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3

Co-creating *Trainz*

From ethnographer to online community relations manager

My research with Auran became a dialogue about how to create and manage relationships with online gamer fans. At a meeting in June 2000 Lane challenged me: 'It is one thing to study these things, how about actually applying these ideas and seeing how they work out in practice.' I accepted a position as online community manager and commenced working at Auran on a part-time basis; a few months later this became a full-time job.

Managing fan community relations is now an integral part of games development companies' innovation, product development and marketing practices. Gamers increasingly expect and demand that developers will not only listen to their views, but also enter into active dialogue with them. Developers like Auran and Maxis actively solicit feedback from consumers and audiences.

What are the implications of taking up the community manager position at Auran and participating actively in the making and management of a gamer fan community, and being paid for it? Does this irredeemably compromise the research with a sell-out to commercial imperatives and objectives? At best is this a case of the ethnographer going native and at worst a commercial takeover of academic research? As Auran's online community relations manager, I was directly involved in the process of making a commercially exploitable fan community (Nightingale 1996: 124).

Ethnographic research methodologies are increasingly taken up by commercial enterprises as a tool for understanding and accessing customer and user culture. In 'Anthropology as "Brand": Reflections on corporate anthropology', Lucy Suchman (an anthropologist who spent many years working as a researcher with the Xerox PARC corporation) examines this

trend of corporate anthropology, suggesting that it involves anthropology's taking on the form of a commodity or brand as anthropologists are employed by corporations and engage with the 'worlds of commercial development, research, marketing and public relations' (2000: 2–3). She argues that such anthropologists come to take on a role or identity as 'proxy' for customers and users within the corporate workplace (2000: 4) – as indeed I did as an ethnographer within Auran. Suchman comments that these roles provide a unique intervention 'inside the engine rooms of early 21st century capitalism', but also raise the challenge of how we should occupy such positions. The anthropologist participates in discovering and observing consumer experience that is then addressed by corporate design and marketing, but also simultaneously contributes to constituting consumer experience 'through activities of design and marketing'. I agree with Suchman that these tensions are irresolvable and are the conditions for undertaking such a research and working relationship. These positions offer opportunities to explore and participate in the making of co-creativity. Nevertheless they also carry the risk and danger of 'contributing to, rather than refiguring, dominant forms of commodity fetishism' (4).¹ Part of the challenge of this research then, as Suchman (2000: 5) proposes, is to 'find the spaces that allow us to refigure the projects . . . rather than merely to be incorporated passively into them'. However, it does not follow from this that these research participations are or should be opposed to corporate agendas. As we shall see, co-creative relationships unsettle such oppositional logics.

My job was to encourage and manage the formation of online communities around *Trainz*: a model railroad simulation. Players would be able to collect authentically detailed 3D models of locomotives and rolling stock, purchased individually or as packs from the Auran online shop. *Trainz* would also allow players to drive the trains through fully 3D train-line landscapes from the engineer's cab-view perspective. On first release *Trainz* would include Surveyor, an editor tool set that enabled players to create layouts. Using Surveyor, players can manipulate the landscape and place objects such as trees, buildings, track, bridges and tunnels, to make highly detailed 3D model railroads. The development team put a lot of effort into the design of Surveyor on the premise that the player activity of creating and sharing layouts would provide the foundation for a growing and sustainable online community that would also be the market for collectible locomotive models. The Auran-hosted *Trainz* website would feature forums, chat, the online shop, and hosting of the user-created layouts. Regular releases of content add-on packs covering historical periods, regional railways, famous passenger routes and particular rail companies such as Union Pacific, Deutsche Bundesbahn and British Rail were also part of the *Trainz* product line plan.

Trainz would also enable players to create content such as 3D locomotive and rolling stock models with 3D modelling programs and import them into *Trainz*. User-created content would be important for the product's success. The development team aimed to introduce user-friendly editing tools for *Trainz* that would effectively open the content-creation process to the players.

The train simulator fan network

The *Trainz* development team identified that there already was an active online community of rail fans and enthusiasts. There were hundreds of websites covering all aspects of the hobby, from model railroading through to train spotting. Additionally, a network of websites had already formed to promote train and rail simulation software. One of the early members of the *Trainz* development team, Rob Shaw, was a rail fan who hosted just such a website. Lane approached Shaw with an offer to join Auran and Shaw accepted, leaving his home in Adelaide and moving his family to Brisbane. Bringing to the project his knowledge and passion for all things trains and rail, and computer graphic artistic skills that were refined with training provided by Auran, Shaw eventually worked on the project as a 3D artist, creating locomotive models. Additionally, he brought to the *Trainz* team his contacts with the online train simulator fans. This was of great assistance to the development team as we commenced our plans for forming an online community around the *Trainz* project. By employing Shaw, Lane embedded a deep understanding of rail-fan culture into the very heart of the *Trainz* project.

Shortly after joining Auran in my role as online community manager, Shaw outlined to me the history of the train sim fan network, formed with the goal of creating a fully featured train and rail simulator. He also put me in touch with long-standing and respected opinion leaders who hosted websites that provided a focal point for the community online activities. For example, he brought to my attention that Vern Moorhouse, a long-standing advocate for train simulation software, based in Wales, hosted the site that was possibly most important to the community: TrainSim UK (www.trainsim.org.uk). This site provided reviews of train sim software and a forum through which fans shared ideas and opinions about what they would like to see in such simulation software.

In a series of email exchanges with Shaw in February 2003, he shared with me his involvement in the train simulator community, and his views on the importance of this community to any train simulator project. The emails detailed the history of train and rail simulations emphasizing the close

relationship between the professional developers and the train simulator fans. Shaw writes:

Under the guidance of Vern Moorhouse and myself, and largely out of the *Mechanik* EN57 Simulator community, the 'Global Train Simulator Working Group' (GTSWG) was formed. The purpose of the GTSWG was primarily the creation of a 3D full colour rail simulation with soundcard support, featuring open architecture and a usable route editor. The community had grown to such a size that there was a long list of would-be contributors, who felt there was such a need for this software that they would create it themselves on a voluntary basis.

The GTSWG also petitioned software companies such as Microsoft with requests that they consider the subject of a rail simulation for a commercial release.

The mission statement, the white papers and the early discussions were noticed by more than one developer of a commercial rail simulation, and one of them happened to be Auran's Greg Lane, who was about to start assembling a team to create a game he had been dreaming of for some time.

From my observations, the single most important factor in the success of a rail simulation is good potential for customisation. Rail enthusiasts nearly always have an interest in a particular locality, railroad, era, whatever, and a little potential to model well goes a very long way.

This brief quotation from Shaw's lengthy and informative email provides a strong sense of the rail fans' investment of time and passion in train simulator projects. These projects relied on the voluntary, collaborative efforts of the online rail fans, and blurred the boundaries between commercial development and fandom. Shaw's account of the Global Train Simulator Working Group had a significant impact on Auran's plans to involve the online rail-fan community directly in developing *Trainz*. Auran's managers and developers hoped that the community would provide feedback on the initial design concepts, review early release screenshots and previews of the 3D models, provide the Auran artists with background research material and specifications on particular locomotives, form a beta-test team and, after release, generate content to expand on the product base.

Throughout July 2000 Auran implemented a strategy to attract and involve the existing network of train and rail sim fans. The web team developed a *Trainz* website that initially featured a few pages outlining the *Trainz* design concept supported by a forum discussion board. The forum provided the initial focus for communication with the community and was augmented by

direct email contact with significant opinion leaders such as Vern Morehouse. Then a few months later the web team launched a more expansive website featuring screenshots and other preview content (movies and previews of the locomotive 3D models), together with an IRC server for hosting real-time online meetings between the *Trainz* development team and members of the community.

Auran's plans were somewhat interrupted by Microsoft's announcement that they were also publishing a 3D Train Simulator product (developed by UK-based Kuju) that would feature accurate modelling of train operations (both diesel and steam) and prototypical routes created with the assistance and input of participating railway companies. *Trainz* development team members speculated that we just could not compete with Microsoft. Many on the team believed it was now inevitable that Lane would cancel the project. They waited for Lane to call a team meeting or send out a group email. He ignored these speculations and then called a brief meeting. His view was that Microsoft would assist with establishing awareness of train sims and that there was room for more than just one software product in this space.

