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*Zork: The Great Underground Empire* Game Review

*Zork: The Great Underground Empire* by Marc Blank and Dave Lebling stands today as one of the most influential computer games to date, both within the adventure genre and in the computer gaming world at large. Published under the Infocom label in 1980, *Zork* followed on the heels of *Adventure* to dramatically expand the scope of computer-based fantasy games, immersing the player in a dynamic and interactive world using only text on a screen. Since its original release, Infocom has re-released *Zork* a number of times, including a trilogy pack in 1987 under the name *Zork I* (along with *Zork II and III*). Packaging for the game has changed dramatically over the years as well, ranging from a plastic zip-lock bag and booklet to a standard box format containing maps and a history of "the Great Underground Empire." While it is likely that Infocom felt pressure to update *Zork* with the latest technology for its re-release, the game-play and design have remained the same since *Zork's* 1980 debut.

When one starts to play *Zork*, it is not clear that the game has a story-line, and the details of the game-play itself are, at best, ambiguous. There is no background information or "intro sequence" to prepare the player for what he is about to experience. The game simply gives the player a blinking cursor with the prompt "You are standing in an open field west of a white house, with a boarded front door. There is a small mailbox here." Right from the outset, the player is left to his own devices to formulate a course of action. With no instruction booklet or help from an experienced player to guide him, a fledgling adventurer could easily find himself getting discouraged. The acclaimed *Adventure* included an "instructions" option at the beginning of the game

that, while not divulging too much information about the game's direction, informed the player of basic navigation commands. *Zork*, however, does not provide such helpful starting instructions; it assumes that the player already understands the basics of text-based play—a presumptuous thought considering the relative novelty of the genre at the time of the game's release. Another perspective, however, is that the initial lack of game-play information helps set the mood for what is to become a deeply engaging gaming experience. Perhaps the player's confusion at the beginning of the game reflects one's actual thoughts and emotions if he were to mysteriously appear in the forest in front of a white house. In this case, one could say that the game-play is enhanced as the game plays to the individual player's feelings during the game.

As the game progresses, the player learns that his objective is to collect twenty treasures scattered around the Great Underground Empire, each treasure scoring points for the player. Once all twenty treasures are found, the player's point total will max out, signaling the end of the game. To find the treasures, the player must explore the entirety of the landscape, with game locations ranging from a subterranean river and dam to an abandoned coal mine. The player must interact with the world in creative ways to solve puzzles, with solutions often requiring the player to think "outside the box." For example, engaging a cyclops in battle almost always ends in a "game over," but shouting the name of the cyclops' feared nemesis "ODYSSEUS" sends him running. There are no obvious cues to tell the player what to do at any given time, so considerable trial and error is often necessary. While the player's ultimate objective is to score all the points, the true joy in playing this game comes from exploring the world in full and interacting with it in every way possible. These two key

aspects of game-play—exploration and interaction—clearly place *Zork* within the adventure game genre. The emphasis is on *learning* about the world through creative approaches and player initiative rather than a simple competition for points.

*Zork* utilizes the technology of its era. From start to finish, the game consists of text on an otherwise blank screen, pausing before every “move” to obtain a command from the player. In this respect, *Zork* appears little more than a low-level exchange of input and output. The game is more sophisticated than that, however, as its language parser clearly demonstrates. Since all of the input from the player takes the form of typed words and phrases, the language parser must be built to accept and process a wide variety of input. The parser must also be able to formulate responses to any combination of characters the player may enter, and give the player some sort of feedback based on the quality of his input. To do this, the parser analyzes the player’s entry looking for any commands it deems to be “valid.” For example, the command “take” is a valid entry, because the verb “to take” is defined as necessary for completing the game, and is therefore valid. The word “rake,” on the other hand, will not be recognized as valid input—even though it is plausible that the player may want to rake something in the game, “raking” is not required to complete the game. Commands such as “rake” along with complete nonsense words result in the statement “I don’t know the word ‘\_\_\_\_\_.’ “ At other times, a command may be valid within the scope of the game, but irrelevant to the player’s particular situation. The parser delivers an appropriate response in these cases, providing the player with some clue as to why his input was unacceptable. For example, a command of “take gold” in the middle of an empty room would prompt the answer “You don’t see any gold here!”

