

Experimental Gameplay Project

Postmortem

Fall 2005

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Introduction

Seeing as the Experimental Gameplay Project (EGP)¹ is not your typical ETC² project, we must warn you that this will probably not be your typical post-mortem. Last semester's team³ wrote a great paper detailing the process behind prototyping a game in a week, and it would be redundant to simply repeat what they had to say about the process, as we more or less followed the same procedure. It's also difficult for us to list what went right and what went wrong with this project as a whole, since each member worked on their own games in weekly development cycles, resulting in roughly 45 mini-projects, each with its own post-mortem. This isn't to say that these topics won't be covered in the following paper, but we want to focus on other aspects of this project, including how it works as an ETC project, how we dealt with following in the footsteps of arguably the most publicly known project ever to come out of the ETC, and where we see this project going in the future.

History of the Experimental Gameplay Project

Before going into detail about this semester's work, it's important to first look at the history of the Experimental Gameplay Project, so that we can clearly understand where it came from and where it's going. Something most people don't know is that it wasn't initially called the "Experimental Gameplay Project." When the original team pitched this project, it was entitled the "Fun Gameplay Project."⁴ In the words of pitch team, the motivation behind pitching this project was that "when Bing Gordon, one of the founders of EA, visited the ETC last Spring [2004], he commented that he saw a lot of interesting projects, but none that were incredibly FUN." The pitch team's solution to this problem was to dedicate a semester to developing a ton of mini-game prototypes on extremely short development cycles. The most important goal with these prototypes would be that they should be fun to play. While they hoped to be innovative and original, it's important to note that the focus, in the beginning, was on fun.

At some point in the pitch process and project assignments, the project changed from the "Fun Gameplay Project" to the "Experimental Gameplay Project." After doing some research, we found that the "Experimental" title was adopted from the Game Developer Conference's Experimental Gameplay Workshop⁵. The Experimental Gameplay Workshop is a three-hour series of presentations and demonstrations focused on original gameplay primarily from the independent game development scene. Held in conjunction with the Experimental Gameplay Workshop every year, the Indie Game Jam⁶ brings 15-20 game designers together and challenges each to develop a mini-game on their own from start to finish in 4 days. The organizers of this event view this workshop as the game industry equivalent of the Sundance Film Festival.

The Spring 2005 team's original goal was for the four of them to develop over 100 mini-games in the course of 14 weeks. In order to be able to create so many games in such a short amount of time, they developed a core set of rules for the project that everybody on the team was required to follow:

- 1) Each game must be made in less than 7 days
- 2) Each game must be made by one person, including all art, sound, and programming
- 3) Each game must be based around a certain “toy” *i.e.* “gravity,” “vegetation,” “swarm,” etc.

These rules are very similar to those of the Indie Game Jam. The team recognized early on that making 100+ mini-games was an unreasonable goal that would result in nothing fun to play, and subsequently reduced their semester goal to 50+ games, approximately one game per person per week. This reduction made the project a bit more manageable for the members of the team, but as the semester went on, they also stopped following two of the rules, abandoning weekly themes and spending as much as two weeks on a single game. They have since stated that these relaxations were to their detriment, and that their best work came from enforcing the restrictions and constraints. Similar to the Experimental Gameplay Workshop, they focused their development on original and fun gameplay mechanics. The majority of their games, especially the most popular ones, were based around physical simulations, and while many were fun and had original gameplay, they weren't experimental in the sense that they were pushing the boundaries of the genre. Their three most popular games, “Tower of Goo,” “Attack of the Killer Swarm,” and “On A Rainy Day,” were purely based around mass-spring systems, flocking behavior, and inverse-kinematics trees respectively. To them, the “experiment” was whether they could follow this strict process for the course of an entire semester and produce a massive quantity of games. And the result of their experiment was that it does, in fact, work.

