

Postmortem: Crocodile Entertainment's Zack Zero



By Alberto Moreno, Carlos Abril

[What happens when an indie team's ambition spirals out of control but the game doesn't connect with an audience at the end of the project? In this candid postmortem of Spanish-developed PlayStation 3 downloadable platform title [Zack Zero](#), two developers who started with a small idea that grew and grew share their experiences.]

We started working on *Zack Zero* in early 2007. At first it was just a two-man team (Carlos Abril and Alberto Moreno, a.k.a. "Grihan"), although in late 2007 Carlos' brother, Nacho Abril, joined the project.

Our initial plan was to make a game with the structure of Carlos' first commercial game, produced over 20 years ago in the 8-bit era (called *Phantis* in Spain and *Game Over II* in other countries).

The idea was to make a platform game with 3D graphics but a 2D game structure. Something simple that would take a couple of years to develop for PC and thus have an initial team, structure, engines, tools, procedures, and an introduction for developing our second game for consoles, a world that was foreign and unknown to us.

However, we ended up making our first game for PlayStation 3, which took three more years to develop than what we had initially planned.

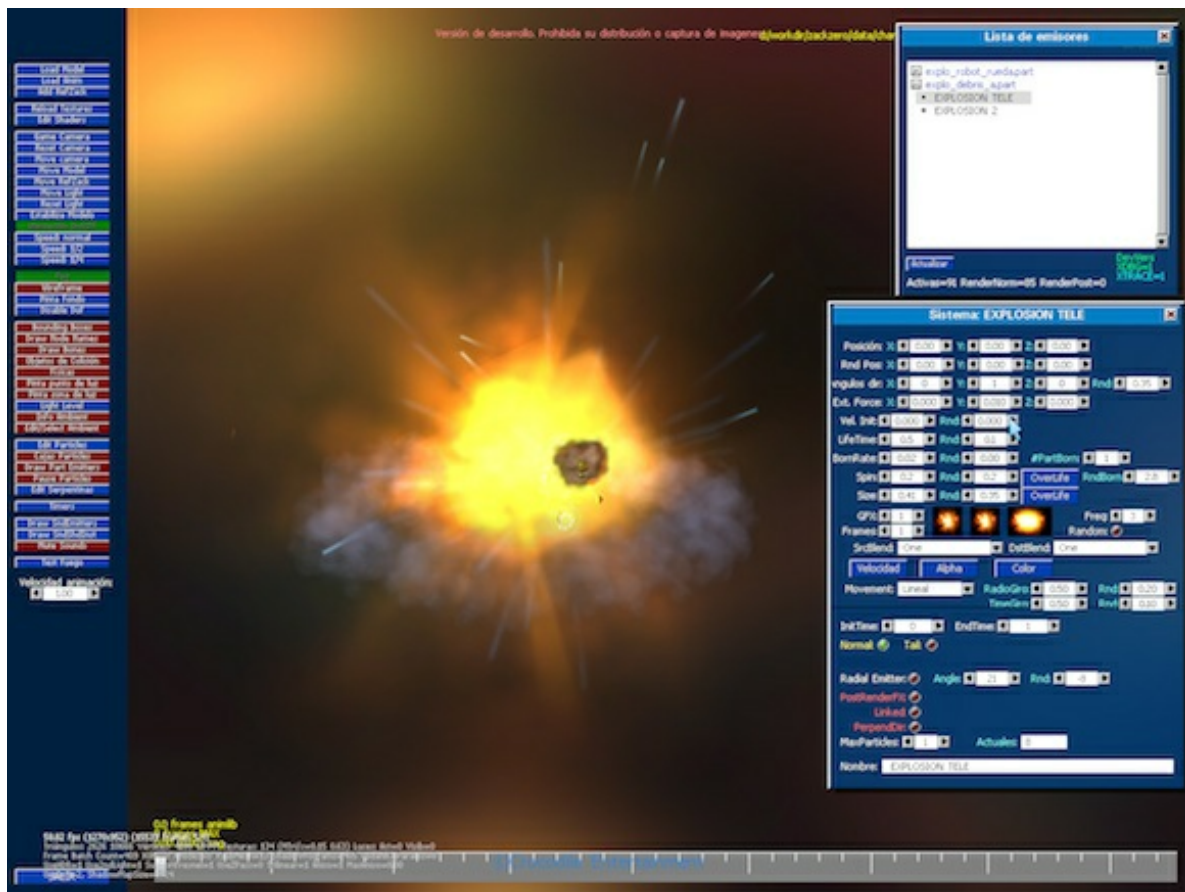
What Went Right

1. Use of Our Own Tools and Technology

It's not quite clear to us what would have happened if we had founded [Crocodile](#) two or three years later than we actually did. Maybe with the affordable tools and game engines available between 2009 and 2010, we wouldn't have had to build our own engine and tools, spending all the development time to create only the game.

But at the time we started the company, there were no cheap and accessible game engines for small studios, so we started designing our own. Nonetheless, building our own technology did give us the chance to access a grant.





Crocodile Entertainment's model editor (Click for large image)

Crocodile Entertainment's first year was practically dedicated to building all the tools and technology needed for the project. While we were looking into game prototypes, we were also creating the necessary tools to make the art and design tasks easier and independent from programmers.

The first preliminary versions of the engine exported too much information from the 3D software, but slowly we were able to improve our tools making almost everything editable in real time: moving and scaling objects in game levels, delaying and establishing offset parameters for animated objects, particle systems, shaders and materials, etc. Also, all enemy mapping and enemy generators could be placed in-game, controlling the enemy flow, and with the help of Lua scripting, a complete level could be set in real time.

2. A Good Distributed Pipeline

Not having offices has always been a problem while developing the game, although it did make us improve our pipeline, looking constantly for better ways to manage communication and task organization.

Only three programmers have worked on *Zack Zero*, all of whom were partners in the company: Carlos and Nacho Abril, studio co-founders, and Diego Garcés, who helped us with the enemy AI.

