation with the player, the actor must get into character by consulting a discreet interface that displays information about the NPC he will be playing (as shown in Figure 4). The information includes the character's name, gender, age, appearance, marital status, job status, and, crucially, his or her personality traits, all of which guide the actor's performance. Additionally, the actor interface displays the NPC's accumulated knowledge of any character or town landmark that is brought up during conversation; this component of the interface is shown in Figure 5. As the subject of conversation naturally shifts over

the course of an interaction, the wizard updates the interface accordingly (so that information pertaining to each new subject is displayed in turn). Each facet of the NPC's knowledge about the subject of conversation is accompanied by the source of that knowledge (*i.e.*, the character who told him or her this information) as well as the strength of that knowledge (characters will be less sure about knowledge that they have accumulated less evidence for [8]).

Beyond the information expressed via the actor interface, the wizard and actor maintain a line of open communication using a chat program. This is necessary for the wizard to feed the actor NPC knowledge that is not expressed on the interface but that the player may still elicit by asking open-ended questions, *e.g.*, “Do you know the person that lives at 504 Woodside Street?” or “Do you know a bald middle-aged with a tattoo?”. Additionally, the wizard may supply interesting dramatic fragments (discovered by querying the simulation) to the actor, which he may or may not decide to act on (*e.g.*, “You went to high school with the subject of conversation”).

Player-Actor Interaction

The core *Bad News* gameplay interaction is embodied conversation between the player and NPCs in the town, who are each performed live by the actor. Here, the player is not constrained to any set of dialogue choices, and may thus say anything that he or she wishes. As such, this aspect of gameplay resembles live-action role-playing [10]. We have observed conversation that ranges from mundane queries about the simulation (“Do you know your neighbor?”) to humorous exchanges to, potently, heartfelt expressions of condolence and loss. At all times, however, the conversation is beholden to the underlying simulation. The actor must adhere to the character's personality specification to determine how he will react to the player. Similarly, the

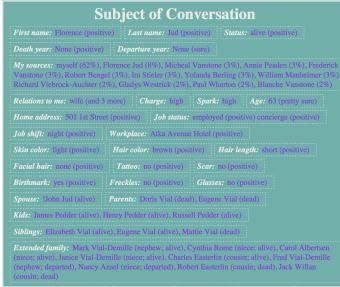


Figure 5: The actor interface dynamically updates to express the current NPC's knowledge of the subject of conversation, even as the latter shifts to new characters or places.



Figure 6: A player, left, engages the live actor in embodied conversation.

character's memory will determine not just what information he imparts, but also the confidence with which he delivers that information (corresponding to the strength of the NPC's belief). Additionally, the actor is free to utilize other salient information that may drive a conversation in interesting directions. For instance, the course of one playthrough shifted dramatically after the actor imparted a widow's remembrance of her departed husband, which was prompted by the player coincidentally asking about an event that occurred the same day the husband had died.

Related Work

As an exploration of interactive drama utilizing live performance with directorial intervention, we connect this work to *The Bus Station*, an early Oz Project experiment that placed players among improvisational actors in a tense scenario managed by a hidden director [5]. As a more recent antecedent, Dietrich Squinkifer's *Coffee: A Misunderstanding* is a computationally assisted interactive play in which participants from the audience act out characters by performing dialogue and choreography selected by other human players [11]. Broadly, the interplay of embodied conversation and deep simulation makes *Bad News* an example of a *mixed-reality game* [2]. Beyond earlier work in computational media, our approach here has been influenced by *Wizard-of-Oz techniques* developed in HCI research [3].

Conclusion

Though approached sincerely in nearly all other expressive mediums, the treatment of death in videogames has largely been flippant. While the medium has produced a handful of solemn examinations of death [6, 9, 4], these have been heavily scripted experiences that do not allow the player to freely explore the matter. In this paper, we have introduced *Bad News*, a game that deeply considers how death affects loved ones via an innovative design combining deep sim-

ulation and live performance. We hope that this work will influence future projects combining simulation and improvisation, as well as games that treat death respectfully.

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