Over the course of one semester, the Spring 2005 team built up a huge amount of publicity both for their project and for the Entertainment Technology Center in general. They presented their games at the Game Developers Conference 2005 Experimental Gameplay Workshop, which generated a huge buzz among GDC attendees, and got over 10,000 people to visit the team's website, ExperimentalGameplay.com. Following GDC 2005, the team was invited to appear on G4's (the only television network dedicated to video games) “Attack of the Show,” a daily live show about pop culture, technology, and gaming, where they again demonstrated the games they made. Following the airing of that episode, their website received over 150,000 visits, making it the most popular ETC project at the time and possibly in the history of the program. On their website, visitors could download and play games that the team made, as well as rate the games with a numerical value between one and five. The average of these scores was displayed publicly on the site along with each game so that the public and the team could know which games were the most popular. Thousands of people downloaded and played their games, and they even developed a loyal fanbase on their website's forums. Just recently (during this semester) the Spring team released a whitepaper on Gamasutra entitled “How to Prototype a Game in Under 7 Days,”⁷ which has caused a resurgence in publicity for the project and their work.

The First Six Weeks

At the beginning of the semester, we decided to adopt the process created by the previous team. We were aware that they did not completely follow this process themselves, but we thought it was important to try it to see if it was really effective. We made a schedule that solidified the rules for the semester: we would have 13 rounds, each exactly one week in length with the exception of a two-week round for Thanksgiving, and each round would have a theme chosen at the beginning of the week. In addition, we were bothered by the censorship of the previous semester's group; they only shared their best work with the community. We decided, in the spirit of full disclosure and discussion of the process, to post everything we created to ExperimentalGameplay.com. We knew that it would be a difficult plan and that the temptation to slip would be great, and so we entrusted our advisor, Chris Klug, with the task of being ruthless with us and helping to keep us on schedule.

Thankfully, learning our tools was not a major time sink in these early weeks. In the words of our advisor, this project is best for learning about game design, not for learning about how to use new tools. One of the major differences between the previous team and this one was that we all had similar programming experience and decided to use the same tools: OpenGL with an object-oriented C++ framework. Most of the team used a common framework based on the work of the previous semester's team, modifying it as necessary to suit the needs of individual games.

The previous team's model suggested using weekly themes, but they didn't say much on how to go about choosing those themes. So in the first week we filled our whiteboard with potential themes and generated our first four from that list. Our fifth theme, "Birth," was chosen by our faculty advisor in an attempt to have us think outside of the literal and more in the abstract. Our sixth theme was "Gravity", purposely chosen as one of the themes from the previous semester to set the precedent that it was acceptable to reuse themes; we were worried that if this project was run a few more times and that precedent wasn't in place, themes could eventually be very hard to come by.

The first couple of weeks went well in terms of making our deadlines, though the deadlines were tight. We thought that the difficulty was due primarily to getting used to the process of creating games and that it would get easier as the weeks went on. Unfortunately, we found that it got harder to make games, not easier. One of the reasons for this increase in difficulty was the fact that as the semester ramped up, our other commitments like electives started taking up more of our time, and that as we gained confidence in our abilities our games got more ambitious. We were still able to stay mostly on track though it was becoming clear that some members of the group were feeling the effects of burn-out. 23 of the 24 games we planned to make by mid semester were completed, but the one that was unfinished was attributable to fatigue.

Our mid-semester presentation to the faculty gave us an opportunity to get an objective view of how we were doing up to that point in the semester. The faculty had two primary messages for us. The first was to commend us for sticking to the process so well. We had

successfully shown not only that the previous semester's process could indeed be used to create useful prototypes, but also that we as a team could produce a large number of games if given sufficient time.

The second message was far less upbeat. The faculty was generally unimpressed with our actual creations, and wanted to see more *experimental* games. This stemmed from the fact that most of our games had similar qualities both to each other and to the previous semester's games. The themes chosen were similar to the ones chosen by the old team and thus the games went in very similar directions. Specifically, the games centered on physical phenomena, like gravity, wind, and collisions. Our games were (usually) fun, but they weren't very experimental in the true sense of the word. In fact, they were usually games that we knew in advance would be fun. We weren't being experimental, we were being safe.

It seemed like we were trying too hard to emulate the work of the previous team and in doing so we forgot to experiment. The faculty challenged us with dedicating the rest of our semester to refocus and really push the boundaries of gameplay. ETC faculty member Jesse Schell said that the first semester proved that it could be done, and came up with some suggestions on how to structure our kind of work. In the first half of our semester we proved that the process could work for a new group of people. With that goal accomplished, we needed to do something new in the second half of the semester.

