Mechatars:
Physical Toy Meets Digital World

TWO WORLDS
ONE WAR

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Welcome everyone, thanks for coming (reading…), we're going to get started.

Please turn off smart phones, dumb phones, 2-way pagers…

Also, slides will be available online and please hold any questions till the end, thanks.

I'm Shawn Patton, a Senior Game Designer at Schell Games.

And this is my talk: Mechatars: Physical Toy Meets Digital World

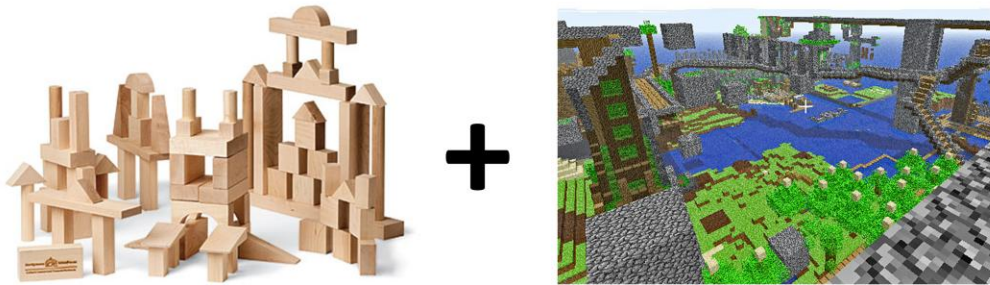One of my friends suggested an alternate title:

But I decided to stick with my original…

Real Quick: Who am I?

I'm an eight year veteran of Schell Games and have worked on everything from theme park attractions to online games. I was the Project Director on Mechatars for about the last 18 months or so.

Real Quick: Who is this talk for?

This talk is for developers interested in crafting a physical toy and virtual world to work together and have a meaningful connection.

Overview

1. **How Mechatars approached linking two worlds**

2. **What went right**

3. **What went wrong**

I'll describe Mechatars, what we did. Give you 5 went rights and 5 what went wrongs.

For Reference : A Commercial

Sometimes a video is worth 1000 words x 30 fps x 30 seconds… that's a lot of words!

http://www.youtube.com/watch?v=md5WTnJEOgc

Cool… but what is Mechatars?

- **Physical World**
  - **Remote Controlled Toy**
  - **Wirelessly talks to other toys**
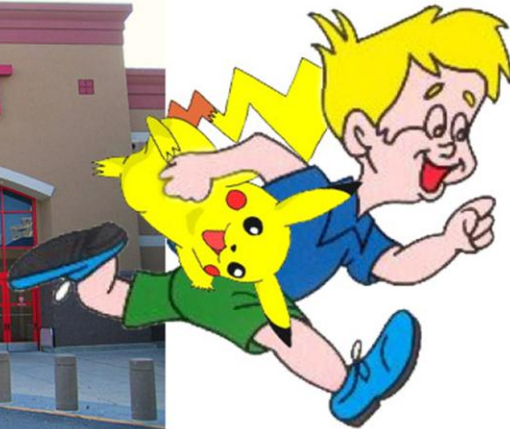 - **Connects to computer** (USB)
  - **$39.99**

- **Virtual World**
  - **Browser based**
  - **Unity 3D**
  - **Persistent**
  - **Connects via cloud to toy**

Let me break it down for you.

Umm… still, what is Mechatars?

Still confused? Imagine you could go to Target, buy a Pokemon, bring it home and battle both in your living room with your friends and online in a virtual world as well.

Our Goal

Link Two Worlds with One Game
(meaningfully!)

That's Virtual Wrexx there on the right.

