Death's Domain and the Preservation of Multi-User Dungeons
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In the still-emergent field of video and computer game preservation, among the most difficult challenges is the preservation of online multi-user games. In addition to the standard difficulties facing the preservationist, these sorts of games raise many additional issues: the frequent lack of a physical object, for example, and the presence of interactions between users as a key component of gameplay. In recent years, multi-user games, including both massively multiplayer online roleplaying games (MMORPGs) such as _World of Warcraft_ or _EVE Online_, and virtual worlds, such as _Second Life_, have become increasingly complex, incorporating dense multimedia and functionality. However, online multiplayer games have existed for over to three decades, going back to a series of online text games termed multi-user dungeons (MUDs), which were most popular in the 1980s and 90s. This paper will examine one particular MUD, _Death's Domain_, which was first developed in 1992. _Death's Domain_ was neither technically spectacular nor especially popular, even in its heyday, but it offers a lens through which to examine the MUD phenomenon and the greater issue of online game preservation.

MUD History

The first MUD (called, simply, _MUD_) was created by a British student named Roy Trubshaw in 1978. The game was inspired by earlier single-player text adventure games such as _Adventure_, _Zork_ and _Dungeon_ (hence the name), which were in turn often inspired by the _Dungeons & Dragons_ (D&D) tabletop role playing game. It was

designed to run on the Essex University local network and remained active until 1987;

indeed, many MUDs would prove to have quite long lives. Several other MUDs,

including *Scepter of Goth* and *Dungeons of Kesmai*, were developed in the early 80s, and

were available to wider audiences who would connect to BBS systems using modems. In

the late 1980s, MUDs became a popular feature of several new online services, including

GEnie and CompuServe.

       With the wider availability of modems and online services, several MUD

developers began creating and releasing MUD codebases, essentially the framework from

which any number of MUDs could be created, all of which would share certain basic

features. The first popular open source MUD codebase was AberMUD, developed by

four students at the University of Wales in 1987, and it featured gameplay largely derived

from the original *MUD*. Though originally written in B, in 1988 it was ported to B's

successor language C, allowing it to be run on Unix machines, increasing its popularity.

Also by this point the telnet network protocol had emerged as the dominant form of

connecting to MUDs. AberMUD was followed by a number of other MUD codebases,

including TinyMUD, LPMud, and in 1991, DikuMUD.[1]

       DikuMUD (often known simply as Diku) was developed at the University of

Copenhagen and was, like many of the other codebases, distributed free of charge.

Unlike certain other MUD codebases which often required a fair amount of programming

knowledge to customize, Diku was based on a series of templates which allowed for easy

(and often minimal) customization by programming novices. As a result, large numbers

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[1] Davis, Erik. "It's a Mud, Mud, Mud, Mud World: Exploring Online Reality." *The Village Voice*, Feb. 22, 1994.
"MUD." Wikipedia. http://en.wikipedia.org/wiki/MUD.

of Diku MUDs were created during the early 90s – one tally taken in the late 90s found that Diku MUDs represented 60% of all MUDs running at the time.[2]

Diku gameplay was heavily influenced by earlier MUDs and, especially, by D&D. Players would create a character with a certain fantasy-world "class" (fighter, wizard, thief, etc.) and randomly determined statistics in categories including strength, intelligence and dexterity. Once a player had created a character, he/she would enter the game world, which would consist of a series of locations grouped together into larger areas. The Diku package contained a number of stock areas, including Midgaard, the city in which characters would first appear. While these areas were highly customizable, designer laziness often led to reuse of the stock areas. Within the game world, characters would move between locations, fight monsters and other enemies, and gain experience points and improved equipment. Characters could also interact with each other, holding conversations, teaming up to fight monsters, or even fighting each other.

