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Fan based production for computer games: User led innovation, the 'drift of value' and the negotiation of intellectual property rights

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Abstract

Fan based or third party content creation has assumed an integral place in the multi-million dollar computer games industry. The emerging production ecology that involves new kinds of distributed organisations and ad-hoc networks epitomises the 'drift of value' from producer to consumer and allows us to understand how user-led innovation influences the creative industries. But the ability to control intellectual property rights in content production is critical to the power structures and social dynamic that are being created in this space. Trainz, a train simulation game released by Brisbane developer Auran, which relies heavily on fan created content for its success is used as a case study. The licence agreements between Auran and the fan creators are analysed in order to understand how the balance between the commercial and non-commercial is achieved and how the tension between open networks of collaboration and closed structures of commercial competitive environments are negotiated. It explains the intellectual property issues involved and highlights how the interface between copyright and contract will have a critical impact on this example of user led innovation.

Keywords: Computer games, Intellectual Property, Fan production

Computer games and distributed production networks

Digital networks have challenged many of the business models for the distribution of media products. File sharing networks and the ease of digital reproduction are a serious challenge to the institutions and practices of media rights-holders. The emerging models for the distribution and consumption of a variety of media products have occupied public debate for some time now. (Benkler, 2003, Berkman Center for Internet and Society, 2004, Boyle, 2002, Coombe, 2003, Gartner G2 and Berkman Centre for Internet and Society, 2003, Fitzgerald and Bassett, 2003, Frow, 2000). But digital networks also give rise to some more innovative and perhaps more challenging forms that intersect with copyright and intellectual property regimes. Interactive media, enabled by digital networks, present a raft of issues about distributed *production* rather than distributed consumption and reproduction. Digital networks enable consumers to become producers and the implications for institutional practices, like rights management, are yet to be fully explored. Hartley (2004) has pointed to the 'drift' of meaning and value in the media value chain as focus has shifted from the author to the text to the audience or users. He suggests that in the new economy it is essential that we understand the ways in which media and media literacies move from becoming 'read only' to 'read/write', and relations between publishers and users become more of a 'conversation'. He contends:

Barriers between producers and consumers, currently organized around divisions of labour such as professional and amateur, expensive and cheap, are delineating new relations of consumption. (Hartley 2004:140)

In this paper we explore how this 'drift of value' works in relation to the negotiations between computer game developers and fan content creation communities. We look at the work of Brisbane games developer Auran as a particularly interesting example of a company seeking to negotiate the complexities of those divisions between professional and amateur, and between open architecture networks and the imperatives of closed platform commerce. Unlike many publishers in this area Auran have taken an exploratory and innovative approach to the challenges presented by this system.

Computer games are remarkably successful applications. They are exemplary in the digital networked environment, exploiting feedback loops, interactivity and networking opportunities perhaps more than any other application online. Computer games also have a history of strong fan communities which have often been active in creating new content. Fans design new levels, create new 'skins' for objects and characters, or code new artificial intelligence (AI) 'bots' to play against in a game¹. They form 'mod' communities (for their game modifications). The developers and publishers of games have been at the forefront in experimenting with business models that encounter these very active communities (Herz, 2002). Some take the attitude that the game and all its code is to be protected at all costs, that any interference with the code is damage or theft and that the developer or publisher holds all rights to the game. Others have taken a more experimental approach and released toolsets to the player communities to facilitate the creation of content. They have actively encouraged mod communities to build a variety of content, and have provided uploading sites for them to share this content with other players. Occasionally they incorporate player created content into the next iteration of the game. Rather than tightening control on their IP, they have released strategic aspects of it to their user communities.

Prominent examples include *The Sims*, a popular single player game about domesticity and retail, with up to 90% of its content created by players, who trade it on the internet (Herz, 2002). Purportedly the best AI bot in the well known first-person shooter game *Quake* was created by a player. The entire game *Counterstrike*, one of the more successful games of recent years, was made by a group of players using the game engine of *Half-life* (Pearce, 2002).

Motivations for creating content range from a passionate interest in games or the particular theme of a game (for instance trains, or a particular fantasy or sci-fi genre), to the satisfaction of creating and crafting new material, the social status within their community for making interesting material, or to using it as a pathway into paid employment. It is productive activity that is freely given. Whilst it may end up economically profitable for various stakeholders, this is not the driving motive behind the activity for most fan creators.