Bossa Nova Robotics approached us, oh, back around 2007, about creating a meaningful link between a physical toy and a virtual world. They would make the toy, we'd make the virtual world. That initial conversation turned into Mechatars years later. Link two worlds? Sounds great, but what does meaningfully mean?
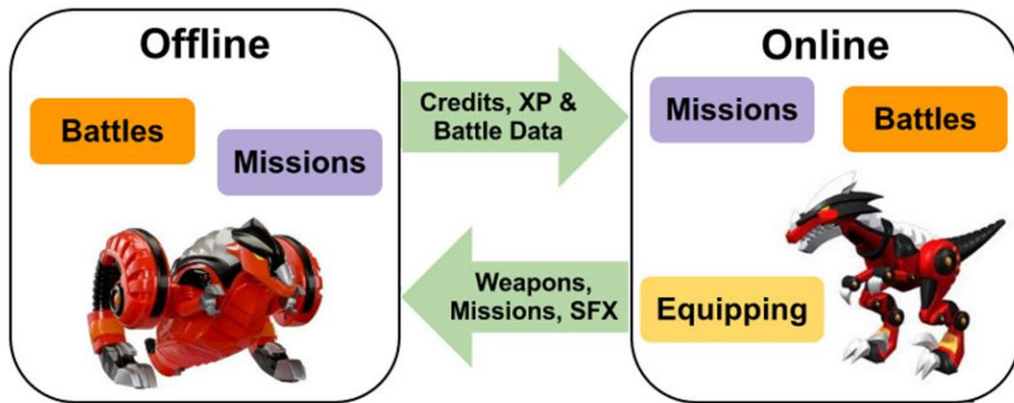
Have battles and go on missions with the toy to earn Credits and XP in the virtual world. Buy and Equip weapons, sounds, and missions online to download back to the robot and change the way it sounds, acts, and plays!

Lots of one-way communication from toy to virtual world exists. One example: Webkinz - (2005) ($15) code on toy, makes virtual pet version, minigames, shopping, decorating, etc…

Still Different

2-way Communication, but still not playing the game in both worlds.

Even some 2-way communication exists. Robot Galaxy (2008) ($20-$75) - robotic toy, can have remote, makes noise (downloadable), 2d flash world including minigames, battle like queued rock paper scissors, can download sfx to robot. Skylanders (2011) ($50 + ~$10) - RFID in figure is character select in game, character data is saved back into figurine. But no gameplay in the real world, only online. We want to play the game in both worlds!

Strong Story & World

Join the Initiative and help the Mechatars save both the Mechaverse and our Universe from the Swarm!

Create a solid story and your transmedia world will survive. Mechatars, from the Mechaverse, are battling the Swarm, and have teamed up with humans through the Initiative. In our world they appear as robots, in their world they're huge fighting beasts! Story supports both worlds!

The Game

Battle offline!

Battle online!

Make progress in the Game!

We wanted players to be able to play in both worlds! What do robot toys want to do? Battle! What do online robots want to do? Battle! Design a game so that the core battle system can be carried out in either world.

An Online Battle!

Let's take a look at an online battle!

Let's take a look at an online battle!

http://www.youtube.com/watch?v=lF10IT4rvd4

Note the custom party music, skin, weapons, and backflip win taunt that I purchased and equipped. Vanity items I'll touch on later

I customized a bunch of stuff! A robot's loadout is like your deck of cards in a CCG, you can customize it for various missions.

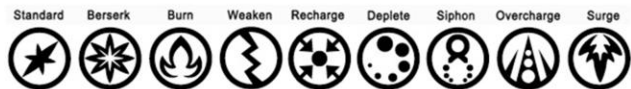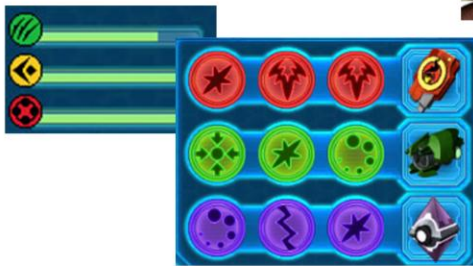Making a game (and a toy) that can appeal to both 6 year old boys and 12 year old boys provides its own interesting challenges.

Turn based for clarity in the real world and simplicity in the online world. Strategy works its way down from hit the blinking button to element mastery to weapon types to energy management to attack properties to upgrades to thinking about your loadout (or deck) and, finally…

"never get involved in a land war in Asia."

… getting in the head of your opponent.

Remote Control

If you've played online, you know how to play offline.

Care was taken to try to marry the design of the online game controls with the offline remote control. That way a player who goes through the online tutorial will know how to play the offline game and vice versa.

When dealing with a system with limited visual feedback, try to set rules and be consistent. Example:

Blinking LEDs = Make a Choice
Solid LEDs = A Choice Was Made

Useful tip…

Some Issues

Hardware Design Is Tough!

A red LED costs 10x the cost of a screw!

The Design is due when?!

Every LED counts, so you better be darn sure you need those LEDs, not to mention what color they are (don't even get me started on blue LEDs). Also, in order to have a toy for Christmas, it needs to be on shelves by August, which means code freeze is May which means Remote and Toy design freeze is January! Yikes!

Between the major developers, back end tech, hosting providers, audio creation, engine support, customer support, and manufacturing, there were 12 companies working on this project! Clear and open communication channels are a must!