Changes in goals

Based on faculty feedback from the mid-semester presentation, we chose to push towards more experimental game development instead of experimental game mechanics. They encouraged us not to just crank out a ton of playable games. We were advised to play dangerously and not settle for the successful safe bet. The biggest aid in refocusing our energies was an explicit statement from our advisor that a failed experiment was considered more successful than a fun but safe game. With this permission to fail, we felt freer to pursue more off-the-wall ideas that may not necessarily come to fruition.

Changes in process

There were a number of suggestions (both internally and from the faculty) for process changes, and one of the obvious ones was to try a longer development cycle. To that end, we attempted a two-week round soon after mid-semester. It was interesting to observe that, in spite of the extra seven days, team members didn't begin active development of their games until the last week. Since there was no apparent benefit to the additional time, this extended development cycle was employed only once.

Iterating off of this idea in changing the process, another change made was to decide on a theme for development a week in advance. This extra week allowed time for the theme to sink in, giving us the freedom to think about an idea without the pressure to start implementation; thus, the transition into next week's cycle was much smoother. This process change was also helpful in accommodating the complexity that the push towards

experimental development implied – we were picking themes that were abstract and less based around the physical, and gameplay concepts that were less apparent and required more time in the design phase.

Another change made post mid-semester was that we stopped hosting our new games on ExperimentalGameplay.com and created our own website with a different aesthetic and branding than the previous team's website. This decision was made after encountering friction from last semester's team and their fanbase. The most important reason to dissociate from the original website stemmed from the fact that the rating system did not promote the creation of "experimental" gameplay and novel interactions; rather, it only served to tell us which games catered to a previously defined notion of "cool." The rating system encouraged developers to just create more of what had already been deemed successful, and we found ourselves falling into the same traps as the mainstream game industry which we had criticized. The new website, therefore, has no rating system. Personal attribution has also been stripped from the games (removing the pressure of labeling what might ultimately be an unsuccessful work as our own), but attributed post-mortems continue to be published for each game made. We therefore don't have to worry about catering to a particular audience and can just focus our creative thought into making games that we deem innovative.

A final proposed change that we didn't have the chance to try out was the Building Virtual Worlds⁸ model where 2-3 people would collaborate over a week to produce a game instead of the tried and tested one-man show.

The Games

Changing the goals and motivations for the games resulted in us developing more interesting games in our final five rounds. The resulting games were more original, more experimental, and made for more fruitful discussions about the merits of their design and concept. Free from the tradition of the previous semester, we branched out into different directions: "Troy" and "i am fractured" are both alternate-reality games that take place through a web interface, experimenting with the boundary between reality and game space. "Cynosure" invites players to view the gamescape through a supernatural eye, and uses blinking as its fundamental mechanic. "Little Violet" dares to explore the topic of child abuse and killing those you love. "Blind Art" draws heavily from improvisational acting exercises, in which the goal of the game is to effectively communicate to another player what to draw without any visual aid. "Musical Bubbles" is a music game at its core, but is subtly training the players' inner ear about pitch and scale. Overall, both we and the faculty were happier with what was made after mid-semester.

Legacy

When we first started this project, we did not have a popular website as the previous team did, and we thought we were missing out on a great opportunity to get feedback on our

games. Our website was hosted on the ETC servers and mirrored the visual style of the previous semester. The old team had already built up the name of the Experimental Gameplay Project with lots of publicity, and most of this publicity was being funneled through ExperimentalGameplay.com, which they own. Their website already had a built-in fanbase and we wanted that audience to play our games as well. Our initial efforts at communicating with the previous team were met with resistance, and the faculty members were required to intervene in order to set up more open communications. We eventually got our games onto the site, but there was a lingering tension between this semester's team and the old team.

At first, our new games appeared at the top of the website; this prime location on the webpage and the mere fact that they were something new caused our games to get more attention than games from the previous semester. Eventually the previous team requested changing from a chronological listing (with the newest games at the top) to displaying the most recent week's games at the top and having all remaining games listed in order of popularity. Because the pre-existing fanbase of the site was mostly interested in the aesthetic styles of the previous team, this led to some of our games moving to the bottom and never being played again.