These practices create many issues of interest, not least the issue ownership, negotiation of rights to materials and the effects these practices will have on encouraging or stifling innovation more generally. The companies which choose to foster and encourage mod communities, recognise a source of free content creation and ideas. In terms of labour we increasingly witness business models where products released into the digital market are not 'finished', but are ongoing productions, which use both the paid labour of the developers' workforces and the unpaid labour of the users to continue development. We can see this as a trend in knowledge-based economies. As Leadbeater noted:

The more knowledge-intensive products become, the more consumers will have to be involved in completing their production, to tailor the product to their needs. ...In a knowledge driven economy, consuming will become more a relationship than an act ... with the consumer as the last worker on the production line..." (Leadbeater, 2000:32-33)

In a digital network what we are looking at, then, is not just a changed distribution market for products of a 'static' or finished nature, such as songs or written works. We are looking at texts that are not finished, and where the input from users can be a significant part of the production. Computer games are a particularly vivid example of this. The distributed production process harnesses the creativity, innovation and labour of the end-user. Who should own it?

Open Source software networks present some similar issues with their distributed production networks. However one of the points of differentiation for games is that they usually represent a hybrid of commercial and non-commercial stake-holders from the outset. Content creation communities for games most often start from a commercial software base. Like Open Source networks, production is distributed. Unlike Open Source, the production nearly always occurs in a commercial environment. Often the source code is not released to the player creators, who tend to produce artwork and texture content rather than code. How the games developer or publisher negotiates the rights of the player content creators is a matter of discretion. The power of the various stakeholders in this situation is not necessarily balanced, with the publishers or developers most often seeking to retain control in whatever ways possible.

The example we present below looks at the case of Auran, a successful games developer based in Brisbane, who has actively sought to build communities of player creators, or ‘third party content creators’ for their game *Trainz*. Balancing a paid and an unpaid labour force, managing the rights for the variety of content and the variety of needs of the different content creator groups, emerges as an extremely complex task. The motivations of different content creator groups vary, with some wanting financial reward, some not, some wanting attribution rights, some seeking to control to some extent the distribution of their product, some wanting publicity and so on.

The case of Auran ‘Trainz’ and third party content creators.

. Auran and developers like them routinely release sophisticated content creation and distribution tools as downloads from their web sites, and include them with their retail game software. The open-architecture design of *Trainz*, a 3D train and railroad simulator software product, enables and encourages fan generated content, from 3D models of diesel and steam locomotives to extensive prototypical railroad layouts, to be integrated with the core *Trainz* platform. The extensions and additions created by fans are integral to game development, marketing and promotional activities.

Much of this content is made freely available via Auran’s ‘Download Station’, an online repository of fan generated content that is accessible to purchasers of *Trainz*. Since the initial commercial release of *Trainz* in December 2001, Download Station has grown to include approximately 26,000 individual assets, including 2800 3D locomotive models. Even more content is available from a network of fan web sites that supports *Trainz*. Some creators offer the material as freeware while others have elected to make their creations available for purchase as payware.

From the outset of the *Trainz* project in mid 2000 Auran decided that third-party fan content would be crucial to the simulators’ success. Like many other developers, Auran sought out fans from an existing community *before* the release of the game. Close relationships were established with creators in the fan community. Initially Auran was regularly approached by fans seeking additional technical support and information about the *Trainz* core platform in order to advance their projects. Auran

formalised these ad-hoc relationships in mid 2001 by forming the official *Trainz* third-party content creators program. Participation in the program (open to the more advanced creator teams) provides content creators with access to a private, password protected forum area through which they can question members of the Auran development team about various technical aspects of creating content for *Trainz*. They are also provided with early access to updated versions of *Trainz* to assist with preparing and updating their content for forthcoming releases. This distribution of early beta versions of *Trainz* software ensures that creators are aware of how to take advantage of new features and functionality being introduced to *Trainz*, and that new third party content taking advantage of the new features is available for users shortly after Auran releases.

Thus through formalising their relationship with third party content creators, Auran gains access to free content developers. These developers (after signing nondisclosure agreements) are in turn given access to the expertise of the paid development team, inside technical information, and a forum environment that generates a sense of community among the third party developers. In some ways it can be seen as an attempt to reign in the chaotic and somewhat anarchic phenomenon of hacking and modding communities, and bring them into a more controlled relationship with the developers. As Foucault pointed out, it is useful to understand a given situation by proceeding with an analysis of power which starts at the micro-level and allows for an understanding of how particular practices (such as the gamers creating content) at a particular time and place became useful and lent themselves to economic profit and were thus harnessed and applied more generally by developers.