However, the marketing and web team recognized that Auran was now competing directly with the Microsoft/Kuju team for the attention and support of the online train simulator fans. In the lead-up to the launch of the *Trainz* website and forum, I emailed rail-fan community opinion leaders, briefly outlining the design concept and inviting them to provide Auran with feedback throughout the development process. This email emphasized that *Trainz* would enable users to create add-on content and modifications. The website also emphasized this call to participate: 'We are inviting you to share your ideas on the forum in each of these areas to ensure that your *Trainz* experience will meet the expectations and express wishes of the train community. Help us to make this the rail software you have been dreaming about!'

How does Auran's invitation to the train sim fans to participate in the design and making of *Trainz* work in the context of game development projects? How does it disrupt and transform organizational and industrial logics?

Lane introduced me to the *Trainz* team at a regular weekly meeting in July 2000, commenting that Auran had a history of developing strong and close relationships with its fan base. Lane outlined my background and research relationship with Auran, and then explained that my role would be to work closely with the web, marketing and development teams to ensure that Auran established a strong and growing fan base supporting *Trainz*. He emphasized his belief that this would be vital to the game's success. My impression at the time, which I recorded in my field notes, was 'strong scepticism' from the producers, programmers and artists, the production members of the

team. This may have been due to my unease at taking on a new role working with technical professionals when I had very little understanding of their skill areas. However, my reservations were confirmed when one of the production team members commented to me after the meeting: 'I suppose this is all just marketing type stuff then.' I described this in my fieldwork journal as a 'bucket of cold water' experience. Just to be sure that I got the point, a producer added – 'I guess you haven't had much to do with developing games before then, you know getting them done and shipped'.

At this early stage of the *Trainz* project my desk was situated in the web and marketing team area. Online community management was physically separate from the development team. I was quickly to discover that opening the production process to co-creative engagement with consumers is hard work. Green and Jenkins (2009: 213–14) argue that the changes associated with emerging participatory cultures are forcing media companies to 'reassess the nature of consumer engagement and the value of audience participation'. They add that the tension between top-down corporate and bottom-up consumer power is 'shaped by decisions made in teenagers' bedrooms and in corporate boardrooms'. I would add however, that these relationships critically concern not just boardroom decisions or CEO strategies but the daily workplace practices and identities of professional media workers. The 'anxiety about the terms of participation' that Green and Jenkins note is not just concern expressed at the top levels about control of media distribution and production but also about unsettling workplace practices, cultures and identities. As I came to learn and will discuss in more detail in a following chapter on 'Co-creative labour', this also was not simply anxiety from media professionals that their job security was threatened by talented amateurs. The anxiety also involved values and understandings of what it means to do a job well and with professional craft skill and integrity (Deuze 2006; Green and Jenkins 2009: 220).

In August 2000, we emailed the train simulator fan opinion leaders whom we had identified with the assistance of Rob Shaw, and invited them to provide us with their feedback on our proposed train simulator design. We advised them that we wanted *Trainz* to be 'their simulator' and that we would 'seriously take into consideration their feedback and input throughout the project'. And they came, bringing with them their ideas and enthusiasm for trains and rail.

The forum was launched on 11 August, and Vern immediately posted asking when we anticipated the first modules would be released ('Release dates'). Over the course of the following weeks, Vern criticized and questioned many of the core *Trainz* project design decisions, including the proposal that *Trainz* would only be available via e-commerce. He was concerned that *Trainz*'s design focus on model railroading would not include any prototypical routes

and argued that, unless *Trainz* supported prototypical route creation, it would not be a 'serious' train simulator: 'For those of us primarily interested in driving a train over a prototypical route of maybe several hundred miles, how easy will this be to do in *Trainz*?' ('Trainz – initial thoughts', 10 August 2000). By prototypical, Vern meant routes that accurately modelled real-world rail lines. The problem here is that Auran did not want to compete directly with Microsoft in the area of prototypical operations. Auran management felt that, with its user-friendly editing tools and diverse range of locomotive model trains, *Trainz* was better positioned as a model railroad simulation. We would release routes that were distinctively themed to reflect particular regions and routes in the United States, United Kingdom and Australia, but they would not be prototypical of particular routes.

Each post made by Vern over this period was carefully scrutinized and discussed by Auran management and raised in regular *Trainz* team meetings. Field notes I made include entries covering concerns raised by Auran's marketing manager about how representative forum posts were of our target market for *Trainz*. As she put it: 'Are we overreacting to a hard-core here?' There was considerable uncertainty surrounding how we should engage with these community views. To what extent should they influence the actual *Trainz* design and production process? How should this user involvement be integrated with the development and production process? My notes record a heated exchange with members of the development team who argued this 'community stuff' was marketing and web team, and shouldn't be allowed to impact significantly on the project schedule or features. However, I also noted that, in team meetings, forum posts made by fans would be raised from time to time in support of a particular feature change or addition that the developers themselves wanted to make. There certainly was not a single Auran position on how influential suggestions from fans should be on the actual design and project direction.

The role of the rapidly growing and demanding fan community was becoming a topic of controversy at Auran. The web team had a vested interest in supporting the value of fan involvement, and was under increasing pressure to ensure that the website traffic was continually increasing. The team argued that it needed regular preview content releases in order to generate traffic. The forthcoming launch of the *Trainz* website would attract a rise, but in order to maintain traffic levels and expand the fan community they would also need to regularly release preview content. Lane also actively supported the importance of online community development for the success of *Trainz*. Members of the development team, on the other hand, considered it to be more of a marketing initiative that got in the way of the job of making *Trainz*. As the senior producer commented to me, 'This is all a distraction really, it can get in the way of developing the game'.

Although the community-based website was a promotional and marketing vehicle for the game, its overall aim was also to generate useful feedback from train and rail enthusiasts that could then guide and refine ongoing development of the project. It was about engaging lead users in the process that Eric Von Hippel (2006) describes so well as user-led innovation. These early adopter trains and rail fans would respond to and adapt our design proposals based on their interests and requirements. Making contact with the existing train sim fan sites was also, in part, a marketing and promotional exercise. We exchanged links with many of the sites, and this had the effect of increasing traffic to our site from potential future purchasers of the game. Securing endorsement of *Trainz* by leading train sim fan sites was an important goal of the Auran online marketing team. For their part, fan site owners regularly approach game developers for exclusive preview content: an ability to be a source of news about the game development process and to publish exclusive preview content helps them establish and maintain their position as leaders in the online fan community. The relationship with the fans was also fostered to gain feedback on the game's planned features, which the developers would then act on where feasible. But what was feasible was in regular dispute among members of the development team.

Decisions on how fan input may influence *Trainz* design were contradictory and shaped by internal tensions. For example, for commercial and business reasons, we initially resisted fan demands from individuals such as Vern that Auran introduce a stronger element of simulation realism into *Trainz* rather than follow the model railroad route; introducing such a significant change would have required a much longer development time. Members of the *Trainz* team, particularly the project producer, resisted too many significant changes based on fan feedback. This was grounded in project management concerns. The producer felt project outcomes could be at risk if major features were to be introduced or significant changes and modifications made. At team meetings in which the ideas put forward by the *Trainz* community were discussed, he would respond that such 'feature creep' and 'design by committee' introduced significant risk that he was not prepared to allow. His brief was for a model train simulation with detailed 3D models and user-friendly editing tools that were seamlessly integrated with the game, leaving everything else for future releases. The producer argued that the fans often just did not have the information or design understanding to appreciate the implications of their proposals. I will return to this question of the relationship between professional expertise and amateur fan creators in Chapter 5 ('Co-creative expertise').

I presented the views and opinions emerging from the growing *Trainz* fan community at many development team meetings. I would provide printouts of emails and forum posts that I considered representative of the views being expressed. Debate in these meetings was at times quite strident.