The biggest communication and organization challenge was amongst the art team. During the main production year, the team had two concept artists, one animator and two 3D artists, while some assets were outsourced. Without a dedicated producer and with no offices to resolve any doubts that could arise, it made us work harder in the description and design of the graphic assets we had to create, since we tried to meet only once a month. Since some team members lived far away, we didn't want to waste precious time traveling and attending too many meetings; that's why we defined each month's tasks in detail in each meeting.

This was possible largely due to the work of the concept artists, since they had to help us visualize all the environments, characters, props, etc. For every game asset, however small it could be, we had to work with concept artists to find the appeal we wanted.

The goal was to give 3D artists and animators enough information about what to do and how to do it before returning home; this way we would avoid daily task revision and tedious telephone, instant messenger, or Skype explanations. This was more difficult with animation tasks, especially with character animations that have direct impact on gameplay. In these cases trial and error play a major role, as do good communications between the programmer and the animator -- something Alberto had to personally supervise every day.

When we started the project, the software we used for task management was MS Project, using email to communicate tasks to the people scattered in different places. That did not work. Communication is crucial.

Later, we made a macro of the list of tasks, organized by user and priority, to upload to the wiki, with colors and comments to improve visibility. Wrong. We got neither feedback nor comments. We did have regular staff meetings with the task lists and work layout, but on a day-to-day basis it was impossible because of the overlap.

Later, we began using Google Docs. Things improved communication-wise, but soon visibility was lost and the document became impossible to read, despite being organized into different sections.

We then turned to Basecamp, but eventually switched to Teamwork (we changed because Basecamp worked terribly on iPad, and at the end of the day it is good to review the check list, make comments, prioritize and do all those things sitting comfortably in a chair). It really is much more productive, more participatory and does not require a dedicated producer.

Each person could put in their own tasks, everyone saw everything and could make comments, view them and reply, so people could see the changes and feel more involved. When you finish a task or make a change, it appears in the general list of changes sorted by date, so arriving early in the morning you could see what people had done, comment, see the result and see if anyone needed anything. And the people from Teamwork were very friendly and quickly included some features we suggested in the product: for example, that in the task list, the little icon to include a comment for each task is shown in green if there any new comments that you had not read. This is very useful for reviewing the list in the morning or late in the day.