It is only if we grasp these techniques of power and demonstrate the economic advantages or political utility that derives from them in a given context for specific reasons, that we can understand how these mechanisms come to be effectively incorporated into the social whole. (Foucault 1980:101)

Tracing the history of the *Trainz* community of developers highlights some of the negotiations between the various developer groups (paid employees of Auran, and unpaid teams that assembled themselves around various interests). *Trainz* online community members collaborate and share information through the *Trainz* online forum. Much early development was done through experimentation and problem

solving, with extended conversations (including the Auran development team at times) on the bulletin board about possible solutions to problems they encountered. Source files were often made available for other fans to use and build on. This open sharing of information extended to fans providing background information, specifications and photographs of particular locomotives to assist creators with their modelling efforts. The early advances made by the fan creators were quite an achievement as Auran did not initially provide the full Content Creation documentation guidelines that explained the *Trainz* systems for integrating various art assets. Collaborative work in the public *Trainz* forum generated the knowledge, techniques and processes for a quickly growing content creation network.

Collaborative, networks of third-party content creation rely on a mixture of the commercial and the non-commercial, the proprietary and the non-proprietary. Download Station relies on the voluntary and free content offerings from fan creators. Since the first release in 2001 new and updated commercial release versions of *Trainz* such as *Ultimate Trainz Collection (UTC)* (November 2002) and *Trainz Railroad Simulator 2004 (TRS2004)* (October 2003) have increasingly incorporated and relied on the content art assets generated and provided by third-party fan hobbyists. This has been with the consent and agreement of the creators. Thus Auran now provides the core code base of the *Trainz* platform while much of the art asset content included with the release packages is contributed by fan creators.

This product represents an intersection of not only the commercial and non-commercial, but of a variety of motivations and production practices. Thus, while Auran's ultimate concern is with the bottom line, the third party content creators are motivated by passionate interest in trains, by the *social* rewards of becoming well known within the community that is of value to them, and so on. The production methods of the paid developers also differ from those of the unpaid developers, and the ways in which these practices mesh or fail to mesh can lead to a less than seamless process of collaboration. It is in the negotiations between these differently motivated groups and their different practices that interesting new production models emerge, and where new rights management systems must be worked out.

As an example, one of the more significant collaborative content creator initiatives involved bringing steam locomotive models to *Trainz*. One of the most frequent requests posted by users to the *Trainz* forum was for steam. The development team decided quite early that within the scheduled time-frame for bringing *Trainz* to market, and with the programming and art resources available, it was not feasible to include steam with the first release. The possibility was raised, however, of commencing the code work needed for steam models, then releasing this material and associated guidelines to third-party content creators who could then create the art and animation assets.

In effect Auran would out-source the introduction of steam to the fan content creation community. However, while the Auran team considered how best to achieve this, the fan creators beat them to it. By mid 2002 a group of creators (Marlboro, Prowler901, UserRo, Jetstreamsky, Narrowgauge and others) were solving the problem of how to implement the various animation effects needed to run a steam locomotive in *Trainz*. This collective effort crossed over a number of different steam projects being pursued by various individuals. The steam creators shared knowledge and skills about using various 3D modelling software tools. Progress towards integrating a range of animation effects associated with steam into *Trainz* was very much the outcome of a collaborative experimental, trial-and-error approach, with regular updates on the results being shared amongst the creators. Throughout this process the collaborators moved well ahead of the technical details released by Auran.

This achievement, that benefited the wider *Trainz* user community and Auran, was a direct result of a collaborative network for sharing ideas, know-how and art content. The creation of these digital artefacts is supported by a free flow of information, ideas, technical details, specifications and drawing plans, textures, model packages, photographs, forum posts, emails, and the exchange of various working versions of the model in progress, packed up in a zip file and transferred among the collaborators. In effect a *Trainz* community digital commons. Steam locomotives became freely available for download from both Auran's Download Station and fan web sites such as Prowlers Den². Others including Strat's 'Big Boy' model were released as payware offerings.