As we moved into September 2000, contentious forum discussion continued on the prototypical route issues. The community was also increasingly eager to see some proof or evidence of the *Trainz* project. Thus far all they really had were descriptive posts from Lane and me. As community leader Barney put it:

What worries me is a feeling that the enthusiasm is also getting a bit thin. It is a direct result of not seeing any real stuff from *Trainz* development. I am sure that when Beta 1 comes out we will all be quite satisfied but at the moment I would like to see at least some screen shots. If we can get some little info of what is ACTUALLY going on then we may be able to help development team with further ideas. ('Let's move on', 7 September 2000)

The web team was busy working on a new *Trainz* website, and planned to release a few screenshots with the website launch. The marketing team also wanted regular, if not weekly, updates of preview content. They believed this was crucial in order to maintain the slowly growing community. On the other hand, the development team considered these requests for preview content as something of an imposition that may delay production.

The problem with this was that Auran was promising that the fans could participate meaningfully in the process of developing *Trainz*. A significant and influential group within the fan community were actively lobbying Auran via forum posts and emails to move the design towards the prototypical train and rail simulator software that they had been advocating and working towards for a number of years. The early members of the community expected Auran to listen seriously to their input and views, to respond to their criticisms and opinions, and to change designs and artwork accordingly. After the weekly previews of models, Auran regularly received emails from community members pointing out inaccuracies and mistakes. Some would even provide specifications and photographs to help the team make improvements and corrections. This feedback then helped the artists ensure that the locomotive models were authentic in both specification and livery. In this way the online train and rail-fan community provided the *Trainz* team with research assistance. Information provided by rail enthusiasts greatly assisted the *Trainz* artists as they reviewed the models in the lead-up to commercial release.

However, this closeness made it difficult at times to manage fan expectations of what could feasibly be delivered within the constraints of a commercial game project. The *Trainz* project was not funded by a large publisher. Tony Hilliam, a significant Auran investor, had contributed to funding *Trainz* since the beginning, on the understanding that it would be taken to market quickly, generating the revenue needed to then support any ongoing development – and

of course a profitable return on his considerable investment. Without Hilliam's backing, *Trainz* just would not have happened. Of course, it is often difficult to provide the fans with full details: much of this information was commercially sensitive, directly involved negotiations with potential publishers and investors, and was often protected by non-disclosure agreements. Auran's responsiveness to fan questions on many issues led to an expectation that this would be the case on all issues. The early release of information also had to be carefully balanced with maintaining Auran's position in a competitive market.

On 15 September 2000 the new *Trainz* site launched with material such as screenshots and previews of the 3D locomotive models. The response was immediate. Barney posted: 'That F7 in Atchison, Topeka and Santa Fe livery is absolutely fantastic. I still have the N gauge model that I purchased way back in 1969 as a little kid. That was my first model'. RogerJ added: 'Give me a Dash 9 and let me rumble!' ('New Trainz web site!', 15 September 2000). However, despite the enthusiasm for the preview content, debate continued about whether *Trainz* should be a model railroad or offer support for prototypical railroads. A forum thread that ran for a few weeks ('Real railroad or model layout?') again brought this to the fore and divided the community. After Auran again commented that *Trainz's* focus would be 'model railroad type layouts', Barney posted, 'Yess!!! I expected that *Trainz* will initially appear as model layout system. That is IMHO very good and wise choice . . . I will finally be able to create model layout that was just too big for my room'. Vern, on the other hand, repeated his request for the ability to create prototypical 'nice long linear layouts' ('Real railroad or model layout?', 6 September 2000).

Over the course of the following months, Auran released weekly preview content (in-game art and preview models of locomotives such as the popular Canadian National SD40). The response to the quality of the preview artwork was enthusiastic and positive, including the following from US_Railfan:

Thanks, it is a grand feeling to have you gentlemen spend the time and effort to share your thoughts and information about *Trainz* with us. I feel as much a part of the project as the members of the *Trainz* staff. ('Trainz insights', 25 October 2000)

By mid-June 2001 fans wanted to see preview movies of the actual gameplay and were questioning whether running such highly detailed 3D models on their PC systems would provide decent performance levels. They generally concurred that the quality of preview art was very high, but were concerned about the possibly high-end PC hardware required to support such 3D graphics. At this stage the team felt it was still somewhat early to release in-game

movies. But Surveyor had reached a stage where Auran could effectively demonstrate its ease of use. An influential community member, 3801, living in Canberra, Australia, had established a reputation through his forum posts as a knowledgeable train and rail enthusiast, as well as a constructively critical supporter of the *Trainz* project. Auran invited him to visit the studio in Brisbane at its expense for a preview of Surveyor. He accepted the offer and, after spending time with the team testing *Trainz*, indicated that he was very impressed with Surveyor's features and user-friendly interface. Throughout his visit, 3801 was also eager to get his hands on the tools and create a route. He immediately identified that Surveyor offered a lot of potential to the train and rail fan for creating their own layouts, and predicted that, immediately following the release of *Trainz*, many layouts would be available for download from fan websites.

3801 sought permission to post his impressions of Surveyor on both his personal website and on the *Trainz* forum. Auran granted permission, on the understanding that certain technical issues could not be publicly commented on, and that he should feel free to express any criticisms he had. His posts about Surveyor were very favourable, claiming that it not only met but exceeded Auran's claims for it as a powerful and user-friendly tool:

People, yesterday I saw the **next** generation of train-simulation and it will be with us **this** year. It is that simple . . . But I can say now that we are in for an absolute treat and Vern, you have absolutely no worries regarding being able to create routes that are as prototypical as you see fit to create. In fact, we are going to have a *ball*!! ('Auran: A place where dreams are coming true', 5 June 2001)

3801's posts generated considerable interest in and enthusiasm for *Trainz*, allaying many of the concerns which had been raised. His visit to Auran included input on Auran's plans to release Surveyor, and the *Trainz* software generally, to a group of the more active and passionate fans for beta-testing and feedback purposes. Auran management envisaged that an outcome of the beta program would be the creation of layouts that we could make available to purchasers of *Trainz* as free downloads. Here, fans such as 3801 were already playing an important role in Auran's promotional activities. His post made a significant contribution to allaying fans' concerns about Surveyor's ease of use. 3801's tinkering and experimenting with the editing tools while he was at Auran also had a significant impact on the views and opinions of the development team, including the lead designer and producer. Throughout the week of his visit members of the team would regularly stop by the desk where 3801 was seated to chat and follow what he was up to. They were somewhat surprised and excited by the quality of the layout

3801 was beginning to produce. The team started discussing how they could better support these user-created content activities and what features they might add with a future update.

After 3801's visit, Auran commenced the ramp-up to the release of *Trainz*. This included releasing further preview in-game screenshots and movies on the website. The team added an episodic series of movies demonstrating how the 'Surveyor' editing tools could be used to create layouts. An episode released on 26 September 2001 demonstrated the ease of laying track using a system that simply involved dragging and clicking with the mouse. The conclusion included a voice-over from Rob Shaw, 'that's all there is to it!' This comment was regularly repeated by the fans on the official *Trainz* forum and other fan site forums to indicate that the *Trainz* editor was user-friendly.

Tony Hilliam and Greg Lane had secured a publishing deal for *Trainz* with Strategy First, a publisher based in Canada. Strategy First would handle the North American release and engage other publishers and distributors for release in Europe. *Trainz*'s retail launch was planned for early 2002. Forum posts and emails from fans seeking further details about *Trainz* significantly increased over the last few months of 2001. One of the challenges confronting Auran was managing and maintaining the levels of interaction with and responsiveness to a rapidly growing fan community.

It would be easy at this point to accuse Auran of cynically manipulating the *Trainz* user community as a marketing ploy in which my research has colluded. But before rushing to judgement we might ask how these relationships are being made. For example, emails received from individual members such as Vern, Barney, CeeBee, 3801 and many others clearly demonstrated awareness that this community initiative by Auran was aimed at creating a market for *Trainz*. However, they also hoped that it was more than just this and that the community input would directly influence the design. These emerging co-creative relationships raise questions about changing markets. What are the transactions and exchanges occurring between these gamer co-creators and Auran? Is this simply about firms and markets taking advantage of the work of unsuspecting gamers?