3. Changing the Core Gameplay

When we started *Zack Zero*, the initial idea regarding its core gameplay was slightly different. *Zack Zero* was initially designed as a game where a space marine had to go straight through linear levels, buying new weapons and upgrading them, killing all enemies in his path and finally saving his girlfriend from the evil Zulrog.

But in March 2009, when we went to the Game Developer Conference (GDC) in San Francisco, we took part in a talk which encouraged developers to develop for the PlayStation 3. And considering how PC sales had deteriorated in the two previous years, we decided to drop our original plan and try to go directly to PS3.

But our purpose and structure of the game did not seem valid for the console so we had to make significant changes - the initial character, the approach toward taking on new weapons and improving them -- and we were in need of more puzzles which required changing the linear structure of the maps.

So we met with the team and held a brainstorming session in a restaurant, while having some beers and eating pizza. As we have said before, we have no offices, so we had to improvise our meeting room.

All this ended up forcing us to adjust what we had already done to fit the new design: we had to change the character to look more like a superhero who, thanks to his suit, could take the form of fire, ice, and stone. We changed the

game levels for these forms of character to make sense, including puzzles and areas where the player had to put them to use in order to advance.



The old run 'n gun version of *Zack Zero*.

Although it took a tremendous effort and forced us delay the project two years, we think *Zack Zero* has deeper gameplay and is, in general, a better game than the one we initially had in mind.

4. Quick PC to PS3 Transition

Changing from PC to PlayStation 3 was not just a problem of modifying the core gameplay of the game; we also had to deal with the creation of our own technology and 3D engine, one that would work on PlayStation 3.

Considering the PS3's reputation, since everyone says that it's a machine that's difficult to program for, after receiving the development kits the transition was faster than expected: we got the game running on PlayStation 3 in little more than two months and enjoyed the platform's architecture a lot.

Nonetheless, we had to do some tricky things, and also encountered some problems, but after some optimizations we finally got *Zack Zero* running at 60 frames per second. We also tried to keep an updated version of our tools for PC from the very start in order to have them for every team member without the need to provide a dev kit for everyone, hence reducing costs: what you see or modify in the PC is what you get in the PS3.



The team's custom in-game editor (Click for large image)

5. The Team: A Mix of Great Members, and Help From Friends and Family

There's no doubt that one of the key success factors for having managed to finish the game was counting on a group of extraordinary professionals, not only because of their ability and efficiency, but also for their human qualities. If instead of working with these wonderful professionals we had worked with people that were not truly excited about this project, there's no way we could have managed to do all the things we did while they were with us.

When we began looking for people for our team it was clear to us that we needed experienced people who could work in an efficient and swift manner, contributing to the project with their expertise.

In a small team, every member is important, so we took great care in choosing the right people for the project. One of the first guidelines when we founded Crocodile was to treat people the way you would want them to treat yourself. Encouraging a good working environment and team culture boost motivation, every team member feels the project as their own and the game benefits from it. But it was not only a matter of team productivity and management, and people were grateful for this.

When we ran out of money, we had to lay off all staff members and continue the project with just the company's partners. But some fired team members decided to continue working selflessly on the game in their spare time since they still felt part of the project and wanted to help finish *Zack Zero*.

We also counted on the help of great developer friends -- old colleagues from previous companies who helped us in almost every part of the game: sound effects and music, animation, localization and marketing. Without their help, it would have been impossible to finish *Zack Zero* like we did.

And, last but not least, our family. Wives, sons, brothers and sisters, father-in-laws, etc. have been our first and most demanding testers as well as critics. Many of them have played *Zack Zero* even more than we have. And some have even contributed to the project economically.

What Went Wrong

1. Project Reboot

As we mentioned before, changes in core design and the transition to PS3 lead to a better game. But that improvement came at a high cost as it entailed a long development. When we began *Zack Zero*, the idea was to make a much simpler game that would let us gain experience and allow for failure without causing a debacle.

