

Robot Turtles: A New Venture in Board Games (A)

In June 2013, Dan Shapiro pondered life's important questions while taking a shower. Among them: Why are kids' games either pure luck (i.e., Candyland) or a frustrating exercise in trying to lose on purpose without the child noticing (i.e., Tic-Tac-Toe)? How old does a child need to be to learn to program? (Is the ability to read even necessary to code and program)? What is something cool I can do with my kids this afternoon? After mulling over the questions, the software engineer and successful entrepreneur arrived at a potential answer.

He emerged from the shower refreshed and energized by the idea of teaching his four-year old twins about programming via a board game. Unsure how his children would react to the idea, he printed out generic robot figures to experiment with various gameplay formats. Within minutes, his children exhibited excitement towards the game.

Enthused by the interest his children displayed, Shapiro spent the next few weeks refining and prototyping the game. On July 22, 2013, he posted the following to his blog:

I took an advance from the very nice people at O'Reilly Publishing to write a book about startup CEOs. It's been two years and they have been very patient while I've finished the draft and not much else...But it's time to get that done. I also have another, non-software product that...well, more on that shortly when it's ready to share. So the fantastic folks at Google have agreed to let me take a leave of absence for a few months to scratch some of these itches. It's going to be a great summer.

Mentioning the desire to pursue a "non-software product," Shapiro took a leave of absence from Google to focus on board game development for the summer of 2013.

The Founder

Shapiro began programming at the age of seven. After receiving his B.S. in Engineering from Harvey Mudd College, he started his career at Microsoft, working on various versions of the Windows operating system, including Windows 98, Windows 2000, and Windows XP.

Alex Murray, a doctoral candidate and Research Associate, prepared this case under the supervision of Professor Suresh Kotha, Olesen/Battelle Chaired Professor, University of Washington's Foster School of Business. The case was developed solely as a basis for class discussion. Cases such as these are not intended as endorsements, sources of primary data, or illustrations of effective or ineffective management.

After spending five years at Microsoft, Shapiro left the company to manage software development for the Identity cellular phone at Wildseed, a Seattle-based start-up specializing in wireless software and entertainment. Following a short stint at Wildseed, he continued his professional career at RealNetworks, an established Seattle software company, where he oversaw the development of RealArcade, a service enabling end-users to play classic games such as Monopoly, Scrabble, and Rollercoaster Tycoon on their desktop computers.

In 2005, with considerable management experience, Shapiro set out to start his own venture. He founded Ontela, a start-up in the emerging mobile imaging industry. Among many other accolades, Ontela received recognition from the Dow Jones Top 10 in Wireless list. In 2009, Ontela merged with Photobucket Inc., where Shapiro sat on the board of the combined entity for a two-year term that ended in December 2011.

In October 2010, with approximately \$1 million in start-up capital, Shapiro launched his second venture, Sparkbuy, Inc. Inspired by online travel sites such as Expedia and Kayak, Sparkbuy used “scary good data” to apply the concept of comparison shopping to electronics products. In May 2011, less than a year after launching Sparkbuy, Google acquired the company. Joining Google, Shapiro led Google Comparison Inc., a Google subsidiary that operates comparison-shopping markets on the Google platform.

Developing the Game

Inigorated by the initial excitement his children displayed when playing the newly invented board game, Shapiro spent the summer further developing the game. He tested multiple prototypes with his children and their friends, integrated feedback from a variety of sources, and watched the game improve from week to week. As the pieces evolved from robot printouts to four colorful cartoon turtles, he aptly named the game Robot Turtles (see the figures below for the cartoon characters he developed).