The potential for *Trainz* to become a successful game very much depended on what the fans would do with Surveyor, their efforts at creating additional content and their efforts to promote *Trainz*. How would they transform it? Would they take it up and play with it to extend *Trainz*? The commercial success of *Trainz* came to rely increasingly on the participation of the *Trainz* fans in the development and production process. Is 'play', then, an accurate description of this relationship between the rail fans and Auran? 3801 took holidays from his full-time employment to spend time at Auran. During his visit he provided the team with useful feedback and eventually contributed to

the *Trainz* manual by writing the foreword – a known, high-profile member of the community, introducing the product to purchasers. He is also recognized in the *Trainz* manual's acknowledgements and credits, for providing additional research – as are over 50 community members who contributed directly to the development project. 3801 also took on a role as community moderator on the Auran forum for a period, assisting with welcoming new visitors and answering common questions. And he made a decision that despite Auran's claims that it was not designed for creating prototypical routes, he would endeavour to create such a lengthy route. In discussions with Auran he commented that he viewed this as a suitable reply and counter to those in the train sim community who wanted prototypical routes for *Trainz*. In short, his view was that Auran had provided the tools to 'do it yourself'. As a member of the beta-test team, 3801 had access to early builds of *Trainz* and he started work on this route, based on an Australian segment of rail, Robe River. The completed route was eventually included in Auran official updates to the *Trainz* release. Here, fan-created content is integrated directly with the official, corporate commercial release. Does this blurring of the boundaries between corporate producer and fan content creator amount to nothing more than the incorporation of fan culture within the networks of capitalism? Or does it provide a strong example of consumer empowerment, and perhaps even a democratizing of fan-corporation relations?

Such stark oppositions are not helpful in negotiating the complexities and contradictions that shape this emerging landscape. Such an oppositional explanatory framework does not so much represent or describe these relations; rather, it is a tool for creating the figure of the fan as an object of academic desire. By engaging with the specificities and particularity of people's encounters with these relations, and providing detailed descriptions of how audiences and media professionals negotiate with media technologies and each other, ethnographic research can help us to get at the ambivalences of our positioning in these networks without necessarily falling back into the banalities of equating this consumer co-creative activity with resistance, or democratic empowerment.

In his study of fandom, *Fan Cultures*, Matt Hills (2002: 27) carefully positions fans within the processes of contemporary consumer capital. He asks what happens to our conceptions of the fan-producer 'when fan cultures are themselves directly targeted as a niche market'. Fans' participation in development and production involves:

mechanisms of market segmentation, in which fans' values and authenticities are . . . sold back to them. And thus who is better placed to produce this material – which by definition must draw on immersion in

fan culture and its forms of knowledge and competence – than the fans themselves. (40)

Hills insightfully argues that the tendency of fan research to foreground fandom's hostility towards commercialization and commodification overlooks the 'potentially curious co-existence within fan cultures of both *anti-commercial ideologies and commodity-completist practices*' (his emphases, 28). This tension cannot be overcome by coming up with better descriptions of fandom or even a better theory of fan practices. Fandom is shaped and made by these contradictions. In fact, the very production and marketing of *Trainz* is enabled by these incommensurable relations. It is here, in this uneasy space, that the dynamics of emerging co-creative relations play out. For Hills the moral dualism of bad fan as consumer versus good fan as producer should be rigorously challenged. The practices I have been describing unsettle and disrupt this oppositional structure. Valorizing of fan production does not engage with the tensions and contradictions that are the conditions of fandom, and is more about creating a figure of the fan, mobilized in academic institutional practice, which can carefully erase the traces and taint of crass consumerism (30–5).² There can also perhaps be a tendency in some media studies research to overly valorize the bottom-up agency and productive activity of the fans somewhat at the expense of considering the work of media professionals that enables these activities.

User-created content and the *Trainz* development project

Over a series of releases from 2001 through to 2008 *Trainz* increasingly foregrounded user-created content. Using the tools provided with the Surveyor module, users made their own 3D layouts and then shared them with other users through the *Trainz* website Download Station. Using third-party modelling tools as 3D Studio Max, players could also make their own 3D locomotive and rolling stock models and import them into the game.

Fan content became increasingly integral to *Trainz* and its commercial success relied on such content. At first commercial release in 2001 Auran did not fully anticipate the extent to which *Trainz* would become reliant on user-created content. This raised questions concerning how Auran would manage the relationship with fan creators. How would this fan content fit within the *Trainz* project? Would Auran distribute the content from its website? Would Auran allow fans to retain ownership of the content that they created? Would fans be permitted to sell the content that they created? How would

the technical challenges of integrating end-user content influence the overall design and architecture of *Trainz*? What kinds of software utilities would be needed to support the fan creators' efforts? Auran envisaged that *Trainz* would be an ongoing project with regular updates. This raised the challenge of ensuring that core *Trainz* code platform updates would be backwards compatible with fan content. The difficulty arises of how this content will fit within the framework of a commercial development project.

Both *Ultimate Trainz Collection* (2002) and *Trainz Railroad Simulator 2004* (2003), as well as more recent releases such as *Trainz 2006* and *Trainz 2009* incorporate user-created content as part of the commercial release package. In effect, Auran relied on a pool of fan content creators and innovators as a routine part of the *Trainz* project. Fans were integral to the design, beta-testing process, content creation and to promotional activities. Auran's strategy to increasingly involve the fans in the development and distribution of *Trainz* was, in part, a contingent response to a difficult commercial situation in which sales were not reaching anticipated levels. If it were not for the continuing support of the fan community, Auran would have stopped the project.

In the first few months after the launch of the *Trainz* website, fans requested information detailing how content should be made to ensure that it could be integrated with the core *Trainz* program. Auran committed to provide documentation and exporter utilities that would support importing models created with recognized 3D modelling programs. Teams such as 3D Train Stuff (www.3dtrainstuff.com), 3dtrains.com and Train Artisan (www.trainartisan.com), formed to produce commercial content for both *Microsoft Train Simulator* and *Trainz*, also approached Auran to seek information about its plans to work with such groups. This immediately raised questions concerning Auran's support for hobbyists working on commercial releases, as against fans providing free content. Should Auran approach these groups differently? Should the developers provide these emerging semi-commercial creators with more support through earlier access to information and builds of *Trainz*? In the lead-up to the late 2001 *Trainz* release, Auran fostered relationships with these groups and indicated a strong willingness to support their content-creation projects. Auran hoped that this support would translate into a steady flow of quality fan content immediately following *Trainz* release. The development team then formalized this arrangement in mid-2001 by inviting the more active, talented and passionate fan creators to join a *Trainz* Official Third-Party Content Creators Program. Participants were asked to sign a non-disclosure agreement before receiving information about importing their content into *Trainz* and access to beta builds so that they could start familiarizing themselves with the *Trainz* features that they may wish to use in their content. An important aim of the program was also to provide the development team with direct feedback from end users,

identifying bugs and problems that needed to be fixed before release. The second aim of the program was to encourage fan creators to start producing layouts and other content that would then be downloadable from the Auran *Trainz* site and fan sites immediately upon the retail release of the game. Throughout 2001, Auran's plans for supporting fan creators were ambitious and included committing to provide them with information and support from the development team, and access to website services such as e-commerce facilities for selling and distributing their content. The response from the creators through emails, forum posts and telephone calls was enthusiastic.

The online fans' efforts to create and share content for *Trainz* reinforced Auran's decision to now concentrate the development effort on a user-friendly editor, and to support the fans' efforts to create layouts and other content for *Trainz*. Auran made commitments to work closely with the third-party fan creators, providing information and documentation on how to prepare their content for *Trainz*. However, the Auran developers were finding it very difficult to respond to the fan content creators with the level of detail and within the timeframes that the creators were expecting. Some of the creators (e.g. the 3D Train Stuff team) were becoming increasingly annoyed that Auran's developers were not following through on commitments to provide the documentation and feedback that they needed to get their creations working with *Trainz*. The development team's time and resources at this stage were fully committed to identifying and addressing bugs that had emerged through the beta-testing process; they just did not have the time to respond adequately on the third-party creator issues. This in turn led to tensions and dissension within Auran. As community relations manager, I felt that Auran now needed to follow through on the undertakings made to the fan content teams, and was concerned that if we did not address their growing concerns we might well lose their interest and support.

