ROM Hacks and Modding in the Age of User-Generated Content

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Keywords
User-generated content, prosumer, intellectual property, emulation, modding

EXTENDED ABSTRACT

What was once a niche practice within online communities, modifying or *modding* digital game files has now become an important element to enable continued engagement for players and arguably extend the lifecycle of digital games that utilize this process. User-generated content (UGC), which still belies a proper definition, is described as covering "activities that range from real amateur content to edited/professional productions" (Simon, 2016, p. 5) and is heavily associated with the notion of a *prosumer*, where "[p]lain consumers morph into prosumers" by generating content as well as consuming content (p. 7). Prosumerism has been especially prevalent within gaming communities, where creating and utilizing Wikis, producing digital videos and publishing them online, and related activities have become popular outlets for players.

While UGC has separate and distinct pulls in other digital media fields, this paper focuses on video games and the notion of modding games, where "player-made alterations and additions to pre-existing games" are made (Sotamaa, 2010, p. 240). Mods have a storied history which lies outside of the scope of this paper, where one needs to only consider games such as *Counter-Strike* (Le, M. & Cliffe, J., 2000) or *Defense of the Ancients* (*DotA*) (Eul, Feak, S, & IceFrog, 2003) to see how mods of games – namely *Half-Life* (Valve, 1998) and *Warcraft III: Reign of Chaos* (Blizzard Entertainment, 2002), respectively – can become popular enough to spawn their own, independent games. These types of mods were typically created by a community of dedicated players, tinkering and altering aspects of the game reminiscent of hobbyists (Sotamaa, 2010, p. 240).

This paper focuses on the history of the ROM hack, a type of mod that is related to the dumping and altering of cartridge and disc-based video games' read-only memory (ROM) to enable new and inventive gameplay results. Of particular focus will be the *Super Mario World* (Nintendo Entertainment Analysis and Development, 1990) ROM hacking community, one that continues to this day, utilizing the base game and its assets to create entirely new levels, overworlds, interactions in-game, and even entirely new games such as *Kaizo Mario World* (Takemoto, 2007-2012). These ROM hacks exist as their own entities and have histories all their own, linking back to the original game through the assets utilized, but ultimately "radically [reconfiguring] play" (Taylor, 2009, p. 333) therein.

Proceedings of DiGRA 2020

These sorts of "new games" based on the UGC work of prosumers has now given rise to AAA games that rely on the efforts of players through UGC to assist the game in thriving, such as *Super Mario Maker* (Nintendo Entertainment Analysis and Development, 2015). *Super Mario Maker* is tasked with taking the subversive act of piracy, tinkering and modifying code, and outputting something new, and transforming it into a highly replayable format of game that offers players the assets necessary to create the same creative works but within the framework that Nintendo allows. This could be as simple as not having access to change sprites, to downright banning levels due to content or glitches employed. This watered-down creativity for players may well be the only legal way to craft your own level, but the game developers have absolute control over the way you create things, how you create them, and what they deem appropriate. Players will actively participate as it is an accessible way to become part of the "modding community" in a way, but plays into the developer's strategy to utilize UGC as a benefit to their game's selling power and longevity – adding value to commercial AAA games (Postigo, 2007, p. 302). This idea of players working to create levels as "an extension of play" has been described as "playbour" (Kücklich, 2005, para. 4), where players are not remunerated for the creative work they perform.

Succinctly, in this paper I argue that game development studios have, and continue to leverage UGC as a vital aspect of their game design, allowing a game's longevity to continue beyond a typical lifecycle due in part to the continued support of the gaming community. I also posit that this shift towards UGC is meant to absorb the previously contentious act of modifying game data files (Curlew, 2012), and these game development studios are now offering tools to prosumers to have them work within the framework with which the studio approves. This work looks at where ROM hacks and modding of games still fits into the larger realm of game design and development, and the ways in which resistance to the uptake of UGC in AAA games works to hold together online communities of modders to continue what they do (Poor, 2014).

BIBLIOGRAPHY

Blizzard Entertainment. (2002). *Warcraft III: Reign of Chaos* [Video game]. Global: Blizzard Entertainment.

Curlew, A. B. (2012). *Play/counterplay: The cultural politics of digital game modification* (Doctoral dissertation).

Eul, Feak, S., & IceFrog. (2003). *Defense of the Ancients (DotA)* [Video game]. Global: Blizzard Entertainment.

Kücklich, J. (2005). Precarious Playbour: Modders and the Digital Games Industry. *The Fibreculture Journal*, 5. Retrieved from: http://five.fibreculturejournal.org/fcj-025-precarious-playbour-modders-and-the-digital-games-industry/

Le, M., & Cliffe, J. (2000). *Counter-Strike* [Video game]. Global: Valve.

Nintendo Entertainment Analysis and Development. (1990). *Super Mario World* [Video game]. Japan: Nintendo.

Nintendo Entertainment Analysis and Development. (2015). *Super Mario Maker* [Video game]. Japan: Nintendo.

Poor, N. (2014). Computer game modders' motivations and sense of community: A mixed-methods approach. *New Media & Society*, *16*(8), 1249–1267. https://doi.org/10.1177/1461444813504266

Postigo, H. (2007). Of Mods and Modders: Chasing Down the Value of Fan-Based Digital Game Modifications. *Games and Culture*, *2*(4), 300–313. https://doi.org/10.1177/1555412007307955

Simon, J. P. (2016). User generated content – users, community of users and firms: Toward new sources of co-innovation? *Info*, *18*(6), 4–25. https://doi.org/10.1108/info-04-2016-0015

Sotamaa, O. (2010). When the Game Is Not Enough: Motivations and Practices Among Computer Game Modding Culture. *Games and Culture*, *5*(3), 239–255. https://doi.org/10.1177/1555412009359765

Takemoto, T. (2007-2012). *Kaizo Mario World* [Video game]. Japan: Self-published.

Taylor, T. L. (2009). The Assemblage of Play. *Games and Culture*, *4*(4), 331–339. https://doi.org/10.1177/1555412009343576

Valve. (1998). *Half-Life* [Video game]. Global: Sierra Studios.