The fact that the progress of the third party creators did not match with Auran's timetable for development is an interesting pointer to how an unpaid workforce is often unruly, difficult to contain, and, not being subject to the constraints of milestones and publisher demands, apt to go at a pace determined by their own agendas. It is also a clear example of the ways in which this unpaid work is done with passion, enthusiasm and self-motivation. No-one is forced to produce this work. It is all too easy to frame unpaid work as exploited labour. But the ways in which these fans rush ahead of Auran, outpacing Auran's development schedules, and demanding information, time and input from Auran indicates that this is an actively negotiated power relationship in which the fans cannot be constructed as a duped community of consumers being taken for a ride by an evil commercial corporation. To suggest the fan producers are not aware of the processes at work is to underestimate a sophisticated community of producers. Thus we need to understand the power relations here as complex, nuanced and constructed around the coinciding interests of the commercial developers and train enthusiasts. As Terranova most usefully frames it:

Incorporation is not about capital descending on authentic culture, but a more immanent process of channelling of collective labor (even as cultural labor) into monetary flows and its structuration within capitalist business practices. (Terranova 2000:6)

Henry Jenkins also argues that these emerging distributed production networks that draw on the creative work of fans are "more than simply coopting grassroots activities back into the commodity culture" (Jenkins 2002:166). This is a framework in which fan communities are not understood as either resisting the culture industries or being seamlessly incorporated to corporate interests and agendas. Instead, these messy and uneven participatory culture negotiations, alliances and relations are perhaps becoming the "routine way that the new media system operates" (167). Jenkins also recognises that these participatory trends of increasing cooperation, collaboration and consultation raise crucial questions and problems concerning intellectual property. He asks, will these emerging collaborative networks "displace the legal structures of the old commodity culture. How far will media companies be willing to go to remain in

charge of their content or to surf the information flow?” (166). Just how the structuration into business practices of productive cultural activity occurs is what is of interest here. We have so far pointed to the ways in which information is circulated and development proceeds in this mixed network of paid and unpaid work.

Marketing is the other area of negotiation between the fan developers and Auran. High profile fan assets feature heavily in the promotion of *TRS2004*. Strat’s ‘Union Pacific Big Boy’ and Jetstreamsky’s ‘UK Mallard’ steam locomotive were prominently positioned on the box art for the regional North American and UK releases. Both of these creators worked closely with 3D artists on the Auran *Trainz* team to prepare and finalise the assets. A major track layout in the *TRS2004* package, ‘Tidewater Point’, was also created by a team of hobbyists, Trainzproroutes³. The next *Trainz* release, *Engineers Edition*, is continuing this initiative of sourcing art content from the fan third-party creator community. Thus the fan creators achieve status and publicity through gaining access to marketing resources available through Auran.

What are the intellectual property implications and challenges arising from this network of relations? Are the current legal regulatory frameworks of intellectual property and specifically copyright an effective and appropriate approach to managing and facilitating these relationships?

Legal Issues – how the law and practice intersect

The basic principle in copyright law is that unless the content is deemed to be jointly authored (that is the contributions cannot be separated out), each author owns the copyright in the original work that they produce as part of the collaborative exercise (Fitzgerald, 2004: 92). The existing law suggests that in a fan based/user led production scenario the developer will own the platform, tools and initial content that is employed by users to generate new content. Those users will in turn own the new content that they create, to the extent that it is original. Where the work is not wholly original, for example where users create content that reproduces content supplied by the developer, the user will own copyright in the new portions of the whole work, but

the original author (or authors) will retain copyright in the pre-existing portions. If the user did not have permission to reproduce the original content, they will infringe the original author's copyright (*Copyright Act 1968*), and, in the case of a derivative work under US law, may be denied any copyright in their new work⁴. An interesting question that arises in European and Australian law is to how moral rights are dealt with. The notion of moral rights and software development is an uneasy and under-conceptualised one but unless consents are obtained moral rights to attribution of the author and integrity of the work must be respected.

Analysis of the Trainz agreements

The spread of copyright ownership over multiple parties along with the need of commercial enterprises to be able to control value invested in content creation and promotion means that the rights between the parties are often mediated through contractual "end user" licence agreements. Auran uses several such documents in relation to *Trainz* collaborative development. We look at four of them here. The first is a licence agreement for the *Trainz* software itself, including the simulator and certain content creation tools. This agreement is a 'shrinkwrap' licence, and grants the user the right to install and use the software, but attempts to limit any use of the software except in accordance with the licence. The licence allows the user to use the content creation tools to create new works, but only allows distribution if the work is original or is 'substantially different' to pre-existing work, the final determination of which are stipulated to rest with Auran. This clause allays Auran's fears that the content that their paid developers and artists have created could be appropriated for use, with little or no change, in competing products such as Microsoft's train simulator. Finally, the licence provides that any content the user creates and submits to Auran may be distributed by Auran with its products, in return for an acknowledgement in the credits.