Internet forums are a notoriously biased and immature medium for discussion, and our naïve efforts to raise the level of discourse on our forums proved futile. There were many comments that essentially boiled down to complaints about our games being dissimilar to the games made last semester. In particular, they liked the art style of one of the previous team members and wanted us to make games in that same style. We realized that the community on the website was more devoted to Kyle Gabler's visual style than they were to innovation in gameplay:

“I found in the previous EGP, all the games had a very strong, stylistic graphical style, which made them seem more high brow and artistic. The crowd, gravity head and darwin hill [*sic*] all spring to mind . . . As you cant [*sic*] have spangaly [*sic*] 3d engines, you might as well have very pretty (preferably hand drawn) 2d games.” – “*God on earth*”

We were effectively supporting a community that didn't support us:

“. . . the new games suck! Have those other guys who made the games got real jobs now or somat [*sic*]? The new guys need alot [*sic*] more practice!!!!” – *Anonymous forum poster*

“. . . what I think the other guys wnt [*sic*] to say is that in the last semester there were a lot more kick-ass games than in this one.” – “*Wolfgke*”

Obviously comments from anonymous Internet posters can't be taken with too much merit, but the point is that we received little to nothing of value from supporting this community. Building an online community of experimental gameplay was one of the original pitches for the project, and one that we had hoped to fulfill – such a task is non-

trivial, however, and may be outside the scope of an ETC project. If a student on an ETC project has to spend time dealing with public relations and press, those efforts cut out of time they could be spending on development (this goes for all projects, not just Experimental Gameplay).

Coincidentally, around the same time that we changed the website, the project started to get a lot more attention from the press, primarily due to the Gamasutra article the previous team wrote. Initially, we were excited, because members of the press were contacting us and wanted to talk to us. We eventually discovered, though, that they were more interested in last semester's team (who had originated the concept) and not us as its current incarnation. We wasted some energy dealing with interviewers only to see the final articles and television spots not include any mention of the us or the new games. After a few weeks, we elected to do no more interviews and focus on making the games.

This project may have benefited from an overlap in the team members so there could be some level of "institutional memory" within the project. Having some of the previous team members in the room with us would have helped to build a continuum instead of a "Spring 2005 team" versus "Fall 2005 team" situation. This goes beyond simply not repeating their mistakes, as we had access to their previous advisor and a whitepaper they wrote on their process; rather, we lost a continuity of spirit, and ended up with an unfortunately divisive situation in regards to our relationship with our predecessors.

The Anti-Project

The Experimental Gameplay Project has very different emphases from the traditional ETC project course. We emphasize individual work over the collective group effort, small deliverables over short-term goals, and speed of implementation over maintainability and correctness. While this disparate philosophy can lead to a more streamlined development process and a good deal of personal growth for the students involved, its place as an ETC project model is extremely questionable.

One-Person Development Teams

One of the most notable elements of the EGP model is the individual workflow – one student comes up with a concept, designs the game, and creates all the code and art assets for the finished product. There is tremendous benefit in giving one person total creative freedom over a game. A single creative vision is far more likely to produce an interesting final product; indeed, some of the most inspired gameplay has been produced by individuals (Miyamoto, Wright, Takahashi, Pajitnov) or by very small teams (the *Half-Life* cabal). The reasoning for this has long been understood by more traditional creative disciplines like the theatre and film, and is fairly simple: design by committee dilutes a creative vision and ultimately removes any truly daring (*i.e.* original) concepts from the ultimate creation. By giving one developer the freedom to implement an entire game, you are guaranteed that the finished game is a product of their mind and nobody else's. No

artistic notions were lost in translation while speaking to a visual artist, the sound is always exactly what they intended, and the gameplay fits with whatever oddball concept was bouncing around in their head. This assertion is not meant to imply that we always reached our goals for these assets, but at least we understood what those goals were with 100% accuracy.

There are more day-to-day benefits to individual work, as well. We can create our own work schedule without any regard for other members; we can choose to work at home or at school, and can work during any time of the day since we never have to coordinate implementation or design with a second person. The same freedom also provides an excellent opportunity to learn good self-motivation and scheduling habits, since nobody is demanding interim deliverables or forcing you to stick to a schedule except for yourself. Since most students at the ETC specialize in one area, even if they are proficient in several, having to create all the assets for a game can push them in new directions and force them to hone skills that might be underdeveloped or dormant.