In October 2001 Auran senior management decided to release an early version of *Trainz* (the Community Edition), making it available for direct purchase from Auran's online e-commerce shop from December. They hoped that this early release version would satisfy the demands of the rapidly growing content-creator community for early access to *Trainz*. It would also provide a useful final round of testing and feedback before the in-store release, planned for early 2002. Auran announced the Community Edition release and started taking orders through the website, advising that it would be followed by the wider retail release in early 2002. Auran also promised to support the efforts of the content creators by releasing detailed Content Creation Guideline documentation. On 14 November a draft version of this document was released through the newly launched *Trainz* Content Creators forum area. Throughout October and November, builds of *Trainz* were released to the beta-testing group, providing invaluable feedback to the development team and assistance with identifying bugs. Members of the beta-test group, who also happened to be content creators, were in the process of using the

Surveyor tools to create layouts or using 3D modelling packages to make locomotive models that they were then importing into *Trainz*. The draft Content Creation Guide provided them with the procedures they needed. On 16 November we announced that the *Trainz* code has been finalized. Auran then started shipping the online orders for *Trainz* Community Edition on 3 December. The website announcement recognized and acknowledged that this release was made possible only by the support and contributions of the *Trainz* fan community that assisted Auran to mould and improve the software to become 'a great hobby game'. Auran added: 'We look forward to seeing all of the exciting activities and content that emerge from the wider *Trainz* community over the coming months and years. Auran is dedicated to working with the community to make *Trainz* the most extensive PC railroad imaginable.'

However, it quickly became apparent that Auran had not yet released the detailed procedural and configuration information that the fan third-party creators needed. On 12 December 2001, Landrvr1, one of the emerging high-profile fan creators, posted to the *Trainz* forum:

GUIDELINES for creating new Rolling Stock? Okay Auran, you have created a most amazing product. Now, when can we expect some direction on how to create our own rolling stock? This is, in fact, what I've really been waiting for anyway! Are you planning on a tutorial section? ('Guidelines for creating new rolling stock?', 12 December 2001)

The development team were also receiving angry emails from content creators expressing annoyance and frustration that Auran had now released the Community Edition of *Trainz*, and were publicly commenting this was aimed at supporting and encouraging content creation, but had not yet followed through on the commitments to release the detailed guidelines for content creation and provide access to members of the *Trainz* development team. The difficulty here was that immediately following the release a few outstanding problems emerged with performance on particular PC hardware configurations. This needed to be urgently addressed and the team was working on a fix that they wanted to release before the coming Christmas break. Auran just did not have the staff resources available to meet the growing demands of the third-party content creation community.

Auran management had underestimated the resources and staff commitment required to support this co-creative initiative. But this was not just about senior management as the development team was itself divided about support for the fans' activities; many on the team viewed the task of supporting these content creator efforts as an ancillary rather than a core part of their job.

Then, on 26 December, JoshEH, a teenage member of the *Trainz* community from the United States, made a lengthy post to the *Trainz* forum describing in detail how to import and get a locomotive model working in the game. He had figured it out by a trial-and-error process of experimenting and tinkering. He commented in the post: 'DO NOT BUG AURAN if you have any problems because they made it clear they won't release any info on it until the content creation docs are out' ('Content creation info must read!', 26 December 2001). This 'do it yourself' or more correctly 'do it ourselves' ethic started to permeate the *Trainz* fan culture. Pikkabird, another young content creator, also advanced work on his locomotive project, drawing on JoshEH's suggestions. Throughout December and into January 2002, many community members, including JoshEH, Landrvr1, Pikkabird and Hack, collaborated on getting locomotive models and other content working with *Trainz*. JoshEH released a Southern Pacific GP9 locomotive that had been created earlier for *Microsoft Train Simulator* and could now be imported into *Trainz*. He also shared detailed tutorials and guidelines about how this could be done through his personal website. On 20 December 2001, Hack released the popular Santa Fe F7 through his www.3dtrains.com website. This model was of a higher resolution and therefore more detailed than the F7 model included with Auran's *Trainz* package. In January 2002, Landrvr1 released a series of models that included a sawmill, station and platform. Auran's Rob Shaw also released a station that he had created in his own time. These content releases were often also accompanied by helpful forum posts from the creators, sharing tips and suggestions for developing *Trainz* content. This community developed and shared know-how very quickly started to outpace the developers' capacity to keep up with how the fan co-creators were exploring and using *Trainz*. As David Weinberger (2011) describes in *Too Big to Know* here we see the emergence of new institutions of knowledge and as a species we are adapting to this – our knowledge making and sharing institutions are evolving. Weinberger writes,

In a networked world knowledge lives not in books or in heads but in the network itself. It's not that the network is a super-brain or is going to become conscious. It's not. Rather the Internet enables groups to develop ideas further than any individual could. This moves knowledge from individual heads to the networking of the group. We still need to get maximum shared benefit from smart, knowledgable individuals, but we do so by networking them. (45–6)

We see this networking of knowledge and expertise emerging right here among this community of train simulator fans. Sure they are sharing their passion for all things train and rail. They are also adaptively exploring how to

make and share knowledge. Expertise and knowledge becomes externalized and distributed. Pikkabird, for example, regularly posted work in progress previews as he moved ahead with his British Rail model projects. Other members would respond by posting helpful research information such as locomotive drawings, photographs and specifications to assist the creators. On 31 December 2001, Pikkabird posted that he was working on a 101 Class DMU unit and needed assistance with sourcing photos showing underbelly and roof detail, together with various body angle shots. Within two hours, Tolaris from Poland posted links to resources and photos. Pikkabird then followed up a few days later with preview screenshots of the model as the work progressed ('101 Class DMU', 31 December 2001).

In January 2002, working with suggestions offered by Pikkabird and others, JoshEH figured out how to incorporate cabs with working levers for his locomotive models:

Yes! you can look out the back of the cab!!!!!!!!!! ☺ anyway here is another picture to tease you with! the controls are placed well here, I can't believe it! and they are working out good!! . . . That F7ish cab Auran did was nice and everything, but personally I am tired of it having to have it on my engines and it just can't beat a good hooded cab view!!!

I also need details about the brake gauges and stuff and how they work or show data . . . you know just everything about them! because I really don't know much about them ☹ so if you have info and stuff email it to me . . . I will need info about the other gauges also so I can get things right. Thanks for any help anyone can give.

CeeBee responded:

Josh, you are simply amazing ☺ Best thing is it sounds like we got quite a few amazing guys working on things. I won't mention names cause I might miss one, but you all know who you are ☺☺☺ Thanx from CeeBee !!!!!☺
[drool and drool mop icons].

Landrvr1 then added to the thread:

Another triumph half, another triumph. Did you have to make the reverser, throttle, and brake levels from scratch? I second the motion for a tutorial. Clearly you have a lot of insight into this stuff. ('We could use some new cabs', 4 January 2002)

After Pikkabird posted previews of his British Rail 08 class shunter, Arpster asked: 'Wow, looks pretty damn good! We could do with a few shunters/

switchers in Trainz. What did you use as a basis for the model (measurements, etc.)? It will be interesting to see how it is possible to get the wheels/coupling rods to work! Well done.' Pikkabird answered:

Yeah, the wheels might be a bit of a problem . . . unless Auran releases animation support before I finish this, which is unlikely, I guess I'll just release it with static wheels (with the connecting rods painted black, and at the top, so they're not so noticable). And then re-release it once animating becomes possible. ('BR 08 class shunter', 17 December 2001)

Amigo also posted: 'I could give you a hand getting that baby out into the Trainz, since I'm playing around with getting models in. That way you don't need to wait for Auran if you want it out soon or just to see it on the tracks' ('BR 08 class shunter', 17 December 2001).

