

Developers In Exile: Why Independent Game Development Needs an Island

Julian Oliver

selectparks

E-mail: julian@selectparks.net

ABSTRACT

An 'Independent Game' is widely understood as a game released by the company that made it, in other words a game that doesn't publish through a third-party producer. While the producer offers investment in the development budget, this is at the cost of relinquishing some financial and intellectual control over the project, hence the reference to a relative state of 'independence'.

This paper however seeks to take the term independence to its maxim; re-potentialising the term 'Independent Game' so that it may include game development practices that are independent from the restrictive mass-market rationales of the industry itself.

This revision, I propose, is the first step toward the medium of the computer-game having equal-opportunity amongst other, more established forms of 'independent' expression, like short-films or experimental music.

Alongside a revision of what constitutes independence in game development, this paper also looks toward better conditions for the development of 'Game Art', a term recently introduced to accommodate the sudden appearance of electronic artworks that directly engage game cultures and technologies.

While not as yet recognised as beneficial within the wider computer game marketplace, this paper shows how game art practices are uniquely positioned to extend the uses for the medium, its channels of distribution and the technology itself.

Thirdly I will outline several economic and legislative challenges currently facing independent game development in all its forms. In doing so, I offer solutions that break a destructive reliance on proprietary tools and platforms, while providing a 'toolkit' for positioning the independent game outside restrictive systems of distribution control.

Finally, I will give a brief survey of a game-project currently in development that both nourishes and encapsulates this strategic solidarity, 'Developers In Exile'.

KEYWORDS

Independent, mass-market, proprietary, open-source, MMORPG, developer

INTRODUCTION: THE STATE OF ENTERTAINMENT

In recent years critical discourses and disciplines have sought to engage the computer game as a mass medium worthy of attention. Within literature studies, the computer game has been investigated as a platform for rethinking narratology, anthropology in the mapping of

online communities and in semiotics, as a rich culture of signs.

Concurrently a 'new generation' of digital artists interested in exploring alternative uses for the medium has also emerged, fascinated with its scintillating possibilities. This said there are relatively few experimental games in circulation, especially when compared to exploratory practices within other media-types, like video and computer music, both of which are arguably younger mediums than the computer game.

Some of the reasons for this are obvious: games can be both very difficult and very expensive to make, requiring comparably large teams working with highly specialist tools and skills. Because of this, game development, as a practice, becomes heavily bound to the capital investments of the publisher, and therefore the publishers interests within the wider marketplace.

'Independent Game Development' then emerges as the self-determination to operate outside of this restrictive relationship, attempting to create a market context to compete with, or even survive amidst the monopolisations of larger publishers. However while the conditions for an independent game development practice currently *appear* better than ever, **1** the culture of the marketplace itself is still very resistant to accepting alternative approaches to the use of the medium itself.

To better understand how the medium is contained in this way, we first of all need to remember that 'game development' itself is considered an Entertainment Industry, and as such a game's a priori is that is be 'entertaining'. Naturally the condition 'to entertain' *per se* is not conditionally imposed upon a short film, but it can certainly be said that if a producer or developer thinks a game is not entertaining it won't be released. More importantly, the regulation of what constitutes valid 'entertainment' must first of all be questioned.

Here we find the first impediment facing the development and distribution of *truly* independent games, censorship.

TRANSGRESSIVE GAMING

It could be said the uniquely performative relation between the player and the computer game is itself controversial. Because the user can express agency within a field of choices or roles, it is assumed their participation is an implication of his or her own motivations and values. Taken screen for screen, the content of games themselves are certainly no more controversial than what is available on television or at the cinema. However it is this assumed implication of the players' involvement that leads to games like *BMX XXX* (where one plays a naked woman riding a bicycle in a competition) being utterly banished from the shores of Australia without classification **2**, while explicit film content is available to adults in most video stores.

Although the game artist may not be reprimanded for exploring confrontational or disturbing ideas using games within the contrivance of a gallery context, such censorship models would certainly impact negatively

on the distribution of 'Art House', 'Documentary' or 'Propaganda' games should such (potentially saleable) genres ever evolve. In a less direct sense, such aggressive regulation of the medium stifles the confidence of the smaller developer interested in both exploring such ideas and developing new audiences.

THE MAJOR PLAYERS

NPD Funworld indicates that total dollar sales of video game hardware, software, and accessories reached a record level \$10.3 billion in 2002. The figure represents a 10% increase over the 2001 figure of \$9.4 billion.

Wall Street investment bank Jefferies & Co. predicts that U.S. sales of video game hardware, software, and accessories will have almost tripled from \$8.3 billion in 2000 to \$21.4 billion in 2005.