Interestingly, many of the later graphical MMORPGs were heavily influenced by Diku. EverQuest, the first widely successful MMORPG, was actually designed by a group of Diku enthusiasts. At the time that EverQuest was released in 2000, it was widely suspected that it was actually built using some of the original Diku code; the developers of Diku were considering a lawsuit until the developers of EverQuest provided a sworn statement asserting that they had created their game from scratch.[3]
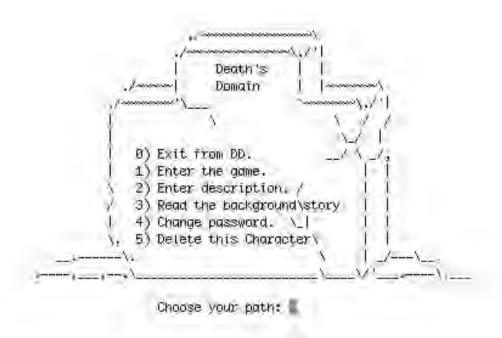
[2] Koster, Raph. "MMO Long Tails," May 29, 2007,
http://www.raphkoster.com/2007/05/29/mmo-long-tails/
Koster, Raph. "What is a Diku," Jan. 9, 2009.
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[3] "EverQuest." DIKU MUD, http://www.dikumud.com/everquest.aspx.

Death's Domain

In 1992, a MUD enthusiast named Nick Borko, along with David Grace and Mike Madl, decided to create a MUD based on the Diku template. Originally titled *DUM*, the name was changed to *Death's Domain* later in 1992. *Death's Domain's* gameplay was, of course, based largely on Diku, though some changes were made, including the addition of "races" (human, dwarf, elf, etc.) and multi-classing, both of which added complexity to the character generation and development process. The game world was created from scratch; the city of Gothos was the main area and the dozens of other areas included other cities, a fishing village, Siberia, and Sesame Street.


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       |     4) Change password.  \_|       | |
       \,    5) Delete this Character\        | |
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Choose your path: █

While the game had been open to players since early 1992, it was still constantly in development throughout 1992-93, with a revamped version being launched in June 1993. Borko would later refer to the period following the relaunch as *Death's Domain's* "Golden Age," during which it was averaging thirty players online at a time, with peaks as high as fifty. While these numbers may not seem high by current standards of online

gaming, they would probably place *Death's Domain* somewhere in the middle of the pack of MUDs available in the early 90s.

By August 1994, Borko and the other original designers had graduated from college and decided to turn *Death's Domain* over to a new group of people who would continue to maintain and expand the game, though Borko would later return to the game in 1996. In 1997, the game went offline for unclear reasons, then was revived in 1998, now running on a new server.[4] From then on, *Death's Domain* remained online "more or less continuously," according to Borko.[5] It is currently online and accessible at darktraveler.com via telnet, though repeated visits seem to indicate that there are few or no active players.

Preservation Assessment

There are a number of preservation factors which can be considered to assess the actions that could be taken to preserve a given game, in this case *Death's Domain*. The first of these, anatomy of the work, considers the elements that make up a game. For *Death's Domain*, these elements include the underlying code for the game, as well as the maps that make up the game world, which are currently residing on a server under the control of Nick Borko. Obviously, since the game is text-only, there are no multimedia components – music, graphics, or video. As a result, it is fairly easy to create backups of this data; Borko has in fact done so and maintains this backup on a separate server. This suggests a key point regarding the game: for it to be preserved, one would need to work directly with Borko, as its only physical instantiation is in his possession.

[4] Borko, Nick. Email to author. March 3, 2010.
[5] Borko, Nick. Email to author. March 13, 2010.

It is also interesting to note that the game remains online and playable almost two decades after its original creation. I would suggest that this is due to a number of factors. First, its creator seems to have an interest in keeping it alive while someone else might have let it go offline permanently. Second, as *Death's Domain* is based on the widespread Diku template, there is a pre-existing infrastructure for maintaining and developing the game. Dozens of other Diku MUDs also remain online, suggesting that the template has supporters who are willing to maintain it and, if necessary, modify it to accommodate changing computer systems. Third, *Death's Domain* is played via telnet, a widely available network protocol. Though not used as much these days, free telnet software can still be obtained easily; in fact, many operating systems, including all versions of Mac OS X, come with built-in telnet capabilities.