Beep



Dot



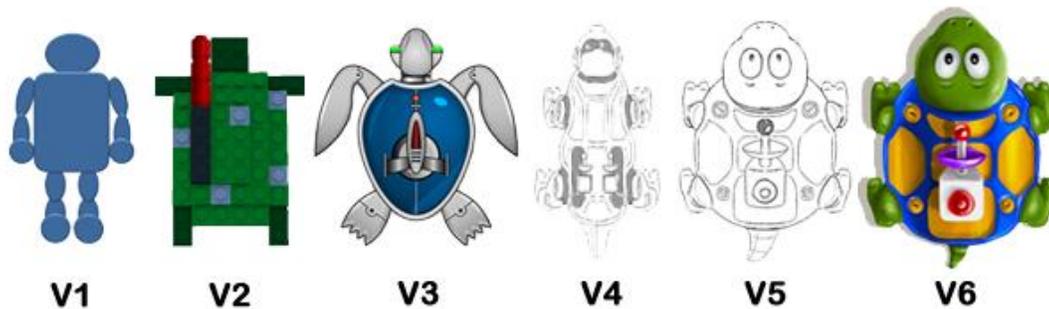
Pangle



Pi

Shapiro designed the game for parents to play with young children. In the game, parents play the role of “Turtle Mover,” setting up the board with a number of obstacles, and children play the role of “Turtle Master,” using a deck of code cards to move the turtles around the board. Additionally, once “Turtle Masters” grasp the basic commands, they can unlock the “Function

Frog” to represent a chain of commands and use “Write Program” to combine multiple cards to simulate more complex programming commands.



Next Steps

Although Shapiro did not initially intend to share or sell Robot Turtles, he developed a desire to provide families and young children the opportunity to learn about programming. However, his children’s enthusiasm for the game translated to minimal interest from established board game publishers such as Hasbro and Mattel. Executives in the board game industry openly wondered how computer programming could hold the attention of the game’s target market, children aged three to eight. Without a comparable product on the market, most of the established board game publishers concluded that the game would not sell and thus they did not want to risk backing it. A few small independent game publishers expressed interest and suggested that they might want to license the game from Shapiro.

The amount of money Shapiro needed to develop and market the game did not meet the minimum funding amounts for the angel investors in Seattle with whom he discussed the venture. Many potential investors listened patiently to Shapiro’s pitch but decided against investing capital. Inquiries with board game manufacturers suggested the minimum factory order of 1,000 units would cost approximately \$25,000. He figured initial marketing would cost an additional \$15,000 to \$30,000 – well below the angel investor minimum threshold. He also considered self-funding the venture, but decided against this option due to his wife’s reservations.

Committed to sharing his idea of teaching young kids to program while having fun with their parents, Shapiro saw two potential avenues to pursue his idea after venture capitalists and angel investors shut him down: (1) license the board game to an independent board game publisher, or (2) turn to emerging crowdfunding – “the practice of funding a project or venture by raising many small amounts of money from a large number of people, typically via the internet” – platforms such as Kickstarter or Indiegogo to pursue funding for his game.

Following the Licensing Approach

Though many established industry experts expressed skepticism about whether or not kids would take interest in a “programming” focused game, a few smaller publishers offered to license the game. While Shapiro would lose significant autonomy in the production of the game, he would gain the freedom to profit from royalties without the work associated with manufacturing and distributing the game in the United States.

One of the licensors floated the terms of the contract to Shapiro. The contract would last five years from the date of release and give the publisher exclusive rights to modify, market, and distribute the game in the United States. Shapiro would receive 4% royalties on the gross sales of the product and a one-time advance payment of \$20,000 when he signed the contract.

Pursing a Kickstarter Campaign

While developing Robot Turtles, Shapiro simultaneously assisted and advised two friends on how to crowdfund their venture ideas on Kickstarter – the largest and most popular online crowdfunding platform (see Exhibit 1). Despite lacking direct experience with crowdfunding, Shapiro spent numerous hours studying campaigns unfolding on Kickstarter. Based on his observations he helped his friends develop marketing and pricing strategies for their campaigns. As Shapiro continued to learn about crowdfunding and help his friends, he developed an urge to give it a try with Robot Turtles.

With this in mind, Shapiro followed more campaigns on Kickstarter and even funded 20 projects as he watched their campaigns unfold in real time. While viewing campaign pages, he noted that many good ideas failed to reach their funding goals because they lacked persuasive marketing efforts. Shapiro said, “Success won’t come from the product or Kickstarter, but from a separate effort. The mistake people make is thinking that Kickstarter will deliver people.”

Still on a leave of absence from Google, Shapiro recognized that the campaign would take approximately a month or more of fulltime effort spent posting updates to Kickstarter and social media platforms, responding to messages, contacting the media, and engaging the Kickstarter community to fund his venture idea. If successful, he would then have to fulfil his side of the deal by manufacturing and distributing the game to those who contributed to his Kickstarter campaign.