The second document is another shrinkwrap licence agreement over what Auran calls 'brew crew content'. This content is a collection of source media files (images, animations, video and sound files) that users can use to create new content for the *Trainz* simulator. The licence restricts any use of the media except as explicitly granted. Because the media forms the basis of the majority of Auran's art development in *Trainz*, Auran made it available to users on the basis that it would not

be used in competing products. Accordingly, use of the content is restricted to developing content for the *Trainz* simulator – users may not save any works created through the use of the content in any other format, and may only distribute copies of the new work through Auran's online submission process. If the user chooses, the content can be made available for Auran to use in its official releases, and if Auran does so, it will give an acknowledgement in the credits and arrange royalty payments if appropriate.

The third document is a contract between Auran and a fan creator who has offered content to Auran for inclusion in product releases such as *TRS2004*. The contract provides that Auran is granted an exclusive irrevocable licence to include the content in the game, but may not modify the content in any non-technical way. In return for the licence to the content, Auran provides the contributor with a signed copy of the game, a polo shirt, a credit in the game and in the manual, and advertising space on both the packaging and the distribution CD-ROM. As fan contributed content provided under this contract is likely to be high profile content, which Auran would likely advertise and gain significant commercial benefits from, the contributor is prevented from distributing or licensing the content, or content that is substantially similar to the content, to any other person.

Finally, Auran hosts the official content creator program for high profile fan development groups, which allows developers direct access to the *Trainz* programming team and select advance features. Auran requires all third-party fan creators who participate in this program to enter into a non-disclosure agreement (NDA) designed to protect intellectual property rights held in the *Trainz* software and the confidentiality of any information or beta software provided. The very success of the collaborative fan network that Auran relies on is grounded in an open and collaborative sharing of ideas and content. Yet we see here how the commercial imperatives for Auran to protect itself in a competitive market challenge the structures of that open production network. The tension between these drives for both open and closed systems requires balancing – negotiated and articulated through contractual EULAs.

These agreements provide that Auran's liability is limited to removing any content it has used in the game and re-supplying the benefits listed in the agreements. Similarly, all the documents provide that the user indemnifies Auran for 'all loss, damage and costs', and where applicable, provides warranties for title and propriety of content submitted. Termination is generally at Auran's discretion.

Restrictions on re-distribution

Unlike many other games' end user licenses Auran does not assert ownership over fan content created for Trainz. Nor does Auran attempt to exclude fan creators from commercialising their content by restricting them to non-commercial use only.

Electronic Arts's standard End User license for tools included with products such as The Sims, allows users to create and distribute material for non-commercial purposes, but expressly prohibits any commercial use. The End User Licence Agreement for Bioware's Neverwinter Nights also prohibits end-user creators from commercially exploiting or commercially distributing add-on module content created with tools that are provided with the game. The rights of the publisher, Infogrames, also extends to being granted an "irrevocable royalty-free right to use and distribute such variations by any means" should an end-user creator have distributed their add-on content (for example, by making it available for download from a website server). The Trainz license on the other hand permits the end user to also modify Auran assets and then distribute the new creation provided it is substantially different to the original work. However, if a creator uploads content to Auran's Download Station they must assent to a license agreement establishing the terms and conditions under which the content is supplied to Auran for distribution. They grant Auran a non-exclusive license to redistribute that content from the Download Station server and on commercial release CDs or DVDs⁵. Auran's policy is that unless they have the creator's agreement they do not include any third-party content sourced from Download Station with their commercial Trainz release package. If the creator refuses permission then the content is removed from any proposed commercial release.