While these parser responses may seem elementary, the parser's ability to handle nearly any sort of input with relative ease reflects the robustness of its design and implementation.

The game also demonstrates a rudimentary artificial intelligence. The player encounters several "monster" characters throughout the game (like the cyclops mentioned above), and each one has its own unique tendencies and capacities. The thief, for example, may choose to either kill you or rob you—which action he takes is entirely up to the game. *Zork* also has a system of doing battle with opponents that makes each encounter different. Killing the troll is not as simple as typing "kill troll"—the battle may take several rounds to complete, and even with the correct input at every prompt, the troll may win. Dropped items change locations periodically as well, illustrating the dynamic nature of the world itself—almost as if the game of *Zork* itself is an "opponent" working against the player.

*Zork's* design provides for depth in the variety of interactions the player can attempt with the surrounding environment. As mentioned before, at every turn the player is provided with little instruction, and it is up to the player to determine what he can do in a given situation. The player is virtually unconstrained in his interactions with the world, save only for actions that violate the natural laws of physics. Theoretically, the game creates a situation in which the player can sit for hours trying command after command in an effort to solve a puzzle. Tedious, you say? Perhaps, but the tradeoff in realism is considerable. By forcing the player to take the initiative at every turn, the game strengthens its starting premise—a lone adventurer making his way through an uncharted dungeon—and the player gains a deeper sense of immersion with the game.

From the opening prompt, the player is *in control* of what happens, and the game will respond only when the player commands it to do so. This deeply-rooted sense of control the game bestows upon its player nearly ensures that no two players will have the same experience when playing *Zork*.

The design is not without its flaws, however. Despite the nearly infinite number of commands the player may supply, each puzzle has, at most, only one or two solutions. Once the player learns the solution to a puzzle, that mystery is over, and the challenge is severely diminished. *Zork* does not alter its puzzles from game to game, nor does it change the main layout of its dungeon locations. Hence, once the game is finished, there is little to do but go back and attempt alternate solutions to an already-solved puzzle. Granted, one could collect the treasures and solve the puzzles in any order he wishes, but with a well-drawn dungeon map, navigating the game takes a fraction of the time it took to explore the landscape for the first time. This limits the replay value considerably, and the game's depth suffers somewhat as a result.

The success of *Zork* in the computer gaming world is no secret. Following the release of the original *Zork*, Infocom released two sequels, picking up where *The Great Underground Empire* left off. Both *Zork II: The Wizard of Frobozz* (1981) and *Zork III: The Dungeon Master* (1982) elaborated on the meager story-line of the original while maintaining the same design and game-play style as the original. All three games enjoyed successes of their own, returning for a re-release in the *Zork Trilogy* (1987). Two other *Zork* games were also developed—*Beyond Zork* (1987) and *Zork Zero* (1988)—that carried the tradition even further. The text-based format did not end with the *Zork* games, however; Infocom continued to produce games using the basic *Zork*

engine throughout the 1980s, although improvements were made to the interface as the technology improved. Games such as *Planetfall* (1983) and *Suspect* (1984) took the player to dramatically different locales, but the high degree of player interactivity that made the *Zork* design effective shows up in these games as well. It is clear that *Zork* enjoyed success not only as a game and a series, but also as a pioneer of game design, being one of the first games of its kind.

*Zork* came at a time of significant developments in computer game technology and design. Before graphics were widely implemented in games, *Zork* created an interactive universe by playing on the dynamics of the players' imaginations. While *Adventure*, its predecessor, may have been more influential in defining the adventure game genre, *Zork* refined the parser implemented in *Adventure* and set a precedent for player-gameworld interactivity. Following the success of *Zork*, the gaming industry saw an explosion of games within the adventure genre, some of which are mentioned above. Even today we see games that hearken back to the original text adventures—*Myst* and *Riven* borrow heavily from the “lost adventurer” paradigm. While we are currently seeing a decline in the popularity of the adventure genre, the design features that made *Zork* a standout game in its day remain benchmarks in computer gaming today.

I referred to <ftp://ftp.gmd.de/if-archive/infocom/info/fact-sheet.txt> for release information while writing this review.