Torn between whether to license the product or pursue a crowdfunding campaign, Shapiro considered the pros and cons of both options. The licensing option required less work from Shapiro as the publisher would manufacture and distribute the game. However, Shapiro would forego his ability to modify the game and lose the opportunity to fully understand the board game industry and demand for his product. Additionally, the contract limited Shapiro’s upside to royalties of 4% on gross sales. After researching the prices of popular games such as Monopoly and Risk on Amazon.com, which sold for approximately \$40 each, Shapiro hoped to receive \$1.60 in royalties per game sold. Making any serious money required a lot of sales.

Crowdfunding represented a great learning opportunity at the cost of a lot of time and effort. Pursuing this option gave Shapiro complete control of the board game and allowed him to interact with people interested in the product to understand what potential funders valued about the product and suggested as improvements. However, Kickstarter also represented an all-or-nothing endeavor. If Shapiro failed to reach his self-determined funding goal, he would receive no funding. From his experience helping friends, he knew a campaign required significant time and work to create a video, launch a marketing effort, engage the media and his network, and actually run the campaign approximately a month. If he wanted to give Kickstarter his full attention, he would not see his Google office for a long time.

Exhibit 1: Kickstarter statistics

Kickstarter projects and dollars (through August 31, 2013)*

Project category	Launched projects	Total dollars	Successful dollars	Unsuccessful dollars	Live dollars	Live projects	Success rate
All	112,239	\$766M	\$658M	\$86M	\$23M	3,618	44.00%
Games	6,501	\$163.89M	\$146.04M	\$14.51M	\$3.33M	342	34.94%

Successfully funded projects**

Project category	Successfully funded projects	Less than \$1,000 raised	\$1,000 to \$9,999 raised	\$10,000 to \$19,999 raised	\$20,000 to \$99,999 raised	\$100K to \$999,999 raised	\$1M raised
All	47,792	5,352	30,957	6,151	4,530	758	44
Games	2,152	116	847	406	568	191	24

Unsuccessfully funded projects***

Project category	Unsuccessfully funded projects	0% funded	1% to 20% funded	21% to 40% funded	41% to 60% funded	61% to 80% funded	81% to 99% funded
All	60,829	11,164	38,357	7,346	2,695	877	390
Games	4,007	290	2,883	469	229	82	54

*Data collected from archive.org to reflect Kickstarter statistics on August 31, 2013. All cumulative statistics date back to the Kickstarter platform launch on April 28, 2009. See below for further descriptions of column data: (1) Launched projects = all projects ever launched on Kickstarter; (2) Total dollars = Dollars pledged to all projects (successful and unsuccessful); (3) Successful dollars = pledges to successfully funded projects. These pledges were collected; (4) Unsuccessful dollars = Pledges to unsuccessfully funded projects. These pledges were not collected (since Kickstarter is all-or-nothing, campaigns that fail to reach their funding goals receive no pledges); (5) Live dollars = Pledges to currently funding projects as of August 31, 2013; (6) Live projects = Currently funding projects as of August 31, 2013; (7) Success rate = Calculated by dividing the number of successfully funded projects by the number of all projects that have reached their deadline (including successful, unsuccessful, canceled, and suspended projects).

**Does not include live campaigns that reached their funding goals but have yet to conclude.

***Funding on Kickstarter is all-or-nothing. 79% of campaigns that raise more than 20% of their goal meet their overall funding goals.

Exhibit 2: Kickstarter rules (from Kickstarter)

We welcome and support projects in the diverse categories of Art, Comics, Crafts, Dance, Design, Fashion, Film & Video, Food, Games, Journalism, Music, Photography, Publishing, Technology, and Theater. There are three rules every Kickstarter project must follow.

1. Projects must create something to share with others.

Kickstarter can be used to create all sorts of things: art and gadgets, events and spaces, ideas and experiences. But every project needs a plan for creating something and sharing it with the world. At some point, the creator should be able to say: "It's finished. Here's what we created. Enjoy!"

2. Projects must be honest and clearly presented.

Our community is built on trust and communication. Projects can't mislead people or misrepresent facts, and creators should be candid about what they plan to accomplish. When a project involves manufacturing and distributing something complex, like a gadget, we require projects to show a prototype of what they're making, and we prohibit photorealistic renderings.

3. Projects can't fundraise for charity, offer financial incentives, or involve prohibited items.

We're all in favor of charity and investment, but they're not permitted on Kickstarter. Projects can't promise to donate funds raised to a charity or cause, and they can't offer financial incentives like equity or repayment. We also can't allow any of these prohibited things.

These rules don't cover every possible use of Kickstarter, but they explain our purpose and perspective.

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