As multinational giants take greater and greater interest in cornering these gigantic markets, companies both big and small become the target of acquisition strategies. Competing multinationals like Microsoft, Lucas Arts, Sony and Infogrames are currently working hard to buy up promising companies, centralising revenue and monopolising the market. Microsoft's recent acquisition of the company Rare is a good example of such competitive rationales.

Schellely Olhava, an analyst for research firm IDC, said the type of family-friendly games Rare creates are exactly what Microsoft needs to broaden the appeal of the Xbox beyond more hardcore gamers.

"They need to get into the mass market," she said. "Rare has a reputation for developing very solid, high-quality franchises, something that's been really lacking for the Xbox..."

While "getting into the mass market" is by no means the pledge of every game developer, it is the mass-media markets that govern the shape of monopolisations within publishing, production and distribution channels, extinguishing possibility for the emergence or sustainability of mini-markets and smaller teams that choose not to side with a publisher. Game-development as a practice is fast becoming a game whose rules are made by the 'major players'.

Artists and researchers are, however, finding other outlets for presentation of their work. Electronic arts festivals, symposiums and conferences now welcome the medium of the game as a valid, even important field of enquiry and expression, but it is here that we find a glass-ceiling for the truly independent developer. Simultaneous with the continued absorption of game content into the Entertainment Industry comes a market for the tools of production themselves, which are often comparable to that of a feature film budget. These include game-engine (the complex software that supports the game) source-code and related licences.

For the artist, issues of cost and licensing greatly hinder open experimentation within the medium, in many cases rendering it totally inaccessible. This is understood best within the context of arts funding. The huge amount of interest in divergent explorations of game technology within the arts is frustrated by either the cost of production or legalities of development and distribution

rights.

Here would be game-artists typically find themselves making some serious [and risky] decisions.

To have control of the project (both in the sense of development and distribution) one can either license an existing engine and codebase or author an entirely new one, both of which are options far too expensive to be realistic within an arts budget. For instance if I wished to develop, distribute and even collect profit from a game based on, or using the 2 year old Quake III Engine, I would need to buy the license for \$US250,000 with a 5% royalty paid of the wholesale price for the title paid to id Software. This pricing schedule is indicative of the expense of other quality engines like Unreal Tournament, Serious Sam and Half-life and is secondary to typical budgets for the production labour itself.

Costly proprietary game-engine code and development tools are also often specific to particular computer platforms, further restricting the medium's field of distribution and flexibility within the development environment. This again is due to monopolisations by companies disinterested in supporting platforms that do not offer worthwhile revenue returns.

Aside from game companies themselves, multinationals like Microsoft, recently a highly aggressive competitor in the marketplace of computer gaming, produce code 'libraries' and 'Application Programming Interfaces' that greatly influence the hardware design of graphic and sound cards, ensuring that certain game-engine features may only be available on their operating system.

Microsoft's closed-source 'Direct3D and 'DirectSound' are examples of this, both of which compete with the excellent open-source and cross platform alternatives, Open Graphics and Open Audio Libraries (OpenGL, OpenAL).

Microsoft's free distribution of the powerful Direct3D and DirectSound libraries is an effort to ensure that more games for domestic computers are made for their own operating system. Since their release, more and more commercial game-engines have chosen to become reliant on Microsoft technologies to benefit from these rarified, yet feature rich products. This hampers evolution of healthy diversity within the artform by creating a market increasingly dependent on the Microsoft platform and the specific features and functions it offers.

While there is certainly plenty of flexibility to make a variety of games with these libraries (they are quicker to get up and running than their open-source equivalents), the inability to access the code in these libraries locks the developer out of having absolute access to extend and understand the technology.

For instance in the development of an engine, we (selectparks) chose to use the DirectSound libraries in our game because of the broad compatibility with existing soundcards and relative ease of use when developing within a Microsoft platform. Various restrictions built into these libraries meant that there was no way of integrating certain dynamic realtime sound features simply because we simply couldn't browse the

sourcecode to better understand how our sound events were being handled. As a result we altered our game design only to find later that the feature was reasonably easy to implement in OpenAL.

Taking all this into account, it's clear how the interests of the developer are positioned secondarily to that of an operating system whose associated game technologies are absolutely geared toward exclusivity and profit. In this way whatever one develops in this platform is *ultimately* curated by the kinds of games Microsoft wants developers to make.

Within other fields of artistic practice, such restrictions would include budget and the innate limitations of the material itself. The difference when computer gaming is chosen as a medium, is that the tools themselves are shaped and controlled by the end games of the Entertainment Industry.

Anyway, these toolkits may not at all be compatible with the chosen development environment of the artist; or the interests of widest distribution to other computer-using audiences. The relative lack of major titles for the game-capable Linux and Apple operating systems is indication of this monopoly.