In a further series of posts, the fan creators shared technical details on the accuracy of their models, and tips on configuring the models and exporting them from 3D Studio Max. Here I have described just a few of the many content creation projects that involved the fans' collaborative efforts. They provide a glimpse of the distributed and networked learning creativity on which the *Trainz* project increasingly came to rely.

Throughout early 2002, the Auran team closely followed the efforts of the fan creators. They were often surprised by how quickly quality content was being released through these collaborative efforts, despite the fact that they had not as yet provided comprehensive documentation. Auran's developers were also surprised by the speed at which the fan collaborative networks were figuring out how to get their content running with *Trainz*. We also saw this sense of surprise at the speed with which fan content creators innovate collaboratively to make and share high-quality content expressed by Maxis's developers in relation to *Spore*. Some of the material was of such a high quality that Auran management felt it was better than the models included with the official release package. A few of the locomotive models produced by the Auran team had received critical attention from knowledgeable rail fans, who pointed out inaccuracies in the modelling detail. The fan creators invested far more research and development time into the making of an individual model than the artists on the *Trainz* team could allow. Game projects now require a lot of art assets, and development time per asset must be strictly scheduled and budgeted. As we followed the emerging network of fan content creators forming around *Trainz*, Lane and Hilliam discussed the possibility of increasing Auran's support for the fan creators. Auran was also being approached by teams interested in releasing their content commercially, both independently on their own websites and through future official Auran *Trainz* releases. Auran had no objections to these proposals, and to further encourage the fan

content creation (both payware and freeware), they announced the formation of a third-party content support program, and invited expressions of interest. The aim of the program was to provide creators with direct access email contact and regular online chat sessions with the development team, and early access to information about how forthcoming *Trainz* releases would affect the process of creating content. Auran also hoped that such an initiative would answer criticisms that Auran had been working closely with some groups while excluding others. This yet again came to the fore in emails, and a forum thread started by JoshEH, 'Shaking the tree! where is the big guys?' in which he provocatively challenged:

I've been wondering this for awhile now, and well I would just like to know! I already have a couple locomotives working in *Trainz*, a couple that haven't been released public yet that are working so far, and I made a caboose with passenger view that is working, so it makes me wonder, what is taking the big guys so long? like TA [Train Artisan] and 3DTrains, I've heard stuff that both groups, that they may be working with Auran already on content creation stuff, so it leaves me wondering even more! why haven't they shown much signs of *Trainz* Life huh? ('Shaking the tree! Where is the big guys?', 16 January 2002)

The content creators were becoming increasingly frustrated that Auran still had not yet released the content-creation documentation. The question of access to information continued to be a contentious issue for the *Trainz* content creators. The difficulty for Auran was that the development team was still updating and improving the code, based on feedback and reports generated from the early release. These changes would then potentially affect the procedures for integrating third-party content. Auran's developers felt that it would be a mistake to finalize the Content Creation Guidelines documentation until the team was relatively certain that no further major changes to the code base would be required. Their concern was that if such a change were to be made, then needed updates for importing and supporting third-party content might not be backwards compatible with existing content. Auran had released *Trainz* in the form of this early Community Edition version to encourage the development and release of fan third-party content. They had announced plans to provide support to content creators, and yet problems with the code had now emerged that the developers needed to be addresses. The team was also considering significant updates to our Download Station system that would also require changes to the preparation of third-party fan content. Auran management were concerned about the anger and hostility that would be directed at Auran when fan creators discovered that the models they had spent many hours creating were no longer supported and would now need

significant reworking. They also worried about the annoyance of users when third-party content they had downloaded and installed would not longer work after they had upgraded to the latest version of *Trainz*.

Auran management were also considering precisely how they would support third-party content creators. There was a series of issues concerning user-created content that the developers were struggling with. Should this support program be open to any creator who emailed an expression of interest? And, following from this, if Auran adopted an open-door policy, did it have the internal resources available to support the number of creators who may want to participate? Or should the developers be more selective, with applications judged on merit (quality of submitted content, their impression that they could work constructively with those involved, current content needs, etc.)? Auran also needed to address the intellectual property issues involved in distributing fan-created content on its Download Station and potentially in future commercial packages. What position should Auran adopt in relation to the emerging conflicts between freeware and payware fan creators? Were the technical systems in place to support such a close integration of fan content with the *Trainz* core code platform in future releases? The developers quickly discovered that both creators and players were having difficulty importing fan content into *Trainz*. The Auran team was exploring the possibility of developing and releasing additional tools that would simplify this process. Posts to the forum and support emails also indicated that a significant number of users were struggling with the download service, which was not yet as user-friendly as Auran had hoped. The support requirements of integrating user-created content with *Trainz* were becoming a growing concern. The development and online team were discovering that supporting a rapidly growing content-creator community was a significant resource, technical and management challenge. Distributed expertise networks such as Auran and the fans were co-creatively building may well produce the benefits that Weinberger (2011) identifies. However, the adaptive challenge of building and coordinating the infrastructures that underpin these networks is difficult and pressing. As knowledge becomes networked 'the smartest person in the room is the room itself: the network that joins the people and the ideas in the room, and connects to those outside of it' (Weinberger 2011: xiii). The challenge and task then, as Weinberger identifies, is how to effectively build smart rooms. These smart rooms include game development studios and I suggest that the making of these smart rooms also needs to be done co-creatively. Auran management tended to focus on the outcome of co-creative media content – the locomotive models and rail world layouts. They underestimated the task of also co-creatively building and maintaining the necessary infrastructure to support this co-creative activity. Indeed, the co-creative activity among the *Trainz* fans and the professional developers was not just producing the

digital content – more significantly it involved co-creating these knowledge making and sharing networks. This organizational transformation required to effectively undertake co-creative production was to prove much harder than simply making digital content.

Auran was already receiving many emails each day seeking assistance with fan-produced content. A user may have registered with the Auran site then downloaded an item of fan content and attempted to install it, only to discover that it would not run. The website provided technical support forum areas and email contact points. Was Auran responsible for providing support for problems with user-created content? Auran developers had not created the content and therefore considered that the Download Station was simply a free hosting service. In the opinion of Auran management, if the developers identified that a problem was related to third-party content then they should advise the user to contact the creator directly for assistance. Unfortunately many users did not accept this logic. They had downloaded the content from Auran's official *Trainz* site that was listed on the box, so Auran should provide the support. Auran management discussed this problem at length with the development team and decided it was just not possible for them to support the rapidly increasing volume of content being uploaded to the Download Station. They did not have the resources to check whether each item of submitted content had been correctly made and configured according to the Auran guidelines.

In the meantime, a number of fan sites had emerged (particularly Amigo's *Trainz.Luvr.net*) that were hosting user-created content. Community members, including highly regarded fan content creators, were commenting that they preferred using these fan sites rather than the official Auran *Trainz* site. The dilemma for Auran was that online sales are a considerable source of revenue. The profit from each sale is fully Auran's and not shared with a chain of publishers and retailers. By having the content on a central, protected server Auran also hoped to discourage piracy. However, if the content was easily available from fan sites there was very little reason for those enjoying pirate versions to convert to a purchased copy. On the other hand, Auran did not want to over-centralize control of the quickly expanding network of *Trainz* fan sites. If anything, Auran wanted to encourage their activities.

There were diverging and conflicting opinions in the *Trainz* development, web and marketing teams about how and to what extent they should integrate user-created content with the core *Trainz* platform and the Auran enterprise generally. This was a sensitive and difficult issue as it involved confronting issues about the quality of the website design and systems, and locomotive art content in comparison to the efforts of the fans. Members of the development team raised concerns about what happened to all the content and the value it held for *Trainz* generally if a fan decided to close their content

distribution site. Such a closure could occur due to the mounting pressures of time commitments and bandwidth costs, or just through loss of interest. Some members of the *Trainz* art team, on the other hand, maintained that relying on fan art content may well result in risks and instabilities that Auran could not manage. The artists argued that fan creators often failed to follow the Auran Content Creation Guidelines. Auran artists were assigned polygon budgets and texturing guidelines to ensure that the models performed well on the broad range of hardware specifications that *Trainz* supported. To achieve the high level of detail that the sim fans desired, however, some content creators were releasing content with polygon counts and texture effects that exceeded the guidelines. This was often not a problem for those hard-core fans with high-end PCs. But for the more casual user with a lower end PC, this would present performance problems.