There is a dark side to working alone, however, and while the drawbacks might be obvious, they are also likely to be downplayed and underestimated. The ETC purports to teach “the soft skills” of working with others, managing group dynamics, and creating a collaborative work, but the Experimental Gameplay Project does none of that, and students who work well in a group may end up frustrated at the anti-social nature of the continuous individual work. The project also does not serve as good practice for the group environments in which ETC graduates ultimately work. While individual design is a worthwhile goal, EGP loses the benefit of immediate feedback and the possibility of the “thinking as one” effect that can arise from the rare, truly effective design teams. The lack of collaboration on the project also limits the students who can participate in the project – without a modicum of coding ability, a student will be lost at best and a liability at worst. Very few EGP games require any wildly complex programming concepts, but the more comfortable gamemakers are with their tools, the more effectively they will be able to work.

Weekly Deliverables

Another strongly appealing aspect of the project is that of weekly deliverables; a small-scope mini-project due once a week seems much more appealing than having to deal with the scheduling headaches and crunch associated with larger-scale projects. There are further benefits beyond simplicity of scheduling, however. The project has a constant freshness to it, since every week opens with a completely new concept and theme, and each gamemaker has a clean slate with which to work, free of the baggage from previous weeks. We are forced to push onwards and not dwell on older work, whether it was a success or a failure. This lack of attachment also fuels creativity; we are more willing to take risks since we know that we are only committing to them for a few days worth of development. Because there is no large end-of-semester deliverable, it is impossible for the project to fall behind – we also obviate the crunch time inevitably associated with large deliverable deadlines. Rather than a spike in working hours before mid-semester,

soft opening, and final presentations, we simply have a steady stream of fairly intense (but relatively low-pressure) development.

The weekly deliverables can take their toll in creativity however: coming up with an original game concept every week *is hard*. This cannot be understated, and is unfortunately the cautionary statement most likely to be ignored by future students. “I’m creative. I can come up with a new game per week. Easy.” Only it’s not. The first EGP team gave up on weekly deliverables after mid-semester; we came very close to doing so, but were saved by well-timed vacation periods and a one-round dalliance with a two-week development cycle. By mid-semester, however, several members of the team were feeling the effects of pushing out so many games in such a short time period; “burnout” is not the right word for it, but perhaps “drained,” emotionally, creatively, would be more appropriate. It’s very easy for the project to turn into a grind, and the added pressures of the public rating system prior to mid-semester did nothing for morale in this sense. Students considering the “weekly deliverable” aspect of the Experimental Gameplay model for future projects would do well to consider the amount of creative energy required for just one idea, and strongly consider their ability to churn out that many products during a single semester.

The timeframe for work becomes very disparate; we often found ourselves doing almost no productive work in the first few days of a round (though, to be fair, there is no way to force yourself to come up with an idea), and then crunching like mad in the last few. The balance of work and the question of whether spreading it through the semester is a better strategy is debatable; certainly it’s what we adopted as a side-effect of the weekly deliverables. The mini-crunch often seemed ultimately meaningless, though, as the game would be forgotten an hour after deadline. The lack of attachment that fuels creativity can also lead to a lack of accountability, not caring enough about an individual game to really make it shine is a danger with the short deadlines.

Future Work with the Model

We’ve noticed an interesting trend in recent rounds of project pitches; many groups are claiming themselves to be “the Experimental Gameplay of *X*” where *X* is mobile content, storytelling, video production, art, web search, or any manner of strange things. The notion of small deliverables and individual work processes is appealing to many students at the ETC. The past two teams who have tackled this model have been populated entirely by second years who had already proven their ability to work effectively in a team environment, and we believe that it’s very important for students to get exposure to the ETC’s core values in that regard before leaving for internships or co-ops. While the students may be eager to work on their own, that’s not what the ETC teaches best and is not what most people in the program are in need of learning.