MODIFICATIONS

So far most purely explorative forays into game design have been made by altering either the artwork [textures, sounds and models] or manipulating the engine of existing commercial games. These are called modifications or 'mods'. 50 of the 51 projects in our International Game Art Archives 4 are mods. Nearly all the 'game-art' found in electronic arts festivals are also in this format. Modifications are made using standard code development environments and 'level editors', art-creation software shipped with a game to encourage the user to develop new content for the community that plays that game. The rationale for supporting a 'modding' culture is that users will continue to buy the product as long as there are new games or game environments to play within. Unreal Tournament, NeverWinter Nights, Half-life and Quake III Arena are all examples of these. Making a mod costs only as much as buying the commercial game, and labour if applicable.

Due to the prevalence of 'moddable' games, it's modding that has given artists an entry point into game design altogether. Artists like Brody, Stephen Honnegger, Eddo Stern and Tom Betts have all built an impressive career as artists by working almost purely as game modifiers.

While the modification of existing games is a *comparatively* easy and near free alternative to the design of a stand-alone, project-specific game-engine, concerns of owner copyright and distribution often come to the fore early on. Exciting *multi-user* modification projects like Fuchs Eckermanns, virtual knowledge-space 'Expositur' 5 for instance, have a greatly restricted distribution because the project is innately reliant on the proprietary Unreal Engine; in order to play the multiuser game each user is legally required to own a copy of the compiled engine and game-data (Unreal Tournament). Imagine, for instance, not being able to distribute a film made using a certain brand of film stock or a

particular camera. This is perhaps a useful analogy for understanding the work that needs to be done to free up the medium of the game to artists.

Modding offers the artist an accessible entry point into game-development practice with the important advantage of a critical framework that is already grouped around a known game or game form. However, the point at which the artist seeks to extend upon functionalities and features inherent to that particular engine difficult arise; due to technical limitations relating to the extensibility and flexibility of engine architecture itself the engine can only be developed to a point...

Secondly an engine is generally designed with a specific game-title in mind and so the designer finds him or herself working with givens conducive to making a certain kind of game. The task of making a second person goat-farming game using a first-person shooter engine would be reasonably impossible for this reason.

At this point the artist looks toward making their own engine, and it's here we find the reason why so little truly independent game-art exists.

THE PEARLY GATES OF MIDDLEWARE

We (selectparks) were considering using the engine of the first person game Quake III Arena in our own current project 'acmi {{ park }}'6. To increase the polygon resolution (polycount) in our game models, and the scale of landscape available in the game, we found we would need to rewrite most of the engine. Even if it were more practical to do this than construct our own engine (which would take around two years and a huge amount of labour), we would need to purchase the engine sourcecode for \$US250 000 in order to be able to *legally and freely distribute* the resulting game. Our two options of a basic modification with restricted functionality and distribution, or an engine crafted from the existing codebase were outside both our own ambitions as artists, and the feasibility of the arts funded project.

To solve this problem, we investigated the use of 'middleware' which costed around a quarter of id Software's Quake III for a full license. Middleware comes in the form of pre-compiled (closed source) code libraries that can be used in conjunction with components of an existing engine to provide certain 'bleeding-edge features'. Thankfully we were able to acquire sponsorship for these libraries and used them with our own engine, the 'Park Engine'.

While it was unimportant to us at the outset, we are restricted from adapting the middleware in any way as the code is pre-compiled (not source code). Also, we are legally restricted from using the middleware itself to further develop the engine (we have spent a year and a half making) after the designated development period.

OPENING THE ENGINE

These problems will continue to plague both artists, developers and the medium's own critical development unless strategies are in place to make the medium more accessible to both artists, arts budgets and audiences.

Put simply, if games are ever to have a scene as prolific and critical as that of digital video short films, the cost of material needs to drop to that of a handycam, rights must reside with the artist, and the presentation medium needs

to be as generic as any domestic computer.

GarageGames have taken an interesting approach to this problem. The complete sourcecode to the excellent cross platform Torque engine [Tribes II] can be aquired at the cost of \$US100 per seat. While this is a great starting point for an emerging developer the licensing agreement still holds proprietary restrictions that ensure that should the project do too well [US\$500,000 or more] the license suddenly switches to that of a full commercial rate. Secondly the codebase can not be distributed without paying the per seat fee. Understandably companies like GarageGames, 4drulers, Conitec must protect their assets. However, when the artist ihim or herself is a developer, is this abstraction of ownership necessary to make a game, and is it [in a wider sense] conducive to the development of the medium amongst artists?