Ultimately, financing issues, the core gameplay adjustments and the transition into PS3 lead us into a very complex and lengthy project. We've had a good experience and learned many things, not only about development, but also about marketing and PR, but recovering our investment in both time and money is going to be very, very hard. But at least we're still here to talk about it!

Furthermore, all the gameplay adjustments lead us to the dreaded feature creep. Our fear to stop all development made us fail to define all of the game's features in detail. Even though the game's new design was clearly defined, there were many loose ends that made us constantly add small features to the game.

2. Funding

We had financial problems from the beginning. The initial idea was to get money for development from the sale of Carlos' shares in FX Interactive, of which he was a partner. However, he wasn't able to sell them until the end of 2007, and for much less than initially expected.

Therefore, throughout 2007 and 2008, we operated using our own savings and the help of relatives, but could not hire anyone to help us with all the content that we had to create.

At the end of 2008, we received a grant, with the first part of the payment in early 2009, which allowed us to recruit people who would create all the graphical content we required. Fortunately, when we came to this point, we had the game design done and a lot of concept art, so we could move quickly.

Despite the grant, financial problems remained: we only received 30 percent of the total subsidy up-front. Only after spending the other 70 percent (from our own funds) did the government agency that offered the grant reimburse that investment.

In order to spend money you do not have (that 70 percent), you must rely on banks, but since all this happened in early 2009, the bank initially said it would give us the money, but then kept putting us off and asking for irrelevant documents. In July 2009 the bank told us that although it had said yes initially, it now had to say no because of the global financial crisis.

This left us in a difficult position, because for more than three months the bank had us running around. The team was still working and getting paid, and when the bank finally said no, the money from the first part of the grant had already been spent.

After months of uncertainty and a lot of paperwork, we obtained a guarantee so another bank could advance us the money. This was in October 2009, and people were given back pay, but because money was short, in March 2010 we ran out of money again and had to lay off the entire team. We ended up with the three people who had created the company in 2008.



3. No Offices, Scattered Team

Another issue to consider in developing *Zack Zero* was that we did not have offices. We were looking at offices in 2009, just before we were denied the advance of the grant. We even talked to the owners of one of them but luckily, as the bank was putting us off, we decided to wait for the go-ahead. If we had acted otherwise, we would be in an office that we could not pay for.

On the one hand, working at home can mean working harder and longer hours to adapt to certain late-night schedules -- especially for night owls, like Carlos.

But then again, it can also be very negative. There are many times when things need to be discussed face-to-face, or done together on the computer, or when you simply need to ask a quick question.

Not having offices and not being able to see things together made things difficult on many occasions. Things that can be solved in five minutes or in half an hour and otherwise get put off unnecessarily.

For example, when we were finishing the game it was hell because we were unable to see things together, to talk about them and discuss them, to make a test version and have everyone see the mistakes when they occurred (when Carlos made a version and passed it on to me, it took more than four hours to upload it to the server). With design or gameplay issues, it is much better to see them together.

4. Little Time to Test and Polish

Since we ran out of money, only three people were working on *Zack Zero* full time. We had the help of our partner Diego Garcés, several old team members, and some developer friends, but only in their spare time and free days, so our "developing power" was as low as it could get.

Fortunately, during the period we had people working on the project, virtually all elements were made: models for the map, enemies, animations, sequences, etc. that the game needed so that we "only" had to finish assembling the maps and finish game development.

This is what we did during the remainder of 2010, and in December 2010 we had three full levels of play. 2011 was the same: fixing all the problems that kept coming up, making maps of the remaining five levels, including new functions as required, managing to play the levels one after another, designing the game menus, making the videos

that play between phases and tell the game story, and so on. The levels were finished in October 2011, after final tasks that Alberto had to endure on his own, since he was the only remaining artist. And from there, we began the closing phase of the game.

In September 2011, Nacho went to work for another company in England, so Carlos and I had to finish the game by ourselves -- the very two people who had started almost five years ago. There were many sleepless nights, long hours working, fixing and adjusting the game, the different stages, playing for hours to prove to ourselves everything was working while we fine-tuned it, all in the midst of a daunting economic situation.