There are some cases in which the redistribution of player created content is limited. Where content created by fans is to be officially included in an Auran distribution, the creator and the developer may enter into a contract which provides for an exclusive

licence to distribute the content to be granted to Auran, and the creator is prevented from later distributing the content to other parties. Where users create new content based upon content contained in the 'Brew Crew' distribution, the creator is prevented from distributing the content in a format or manner other than through Auran's established distribution channels. Similarly, where new content is created by the tools provided by Auran and reproduces work provided by Auran or another third party, distribution is also restricted. There are no grounds for restricting the distribution of wholly original content developed with the use of Auran's tools, but Auran purports to be able to make a final decision as to whether such a work is or is not a new work. (This raises a concern as to whether this allows contract to override rights bestowed under copyright legislation, where the need arises (Copyright Law Review Committee, 2002)). Mainly, these restrictions act to prevent Auran's intellectual property being appropriated for its competitors' products. Auran needs to ensure that it allows its users the freedom they need to develop, without providing an avenue for its work to be used to its detriment.

IP rights and tensions within the development community

When uploading content the fan creator also warrants that they do not infringe the copyright, patent or trademark rights of any other person. Creators using or modifying the work of others has been a continuing issue of concern to Auran and of conflict among the *Trainz* fan content creator community. The most divisive issues surrounding intellectual property have tended to be disputes among fan content creators rather than disagreements between Auran and creators. For example, creators from time to time report that another creator may have used or modified their material without permission.

Acknowledgment and credit is important to most fan creators, and they become understandably aggrieved when another creator uses their content in a project such as a layout or route without seeking permission or providing credit. While some fan creators allow their content to be modified and used by others, with appropriate acknowledgments, others are hostile towards any unauthorised use of their content, viewing it as a serious breach of their intellectual property rights. Some creators include licenses with their content packages, expressing the terms under which their creations can be used and distributed, while others do not. Auran is often approached

by creators to assist with resolving these digital rights disputes. Further intellectual property complications arise when fan creators use the brands, trade-marks and liveries of major rail companies; for example, when creating a Union Pacific or British Rail locomotive. Often the creators do not have the express permission of the companies to use these trademarks. A few teams have approached major rail companies such as Union Pacific and negotiated a license in order to use the trademarks.

These digital rights management issues are a continuing source of conflict, uncertainty and misunderstanding among the fan creators contributing content to the *Trainz* project. Some feel that creators should openly share the source files as this provides a valuable resource to encourage further creative collaboration.

It is important to understand that these divisions and conflicts are not simply an opposition between Auran as corporate developer and the fan creators. Many of these conflicts play out among the content creators and the wider *Trainz* fan community. For example, one of the more divisive issues continues to be the status of fan payware. When fan creators such as Landrvr1 announced plans to release their models as payware they were answered with both supportive and oppositional forum posts. Some fans commented that the creators deserved compensation for efforts that provided many users with pleasure and enjoyment. However, others passionately argued that hobbyists should not be selling their creations to others as this would undermine the open collaboration and sharing that characterises a fan community such as *Trainz*. Auran regularly receives emails protesting that payware creators should not be permitted to make posts on the forum promoting or previewing their payware content releases. Such posts are viewed as marketing and advertising on a community forum, and therefore should be deleted.

Auran's position is to equally support both payware and freeware creators. Auran has no objection to creators taking the step of commercialising their efforts. Many payware creators also provide free content downloads. But the payware versus freeware argument continues to be a divisive issue. In these emerging ad-hoc production ecologies the commercial and the noncommercial, the proprietary and the

nonproprietary commons mix uneasily, opening difficult digital rights management challenges.

Collaborative development and enforcement of strict IP rights

The development model employed by Auran ensures that Auran generally has final control over submitted works, and that the author may not make the work available to Auran's competitors. This approach, while perhaps justified, must be carefully and continuously moderated to prevent disenfranchising the contributor base. A regime of strict enforcement of intellectual property rights can lead to problems of ownership and control, which become more visible as developers move further from releasing a complete product and towards providing only the underlying platform required by users to interact and create content. Taylor (2002) notes that while some argue for the rights of users on the basis that they provide the majority of the value of games, others argue that since games "are not only private and for profit, but based on voluntary participation [...] game owners have every right to set any terms of service they want" (Taylor, 2002:227).