We needed to support players who only owned one robot (and had no friends) so we made single player offline missions fun. We also made online missions with Special Objectives. Offline synchronous play was achieved when two robots battle wirelessly, online you can battle your friend's Mechatar even if your friend is offline. They can then see that battle (even watch a replay of it) when they log in and challenge you right back!

Special Objectives

Here are those special objectives to get older or more experienced players to explore the depth of your strategy.
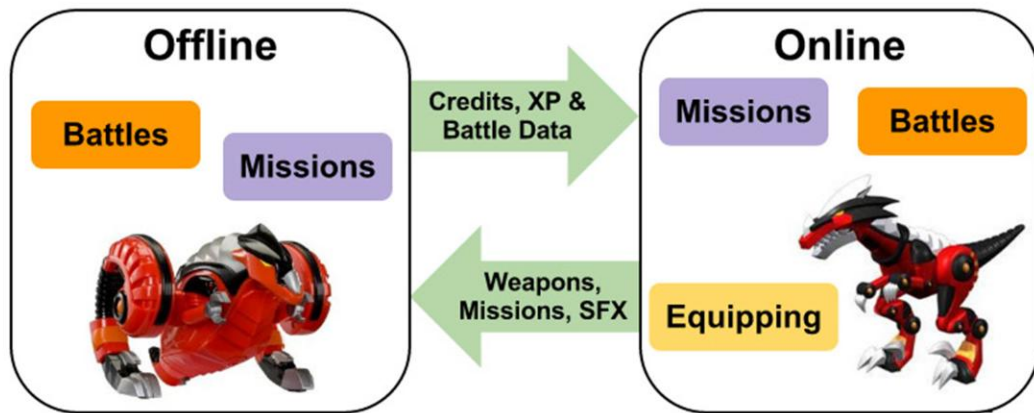
Remember, we want that meaningful connection, but…

Pssst! That's all Great, but doesn't this need to make money?

…even a cross-dimensional world with a meaningful connection needs to pay the bills.

Physical toy is the velvet rope, getting you access to more planets to explore, offline play, and extra team members (M+1 = You have 1 more virtual Mechatar than you do physical Mechatars).

Microtransactions give you more paint jobs, animations & taunts, sound effects, and more missions (that drop weapons) as content.

Overview

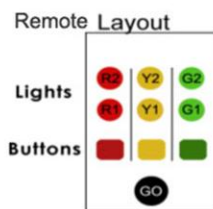1. How Mechatars approached linking two worlds

2. What went right

3. What went wrong

On to what went right!

What went right?

1. **Playtesting** – Do it early and often (from paper prototype to flash to early remotes to Unity to final hardware. Remember, you have to lock stuff down early with toys!)

Be in the room if possible…

Hugely important, start early, continue often!

What went right?

2. **Levels of strategy** – Key for a battle system geared toward broad demographic

Strategy is key!

What went right?

3. **Hardware Use** – Find what's fun and make the most of your hardware (6 games made with 9 leds)

Lit LED Revolves   Lights "move" across

Repeat Pattern   Fill in the Blank

Lights Line Up   Line of LEDs Spins

Limited visual feedback? No problem! Figure out what your toy can do…

What went right?

3. **Hardware Use** – Find what's fun and make the most of your hardware (6 games made with 9 leds)