We also need to consider whether the classic “one week deliverable by an individual centered around a theme” model of EGP is one that can be applied to different kinds of work. Generally it seems that such a system really only works for about half a semester

and after that point the feeling of grind sets in. For a more creative project (that is, one more focused on development of a medium or explorations with a specific piece of hardware rather than a client deliverable), it might very well make sense to spend the first half of the semester with themed weekly deliverables (by individuals if possible) in order to get as many ideas as possible before settling on one to develop for the remaining time. The first tendency in modifying the model would be to loosen its constraints, but this is detrimental in two ways: firstly it removes a strong driving force behind creativity (constraints, ironically, give a sense of freedom in such endeavors) and secondly can send the group down a slippery slope until they lose all structure and devolve into a stunted studio course. It is vitally important to recognize that the model is neither perfect nor a panacea, and its applicability for a given project should be ruthlessly examined before it is applied.

The Future of the Experimental Gameplay Project

In its current state, the Experimental Gameplay Project is the game-development equivalent of independent film makers: young adults with no budgets and short development cycles. What it needs to become is what movies like Stan Brakhage's *Mothlight* are to film, truly experimenting with the art form and medium, not just merely creating interesting twists on pre-existing genres. This will probably result in a lot more failed experiments, or games that are interesting in concept but not fun to play. This should be perfectly acceptable, though, as within this increased amount of "failures," you'll find a handful of gems that are more valuable than any safe bet. Greg Costikyan once said, "Most experiments will fail. The ones that work have the potential to be vastly more successful than the average game... And the designers we admire most are those who pulled this off."⁹

There has always been talk of additional platforms for EGP, and how its model would be perfect for (insert: mobile gaming, the Jam-o-Drum, or whatever the exciting input device of the day happens to be). While it's true that a group working on new platforms might benefit from a rapid prototyping phase, asking an existing EGP project team to turn their efforts to a new platform would almost certainly have poor results – we all create games with the tools with which we are most familiar. This semester those tools were universally OpenGL and C++ (with some PHP/MySQL thrown in for good measure); last semester Flash was part of the canon. Pushing members of the team is a good thing, but forcing them to learn a new technology as part of a one-week development cycle is lunacy – becoming proficient on a new platform takes time, and that first cycle with a new technology would almost certainly produce a very modest, throwaway game, negating an entire round. Let the developers work in their comfort zone in terms of tools, but push them out of that zone in terms of design and theme.

If this project's focus is on exploring challenging topics and themes that haven't yet been explored through gamespace, and to be truly experimental, the project should model itself not on the Experimental Gameplay Workshop, but the Game Design Challenge. The

Game Design Challenge is an annual event at GDC that invites a handful of veteran game designers to design a game around a challenging theme. The past two challenges have been to make a game about a love story and to make a game using the Emily Dickinson license, and this year's challenge is to make a game that could win the Nobel Peace Prize. Themes shouldn't just be a starting point for creating games; they should be the driving force behind the entire project, possibly even decided on before the semester starts.

In short, the project would be best served by turning its attentions towards themes, ideas, and topics, rather than direct physical gameplay or toys. While the first team focused almost exclusively on physically-based games and direct interactions, our goals have evolved to push the envelope in terms of interesting themes and concepts. Better and more nuanced physics and graphics engines are, of course, wonderful things, but they should not be the focus of new gameplay; if electing to deemphasize the graphical polish of a game loses followers in the long run, it's a small price to pay for true experimentation. Overall, we have been satisfied with the end results of the semester, and hope that our personal discoveries can aid future teams attempting to experiment with rapid prototyping in their projects.

¹ <http://etc.cmu.edu/projects/experimentalgameplay/>

² <http://etc.cmu.edu/>

³ <http://www.experimentalgameplay.com/>

⁴ <http://www.andrew.cmu.edu/user/kgabler/gameplayproject/>

⁵ <http://www.experimental-gameplay.org/>

⁶ <http://www.indiegamejam.com/>

⁷ http://www.gamasutra.com/features/20051026/gabler_01.shtml

⁸ <http://www.etc.cmu.edu/bvw/index.html>

⁹ [http://www.costik.com/presentations/Imagining New Game Styles.ppt](http://www.costik.com/presentations/Imagining%20New%20Game%20Styles.ppt)