Here Open Source and the General Public License become integral partners in the future of truly independent game development. From my perspective as an artist and developer, it is the only way forward. While I have used the (open source) Linux operating system for a few years, discovery of quality open source options for game production came late and so my massive relief at having powerful free and open code is mixed with some regret.

Clearly the greatest value of open source projects to the independent developer or artist is the transparency of the technology and the ability for the artist, not the proprietor to have rights to contribute to the medium's development at every level.

Recent years have seen the emergence of many opensource game-engines, free engines with open code-bases that are not far behind many of the proprietary products available. Under the GPL anyone is allowed to use these projects without distribution restriction or cost.

Games using open source technology can even be sold as long as the code remains publically available for further development. Some extra learning is often required before development can begin; most are at the alpha or beta stages of development and do not offer the plug and play solutions that middleware or commercial engines offer. Advanced projects however, like Nevrax's 7 NeL engine, The Cube 8 or the CrystalSpace 9 engine now offer a high standard of engine with powerful Application Programming Interfaces and artist toolkits for Massive Multiplayer and First Person games respectively. Moreso they are committed to developing for a wide variety of system architectures and operating systems.

So Why does Independent Game Development Need an Island?

Currently, the partialised nature of so many open source game-development projects has made valuable resources, code and conversations specific to the forums and code-repositories of each project. While the world of opensource game development is very much alive, there isn't yet a shared base of exchange bridging both the mutual interests of the community, from the artist to the developer. Secondly, opensource game-development is so often strategically ignored by the game-development marketplace, and so a bold statement of its presence is

required for it become a 'visible' alternative.

DEVELOPERS IN EXILE

Consolidation of knowledge, a common groundplane and the pooling of resources are all particular to desert island life. It is for this reason that selectparks have chosen the Island as the ideal platform to support a growing community. Working with other developers and designers we have begun building a massively-multiplayer world, in the form of a fictional Island state to host the *truly* independent developer.

Developers In Exile is a tactical initiative to achieve strategic isolation from game-development contexts restricted by mass-market rationales, in the belief that such distinctly capital ambitions are detrimental to open and accessible explorations of the medium.

An experiment in consolidating an open source game development community, DIE will be a 'common ground' for independent game development. In an attempt to stand as a working exhibit of the possibilities and benefits of opensource development, [DIE](#) will be a fun and feature rich game-based context for discussing and problematising issues affecting the independent developer, socialising, nurturing ideas and code.

Furthermore, the [DIE](#) project seeks to exemplify this policy of openness and accessibility by making the game code and artwork transparent and manipulable by the residents of the world.

Built ontop of the open source NeL engine [Nevrax] the codebase will be configured to be 'living'; Inhabitants will have both the ability to create new territories, trial new life-forms and contribute to the evolution of the engine and its functionality.

Code repositories, for individual projects will be accessible to both visitors and local developers and will be accessed as 'mines' in user determined locations throughout the world as well as through conventional methods ['CVS' - Concurrent Versioning System].

Interestingly the vast array of persistent Massive Multiplayer game worlds [Anarchy Online, Asheron's Call, Everquest, Lineage] configure 'citizenship' as a paid subscription.

While I find these worlds richly rewarding to play, contribution to and privedge within the world is primarily economically determined. In gameplay this results in the expectation of "more game for my dollar" whereby the gamer's enjoyment is waged against their interest or ability to continue paying.

While [DIE](#) is not interested in 'competing' with the rich gameplay of such worlds, it is important that the project offers a tax-free citizenship. This defines a fundamental level of motivational difference between the great majority of game based persistent worlds and DIE.

The second component of the project involves a website, forums, project documentation and public download site.

The [DIE](#) core design team is currently comprised of individuals as diverse as an IP lawyer, a political scientist, Linux developers, artists, 2 game theorists and several programmers.

INFORMATION AND QUESTIONS

Further information on [DIE](#) can be found at the project page:

<http://die.selectparks.net>

ACKNOWLEDGMENTS

The author acknowledges the support of Katherine Neil in the writing of this paper.

REFERENCES AND NOTES

1. <http://www.onlamp.com/pub/a/onlamp/2002/12/23/indiegames.html>
2. BMX XXX was not allowed an R18+ rating as this rating does not exist for videogames in Australia. It was later allowed on Australian shelves once the content had been sufficiently modified: <http://www.gamepower.com.au/?aid=1069>
3. Here id Software is distinct from other game development giants, offering games like Quake III and Doom III for both the Linux and Apple operating systems.
4. <http://selectparks.net/sp5.htm>
5. http://www.t0.or.at/~fuchs-eckermann/expositur/expositur_fin.htm
6. <http://selectparks.net/acmipark.htm>
7. <http://nevrax.org>
8. <http://wouter.fov120.com/cube/index.php4>
9. <http://crystalspace.org>