Lock On

Nanoscan

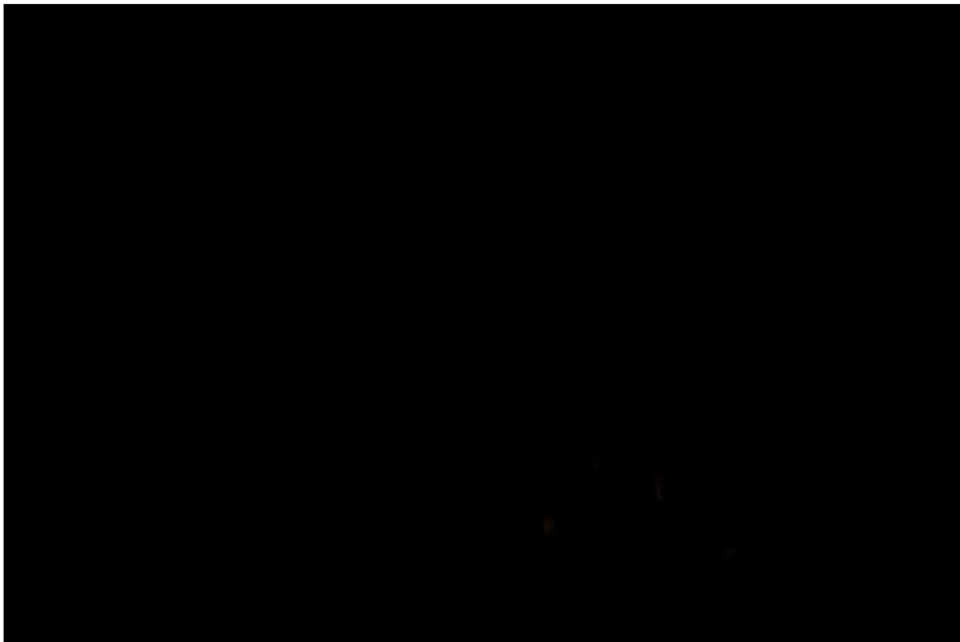Conduit

Interceptor

Power Link

Evasive Maneuvers

And turn what it can do into minigames!

What went right?

4. **Strong Story** -
Draft (and stick to)
a strong Story.
People will take
note!

Since this is a cross-world property, creating a strong story
lets your players involve the whole family!

Best video ever:
http://www.youtube.com/watch?v=CudedD52DIU
"I always knew you were the Swarm hon"

What went right?

5. **That meaningful Connection** - You can play the same game between worlds. Example:

Blazing Fire

This player reached max level in half the time of anyone before him. How?

He spent ~45 minutes online each day.

He also spent ~60 minutes playing **offline missions** each day!!!

Concrete example of playing in both worlds and making progress!

Overview

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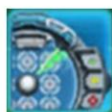
2. ~~What went right~~

3. What went wrong

Wrong : (

What went wrong?

1. **Nerfed Aspects of Online Battle to unify games** - Think long and hard about how different you are willing to have your online game experience be from your offline one.

We miss you
Real Time
Battle Events...

We originally had some real time battle mini games/quicktime events to boost attacks. When they proved difficult to convey on the toy, we cut them from both worlds. We probably should have kept them for online and just conveyed the difference clearly.

What went wrong?

2. **Micro Goals were too hidden** - Have micro goals sprinkled throughout your game (in both worlds) that encourage your players to explore all you have to offer.

These should be all over!

We touched on this with our Special Objectives, but they were associated with specific missions and a more general system would have been nice to integrate reasons to explore our game's strategy

Too Hidden!

Make them more accessible!

What went wrong?

3. **Poorly Expandable UI** - Make sure your UI is expandable for a game that will keep growing.

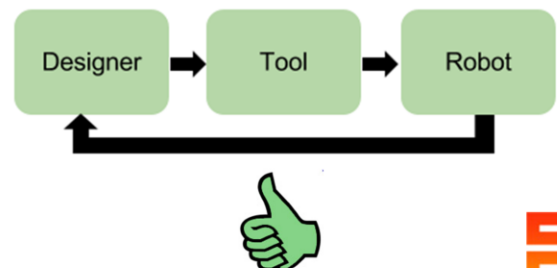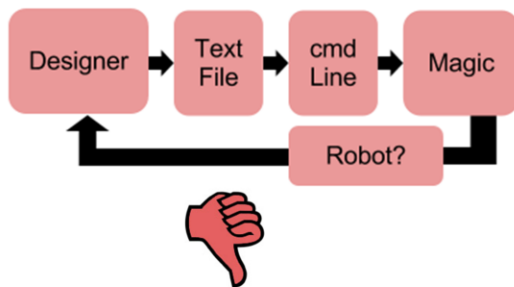We designed ourselves into a corner, make sure you UI can grow with your game.

A lot of UI, most of it worked, some didn't… test often!

What went wrong?

4. **Poor Offline Tool Pipeline** - Make sure you have the tools to iterate on your offline content! Don't underestimate that time, because it is a different pipeline.

We know online pipelines for new content, make sure you think of the offline ones too!

What went wrong?

5. **Did not Focus on Marketing Challenges Soon Enough** - Gosh it can be hard to convey cross-world products in 5 seconds. But it's important to nail it! (we bent the nail…)

Make sure you give thought to how to convey the core of your cross world experience early on, because it will be imperative for marketing purposes. In a 30 second commercial, you want to grab the kid in 5 seconds. (Skylanders does this well)

For all its faults, kids are playing with them, making fun adventures, sending us mission and Mechatar ideas! The future is exciting, the strong connections that are possible between physical and virtual worlds are just starting to emerge!

Thank you all for listening! Real quick before questions, if you get a chance, don't forget to fill out the evaluation form email you'll receive.

That answer is