While the motivation for users to develop content remains strong, it is in the publisher's best interest to use contractual means to further enforce their copyright interests and keep control over development as tight as possible. If motivation begins to fade, however, publishers may need to design a more equitable model for joint development. Users will generally not need more financial incentive to generate content (which would, necessarily, diminish the value of harnessing the energy of an unpaid user-base), but may need greater integration into the development community. A strict legal interpretation of the contractual agreements between Auran and contributors suggests that any interaction and development is conducted on Auran's terms. Benkler warns of this approach, considering that firms that specialise in providing platforms for peer production "will not be able to count on appropriating the end product directly, because the threat of appropriation will largely dissipate motivations for participation." (Benkler 2002:444). Recognising this difficulty in managing and motivating an unpaid user-base, Auran has sought to provide various rewards to developers (including advertising exposure, behind-the-scenes access and merchandise) and has employed at least one person to specifically liaise with the user community. The agreements between Auran and fan creators provide a default strict

legal platform that Auran can resort to if it feels that its content has been unfairly appropriated or its commercial activities jeopardised. In practice, however, Auran is necessarily much more liberal with its fan community, being primarily concerned about large scale unscrupulous dealings with its intellectual property. Thus they are seeking to prevent occurrences such as the wholesale export of Auran content into the Microsoft train simulator. Accordingly, fan requests to export or commercialise content that they have modified, even to a small extent, are generally granted, and Auran does not raise complaints about use of its content in ways that would constitute fair dealing.

It is generally in the best interests of a company such as Auran to ensure that it has a healthy relationship with its users. In part this can be to prevent mod communities developing completely outside their control in alternative networks. In some cases, it may involve relinquishing the tight control over the way in which a project develops or is conducted, allowing users to have more input over future development, or allowing a wider community to flourish by giving away more content, in the anticipation that users who feel that they can take the game in a different direction can do so, without seizing control of their work or alienating them to a potentially competing environment. In other cases, rewards of the type presented by Auran may be sufficient..

Using strict intellectual property laws to regulate the development of content by an unpaid user-base seems to be a strategy that is only effective as long as users have a high motivation to develop content, and are generally not significantly affected by the legal relationships created. That is to say, if the legal agreements are simply formally stating the way in which development is taking place, or are generally otherwise unenforced, there is little risk of alienating the user-base. If development of content in accordance with the developer's licences becomes overly burdensome, the motivation for participatory production obviously diminishes significantly. Because individual contributors are not directly monetarily compensated by the developer (although an increasing number of fan developers are commercialising their products), their motivations to produce may be quite complicated, involving a sense of community, the potential for public exposure, a love for the subject matter or the provision of merchandise and access to private areas. Developers wishing to encourage

participatory production therefore have to take significant care that the enforcement of their intellectual property rights, as well as their rights under any applicable contracts, is sufficiently balanced with the motivating factors of the user-base, and must be aware that those factors may change over time as the community develops.

Conclusion

The great challenge in this environment in the next few years will be over who controls the IP – a complex mosaic of rights in the digital estate – and how. Power here comes very much from an ability to leverage off an intellectual property base (such as copyright in code or visuals). The critical question will be the extent to which commercial entities can acknowledge fan based ownership as part of the ‘drift of value’ (Hartley, 2004) from producer to consumer. Auran provide an interesting approach which is responsive to the needs of the fan developers and in most respects provides a best practice model. That cannot be said for all platform owners. The immediate challenge is to conceptualise a commercial and legal framework that will best facilitate the new dimensions of distributed production networks in games and other emergent areas of the creative industries. The dilemma is: the more user led IP is regulated through contract, the greater the potential for stifling user led innovation; yet the less contractual restructuring the platform owner can demand, the more circumscribed and limited will be the development framework. From the user-developers’ perspective the only acceptable solution is one that embeds in law, not just practice, the fundamental rights of those at the forefront of user led innovation. The counter argument will be that fan based productivity would be significantly reduced if it were not for the investment of the platform owner. The sensible and effective resolution of these competing claims will not only act to provide balance to the games landscape but it will also be vital to facilitating the future of user based production more generally across creative industries.

Notes

¹ An object in a game environment is often a model with a texture wrapped around it. Players take the model and lay their own textures over it to create a new ‘skin’, giving the object a different look. Similarly they can design new ‘levels’ which are the terrain or environment that play takes place in. ‘Bots’ are the robot or computer generated opponents players compete against.

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² <http://www.steammachine.com/prowler/>

³ <http://www.Trainzproroutes.com>

⁴ 17 USC 103(a); This is arguably not the case in Australia. See *A-One Accessory Imports Pty Ltd, Rogers & Bennett v Off Road Imports Pty Ltd & King* (1996) 143 ALR 543, 556, although an action for copyright infringement will lie.

⁵ For a copy of the policy document see

<http://www.auran.com/Trainz/AuranContentCreationandDistributionPolicy.htm>

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