Another component of the game that should be considered is the character data. Players will often play MUDs for days, weeks or months developing a single character – the data for which is only stored remotely, on the server. While this data could simply be saved along with the rest of the game files, it seems that the character data from the games' earlier incarnations no longer exists. Indeed, *Death's Domain* has gone through multiple "purges" which have wiped the character data clean – essentially pushing a reset button on the game. This purges seem to have taken place when the game was offline and most likely resulted from the game being moved to a new system, possibly being modified in the process. For any future migrations, attention should be paid to preserving the character data, though at this point there may not be much data to preserve.

The second major preservation factor to consider relates to the game's behaviors and interactivity. In the case of *Death's Domain*, there are two major areas of

interactivity to consider: the interactions between a player and the game and the interactions between players. While the former would be fairly easy to preserve, as discussed above, the latter is more challenging. Even if the game is active, as it is currently, inter-player interactions require multiple users, which do not currently exist. In this situation, then, perhaps it is enough to make the game available to be played and let interactions occur naturally – or not, as the case may be. Alternately, consider if the game were to ever be preserved in a non-online setting – as a single-player game on a local computer, for example. While the end result might be the same as with an online version with only one active player, the experience would in fact be quite different. As long as the game is online, there is the possibility that it could return to full multiplayer functionality – perhaps if it were to gain publicity somehow – a possibility that would not be present in a strictly single-player version.

The next preservation factor is the issue of rights, which seem fairly straightforward in this case, though there may be some potential problems. *Death's Domain* was created primarily by Nick Borko, and the game bears a copyright notice reading "Portions Copyright ©1992-2003 by Nick Borko. On the full credits note within the game, two other individuals, Grace and Madl are, as mentioned before, also listed as co-creators. In addition, five other people are credited with "original game idea, concept and design." Finally, there are many other individuals credited with designing certain areas of the game world – at various points in the game's existence, the administrators accepted submissions of new areas from users. As a result, while Borko probably owns the rights to this game, it is possible that some of the others responsible for parts of the game could claim ownership. While *Death's Domain* is built from the DikuMUD

template, that code is freely distributed and the license allows anything to be done with the code as long as no money is ever charged for the sale or distribution of derivative products. This should be kept in mind, though it is not something that would affect preservation efforts.

Another preservation-related element to consider is the statement of significance, which should qualify the degree to which this game should be preserved. In this case, it is not necessarily clear that *Death's Domain* is worthy of preservation, especially when compared to the hundreds of other MUDs, not to mention other varieties of early multi-user games. While the preservation of MUDs is certainly crucial to maintaining one particularly influential segment of gaming history, this preservation would best be done on more popular games, possibly chosen from a variety of different codebases. While *Death's Domain* could be relevant as a representative of Diku, there are other still-active, more popular Diku MUDs that would make a better choice.

A final risk assessment taking into account all of these factors would suggest that *Death's Domain* is not necessarily at risk of being lost. It has survived in the past through a series of migrations by the creator, with occasional emulation along the way. If preservation were to be undertaken on this game, or on another MUD deemed more historically significant, the best option would be to maintain both an archive copy that would be placed in storage and an active copy that could be maintained on a server. The MUD community is still surprisingly vibrant, and an archive could expect that the active copy would remain in use, allowing for the "preservation" of the inter-character interactions. Maintaining the active copy would also allow an archive to make sure that character data was being properly backed up, and would even allow the archive to

produce documentation of user interactions if desired. Emulation, if required, would not be a problem, as the game is text-only and the DikuMUD codebase has proved to be flexible in the past. These recommendations will ensure that any MUDs preserved in such a way will still exist and be fully functional in both the short and long-term future.

Works Cited

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