We asked for help from family while the banks relentlessly hounded us. It was a very tough situation that we hope we do not have to go through again. Finally, in December 2011, we passed quality assurance.

The ideal scenario, however, would have entailed finishing the game one or two months earlier, with more than just two people working 100 percent on the project, and more users for gameplay testing, which would have allowed us to focus on final polishing of the game instead of finishing so fast and last-minute.

5. Marketing and Press Relations

And finally what was probably our biggest mistake. After passing QA, and a little under one month before game release, we began to think about PR. Should we contact the press and start to publish material such as videos and screenshots or should we wait until the game was released?

In the end, after watching a video about indie studio marketing, we were convinced that the best strategy was to wait until people could actually buy the game, so that players could impulse buy after reading an article in a magazine or on the internet (we have a feeling that our exhaustion, caused by the stressful closing of the game, had something to do with this decision).

Unfortunately, we've later discovered that this strategy may work well with mobile games, but not on the PlayStation Network, a place where visibility is limited to the game's first two to three weeks on the market. Furthermore, many of the unknown games that appeared on XBLA or PSN without a previous campaign were apparently low quality, something that surely doesn't help new and unheard-of games.

In Spain, we didn't have a hard time reaching the press, but it has been a true ordeal outside of our borders. Only a tiny amount of the emails we wrote were answered.

We also think our contact with the gaming community should have existed already. We should have published more preview trailers, a development blog, in-progress screenshots, etc -- anything that would make our game known before its release.

If we could turn back time, we would begin by establishing press contacts way in advance, making the most of our previous GDCs, or travelling to other fairs like PAX. This would allow us to make a name for our game much sooner, so that gamers wouldn't find a new product on the PSN Store thinking "What the hell is this?" and so that the press wouldn't receive emails from an unknown studio.

And finally, even though many reviews have been positive (approximately 80 percent awarded us a score between 6 and 9) the mainstream press seems to have had a different opinion. GameSpot, IGN, Destructoid, and others gave *Zack Zero* very low scores, which is bad for us for a number of reasons. The media coverage of these sites is much larger than the rest, so surely their low scores influenced many consumers and had a negative impact on overall sales.

Furthermore, it's likely that the rest of the media lost interest in *Zack Zero* when they saw that the game had not been well received by major publications, making it even harder to reach the rest of the press.

To be honest, many of the issues common to most of the negative reviews have a lot to do with the little time spent giving the game that final touch we spoke about earlier. Keeping this in mind, we tried to correct many of the annoying things the press seemed to agree on when launching update 1.1, something that made *Zack Zero* a lot better in many ways. How would the reviews of those same publications have turned out if they had analyzed the game with this update? That's something we'll never know, I'm afraid.

Conclusion

When we decided to make a game within our own capabilities, we overestimated ourselves -- especially since we had never developed games for consoles before. In this sense, scope management has been a disaster.

We did succeed in making a fully functional engine with a competent visual look, including its tools, exporters, viewers, and all configurable game material in the modeling tool, etc.



The old run 'n gun version of *Zack Zero*.

Needless to say, if we were to start all over again with all the knowledge we have acquired, the design would be much more complete and we would focus much earlier on core gameplay. Nevertheless, we think that, as a first project, it has turned out pretty well.

Zack Zero was created to recover the essence of old school platformers: we were looking for diverse and colorful environments, easy-to-control combat, a wide variety of fun, and almost cartoonish enemies and final bosses, a simple yet effective storyline and, above all, enjoyable entertainment for everyone. And we think we have succeeded in doing that and have managed to make an enjoyable game.



But could it be that these are the precise traits that part of the press and gaming community didn't enjoy? Perhaps they expected a more serious style, with a complex storyline or innovative gameplay, but that's not what we were aiming at. If we could have contacted the press earlier on and conveyed exactly what we wanted to achieve with *Zack Zero*, the game would have probably been received more favorably.

However, we're sure that if we take players' suggestions and constructive criticism into account, we will make *Zack Zero* a better game when we release it on other platforms.

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