But others on the team expressed a different opinion. Rob Shaw commented:

Sure the artists here have a point. Poly budgets and optimising, they are important. But often it is small things that they miss, minor details that really matter to a train fan. It wouldn't take much work to fix them. But unless you're interested, unless you know and love trains you don't see it. Or they just cannot be bothered because it doesn't matter to them.

On 25 January 2002, Auran released an early draft of the Content Creation Guide and followed up with a series of art-asset examples (sample *Trainz* model files) to assist fan creators to understand the process of importing and configuring models. We also released Content Dispatcher, a utility to simplify the process of packing, distributing and installing fan content. The third-party creators were generally pleased that they finally had the long-awaited documentation. But many also agreed with JoshEH's post:

Disappointment. Will you include more in the not too long off? Some of us were a little disappointed in what was said, as it left us wondering about some things, like some of the config file settings and such, also when will the sample files be out so we could explore those? Most of the stuff we already knew about though. ☹ ('Third party content creation guidelines now available!', 26 January 2002)

Throughout 2002, quality fan content from creators such as Pikkabird, JoshEH and Landrvr1 continued to be released. The collaborative approach to sharing information and working through problems also persisted despite growing competition and factionalism among the forming content-creation teams. In mid-January, for example, JoshEH had worked out how to model

cab interiors, and offered to make the source files available to other creators so that they could then learn and improve on his efforts. The resulting forum thread included a series of posts offering further suggestions ('What? Think you would want one of these? Nah', 14 January 2002). Other creators also followed this practice of sharing content. When releasing a pack of much-anticipated content (Chicago Traction, Northshore and Southshore inter-urban liners), Landrvr1 commented:

In keeping with tradition, all .tga files are included. it's my hope that people will take these and mess with them anyway that they would like. it's really never fun to receive new rolling stock, and someone hasn't included the .tga files! ☺ ('Chicago traction – Pack 1: Released', 17 March 2002)

The *Trainz* project came to increasingly rely on the unruly assemblage of this ad hoc and distributed collaborative fan content-creation network. Here the commercial and the non-commercial, the proprietary and the non-proprietary, are linked in ways that profoundly reshape the networks of work and play. On the one hand we have this fan-based voluntary, collaborative effort, creating content that contributes directly to the promotion and success of a commercial, proprietary product. On the other, this fan network is imbricated with, and relies on, a proprietary support infrastructure.

Now this fan-based producerly activity could easily be read within the tradition of cultural studies as an example of active audience practice. Aren't gamers, in Jenkins's terms, functioning here as textual poachers? Aren't they taking the products of capital and reworking them according to their own agendas, pleasures and enjoyments? The problem here, as we've already seen, is that Auran actively encourages and supports the practice. These participatory collaborations are immanent to these corporate practices and processes. Care must be taken at this point as immanent does not necessarily mean that they are seamlessly integrated within the networks of corporate capital. Further more, these fan practices do not aim so much at disrupting corporate processes as they take pleasure from the products of international capital. To disrupt those flows would be to disrupt the fans own participatory pleasures. But as we've seen this is not just about a banal form of populist pleasure. These activities concern innovations in the growth of knowledge and distributed learning. But these learning and knowledge creating and sharing activities are occurring through the commercial domain. The interests of fans as co-creators, then, must surely lie in not disrupting the source of their benefits. Rather than subverting, fan practices often involve efforts to increase their levels of participation in these commercial networks (Jenkins 2006; Hartley 2009). How are these co-creative networks being made and what is the nature and characteristics

of the transactions and exchanges that are occurring among the co-creators (both professional and amateur)?

Before pursuing these questions further, we need to consider that the very ways in which they are posed can predispose us towards particular frameworks for responses – for example, we could approach them as problems of corporate co-optation and exploitation of fan culture. However, these co-creative relationships are shaped by a complex series of negotiations and compromises. It would be a mistake, I argue, to view these emerging relations as an *opposition* between the commercial and the non-commercial, the corporate developer and the fan community. Rather than being exterior and oppositional terms, these entities that are ‘Auran’ and ‘the *Trainz* fan community’ are immanent to these proprietary–non-proprietary and commercial–non-commercial dynamics. There is no exterior position from which to securely critique these conflicts and compromises. The problem is how to participate in these processes. The more interesting challenge is how to build, in Weinberger’s terms, ‘smart rooms’. What would it mean, for example, to co-creatively build a project such as *Trainz* for mutual benefit? What are the conditions in which that might occur and what are the factors that might disrupt and impede such mutually beneficial outcomes? Fully answering these questions is beyond the scope of the book, but these are the questions that have emerged for me from this ethnographic research. Posing these questions I argue is far more illuminating about the nature of co-creativity than simply asking are these practices exploitative in the context of an assumed opposition between the commercial and the non-commercial spheres.

An uneasy alliance

In earlier discussions with the fan content creators, Auran management had made commitments that it was proving difficult to meet. The online sales of *Trainz*, although growing steadily, had not reached the projected numbers, and the retail sales figures were lower than required for *Trainz* to become a profitable venture. Auran senior management were assessing the viability of continuing the project. Delays with delivering the promised support for the third-party program, combined with the increasingly apparent problems with marketing and distribution, resulted in many of the high-profile content-creation teams such as Trains Artisan and 3D Train Stuff shifting their efforts exclusively to *Microsoft Train Simulator*. These fan creator teams that were pursuing semi-commercial undertakings were understandably attracted to the larger user base of Microsoft. Others, such as the Digital Roundhouse team, continued with their plans to create third-party content for *Trainz*. This

was a difficult period as Auran's developers were not in a position to disclose to the content creators commercially sensitive information that was influencing Auran's capacity to follow through on support commitments. Again rumours circulated that Auran's developers were working closely with a privileged and favoured group of fans while excluding others. Changes being introduced with the forthcoming updates would require fan creators to also update their content. This change was designed to simplify the process of distributing and installing custom content, by integrating the distribution of custom content closely and seamlessly with the core *Trainz* application platform. The issues of what level of detail about the core *Trainz* program update would be released to the content-creation community, to whom it would be released and within what timeframe proved to be a continuing source of conflict and tension within Auran and between Auran and the content creators.

Unfortunately *Trainz* was also running into sales, marketing and distribution difficulties. There were significant delays in the retail release of *Trainz* in Europe. When they did finally occur, the releases had been preceded by very little in the way of a marketing campaign. This in turn led to reluctance on the part of major game retail chains to stock *Trainz* in significant quantities. In fact, one of the more successful retail launch events was organized by a group of *Trainz* fans in Copenhagen working in collaboration with the Scandinavian distributor. The future viability of *Trainz* was very uncertain at this point in mid-2002. But the passionate support of the growing *Trainz* online community encouraged Auran's senior management to move ahead with plans to expand from the core *Trainz* product release. For example, a series of promotional activities undertaken by groups of *Trainz* fans attending model rail club meetings and larger model rail exhibitions and conventions throughout the United States and Europe convinced management that *Trainz* may still have had strong potential to become a successful product.

Despite these difficulties, when Auran released a major update on 10 July it included outstanding fan third-party content including CeeBee's Highland Valley layout, 3801's Robe River Iron route that was supported with a locomotive created by JoshEH, and Pikkabird's popular British Rail Class 37 locomotives. This update included systems and utilities designed to support the making and sharing of user-created content.

How steam came to *Trainz*

The importance and value of this fan content-creator network comes to the fore in the introduction of steam locomotives. I briefly covered this in the introduction and now return to this user-led innovation initiative in more detail. On initial release, *Trainz* did not include or support the creation of

steam locomotives, concentrating on diesels and electrics. The development team decided quite early that, due to the short project schedule for bringing *Trainz* to market, and the programming and art resources available, it was not feasible to include steam with the first release. The problem was not in generating the required art assets (the 3D mesh model, textures and various animation effects for creating a virtual steam model). The challenge was more the coding problem of accurately simulating the physics for operating a steam locomotive. The team considered commencing the necessary code work, then releasing this material and associated guidelines to fan content creators who could then create the art and animation assets. In effect, the plan was to outsource the introduction of steam to the fan content creators. Auran programmers and graphic artists would then help the fan creators to integrate and import the steam models into the core *Trainz* program. Auran's developers entered into preliminary discussions along these lines with content creation groups. Unfortunately, the work required on the various *Trainz* updates again created delays and obstacles for Auran's plans to provide the promised support. This was a difficult and tense period in Auran's relationship with some segments of the third-party content creators. Auran had no support for steam, but the requests for it were growing all the time from both end users and content creators.

In early April, User.RO had commenced work on a project to create the Flying Scotsman steam locomotive. He made posts to the *Trainz* forum that previewed the work in progress as he struggled to implement the animation effects needed for a functioning steam locomotive. He requested assistance with technical background information from other community members. User.RO's previews generated much excitement in the community and encouraged other creators to participate in the effort to bring steam to *Trainz*. As User.RO progressed with the project, his regular preview and update reports shared technical detail on how to make a steam locomotive model for *Trainz*. For example, on 12 April Narrowgauge started a thread requesting assistance with implementing the running gear animation. User.RO immediately responded by posting a link to a download example file demonstrating the animation. Others followed up with further questions and suggestions. Prowler901 provided an example of his work in progress effort at creating the animation effects. User.RO encouraged, 'WOW this place is getting more addictive in every day 😊 Good work Prowler901! 😊 Keep it this way. 😊' ('Steam loco running gear animation', 12 April 2002). The previews of the work in progress, and the collaborative effort to introduce steam to *Trainz*, prompted a passionate reaction from members who were closely following the threads. JFDman posted: 'Just saw this thread, and I have to share my complete and total bewilderment. First, the incredible Flying Scotsman, and now this. I wonder what Auran think about this . . .

you guys are trumping their “steam is coming later” plan! ☺’ (‘Steam loco running gear animation’, 12 April 2002).

As described in this book’s introduction I encountered one of the early outcomes of this steam collaboration at the NMRA convention held in Fort Lauderdale, Florida. While at the convention one of the *Trainz* fans, Gumby, voiced his concerns that Auran was not following through on commitments made to the third-party creator community. He said that the creators were angry, they had invested so much time and effort into supporting us with quality content and yet Auran still had not provided the levels of assistance and information that we had led them to expect. A direct outcome of this support was the P10 steam locomotive that Auran staff were using to promote sales of *Trainz* at the convention, while one of these talented creators was pointing out that many of the content creators felt that although they were a valued part of Auran, the recent falling away of Auran’s commitment to the community was leading to a growing sense of unease and uncertainty. Gumby said ‘they felt disappointed and let down’. He was seeking reassurance that Auran remained committed to supporting the creators’ efforts, and firm details on just when the third-party creator support plans would be implemented. After all, Gumby and a small team of third-party creators had invested a lot of time and energy in creating models that they intended releasing for sale on either their own website or Auran’s e-commerce system.

The P10 steam locomotive emerged from a collaborative effort led by community member Marlboro, which crossed over a number of different steam projects being pursued by various individuals. Steam creators such as User.RO and Prowler shared knowledge and skills about using various 3D modelling software tools and about steam locomotive history and lore. Their progress towards integrating a range of animation effects associated with steam into *Trainz* was very much the outcome of a collaborative, trial-and-error approach, with regular updates on the results being shared among the creators. Throughout this process individuals such as Prowler and Marlboro were moving well ahead of the technical details released by Auran. Narrowgauge posted: ‘What are the CCG [Content Creation Guidelines] naming guidelines? . . . Not happy Auran!’ (‘Steam loco running gear animation’, 9 May 2002). The Content Creation Guidelines had not been updated with the naming conventions required for the animation effects to be successfully imported into the *Trainz* program. Marlboro continued with his effort to introduce the P10 steam locomotive to *Trainz*, running into problems and often resolving them with assistance and input from other members of the content-creation community.

On 9 June, after a further series of exchanges that involved the sharing of information and resolving outstanding problems, Marlboro announced that ‘she’s done’ (‘4-6-2’, 9 June 2002). Then on 17 June he posted that the

P10 was finally ready to upload. Marlboro confronted the difficult question of how to distribute the P10 to the wider *Trainz* user community. He raised this question in a forum post, contemplating the possibility of holding it back and distributing on a CD together with other steam locomotives that he was working on. Should it be payware or freeware? Should it be uploaded to Auran's Download Station or released for download on his own website? Marlboro raised concerns that the impending Auran update release may create problems for the locomotive's integration with *Trainz*. Marlboro also mentioned that he would like to apply for 'official content' status and was concerned that any pre-release of the model may impact negatively in some way on his involvement in Auran's official content creation program. Auran had announced plans to extend support for fan content creators through an official content creation program; interested creators would need to apply to Auran to participate in the initiative.

The P10 poses problems about access to Auran and the potential terms and conditions of that access. It is also potentially subject to legal terms and conditions, such as licence agreements Marlboro would be accepting should he upload the P10 to Auran's Download Station. This achievement that benefited both the *Trainz* community and Auran is an outcome of an open, distributed, collaborative network, freely sharing ideas, know-how and art content. The creation of the P10 has been supported by a reasonably 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. In effect, the P10 project was made possible by a *Trainz* community digital commons that encouraged the free use and circulation of resources such as 3D models and knowledge. But at this juncture there is a moment of hesitation about how the P10 should now be distributed. What are the implications of how it continues its journey? Should it be freely available to other users through Auran's Download Station? Marlboro poses the question:

I was first thinking about a CD with a collection (Niagara and Mikado are not all too far out), then pay-ware, then share-ware, then about SP3 . . . then I thought let's forego all this c . . . and load her up (after I figure out dispatcher). What I would like to do, though is to apply for 'official' content. Could I still put her up in the custom content section or put her on my site for download? ('4-6-2', 17 June 2002)

The response was a series of enthusiastic posts urging Marlboro to release the P10. Then later, on 17 June, Marlboro announced that the Union Pacific P10 had been uploaded to Auran. From this point on the P10 was in the hands of Auran, awaiting approval from the web development team before

being made available for general distribution. While waiting for this, Marlboro moved ahead with previewing other versions of his steam models, to much enthusiasm, praise and encouragement. Due to Auran's delay in releasing the P10 because of updates to the Download Station, other members of the community offered to host the model on their fan sites. Marlboro needed to update the P10 model to ensure that it complied with the new third-party content requirements. Auran staff had been following with much interest the fan creators' endeavours and individual team members would regularly take it upon themselves to participate in email and chat dialogues, assisting content creators with information and suggestions about how most effectively to integrate their models with the *Trainz* program. Some team members would often do this in their own time. This again raised the dilemma of who received access to Auran technical assistance and on what terms and conditions.

On 19 July 2002 an updated version of the P10 (with the new sound, steam and smoke effects) was released through Auran's Download Station. The post from Bobo88 announcing that the locomotive was now available acknowledged that the model was the outcome of a collaborative effort. The response from the wider *Trainz* fan community to the release announcement included:

Totally amazing, what a wonderful sight and sound. Just had six of these beasts running round a layout, a real joy. Well done to all those involved in figuring all this out, the door is truly open now for some fine steam additions. (Jetstreamsky, 'Want steam?', 19 July 2002)

As Jetstreamsky pointed out in his post, the collaborative effort involved in working out how to bring steam locomotives to *Trainz* opened the way for others to also undertake steam locomotive projects.

In this account of the P10 and the collaborative, co-creative culture networks through which it emerges and circulates, what are the implications of defining these objects and relationships as objects of exchange and transaction? How should we analyse these relationships that unsettle oppositions such as amateur and professional, market and non-market, growth of knowledge and popular commercial culture?