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Contents

Sample 1: The house that plastic built

Co-produced by NBC News, available in full at globalreportingcentre.org/plastics.

Excerpt

During World War II, U.S. plastic production nearly quadrupled. It was used in everything from tires to radar cables to parachutes, and in the production of the nation's first atomic bomb, serving as critically important uranium-resistant gaskets and valves.

Plastic was also used during World War II for deception. Fake inflatable tanks would sometimes be deployed as decoys. Photo credit: The National Archives #100310462 and #100310448.

When the war ended, the infrastructure to crank out plastic was still in place. Plastic producers turned their attention to the consumer market, and their timing couldn't have been better: an expanding suburbia and booming middle class in the U.S. and Canada meant more money to spend and bigger houses to put things in.

It might seem silly now, but plastic was once "considered the very height of glamor." This is no better epitomized than by Monsanto's House of the Future, an all-plastic, spacecraft-style home unveiled at Disneyland in 1957.
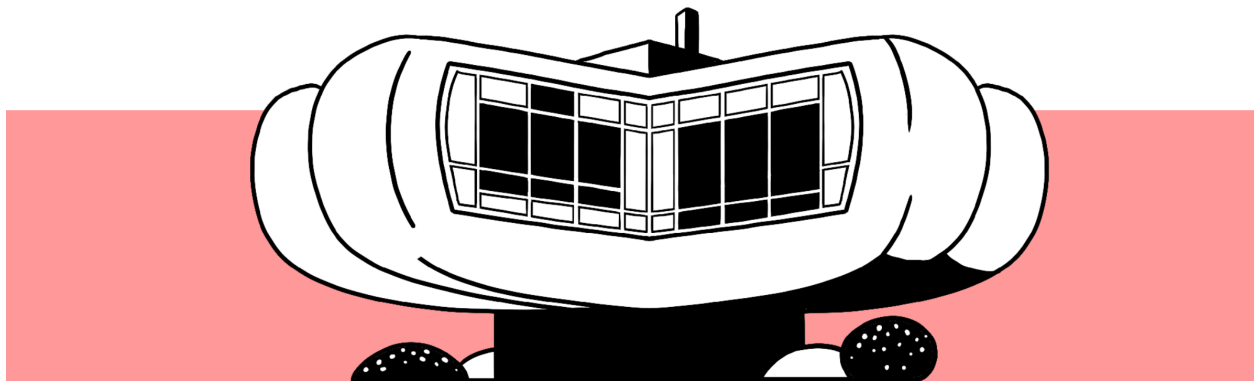
Monsanto's House of the Future.

The same properties that made plastics desirable presented a new problem: they were too durable. After the exhibit closed, demolition crews took a wrecking ball to the House of the Future. Legend has it, the ball bounced off.

To keep growing, plastic needed to be disposable. Speaking at a 1956 industry conference, Lloyd Stouffer, editor of Modern Packaging Magazine, famously told plastics manufacturers that "the future of plastics is in the trash can." In 1963 Stouffer followed up by writing:

"The happy day has arrived when nobody any longer considers the plastics[s] package too good to throw away."

Sample 2: Apocalypse Made Easy!

A satirical team-based survival training game that runs as a mobile web app. It consists of four different scenarios across the city, each focused on a different aspect of survival preparedness. After securing a grant to develop it, I worked as the producer, designer, and lead writer.

Gameplay script excerpt (written in YAML)

```yaml
- step: message
  if: !ROLE('D')
  messages:
    - (Waiting on NAME_WITH_ROLE('D')).


- step: map
  if: ROLE('D')
  message: Please confirm your location. Are you all facing Science World's main
entrance?
  latlng: 49.273373, -123.102657


- step: choice
  key: begin-scenario
  if: ROLE('D')
  choices:
    - x: We're here.


- step: message
  if: ROLE('D')
  messages:
    - Okay. Read this aloud. <img src='/s/images/childs-drawing.png'>

    - Begin imagination: you wake up and your bed is shaking. The dysmorphic painting
that your small daughter made falls to the ground. Your window shatters. Are many
cars crashing into your house at the same time? No. It's an
<strong>earthquake</strong>. Your house collapses and you perish.


- step: choice
  key: done-bleak-intro
  if: ROLE('D')
  choices:
```

```
    - x: Bleak.


- step: message
  if: ROLE('D')
  messages:
    - Don't worry. In a few minutes you'll know how to respond to just such a
situation. Unless an earthquake strikes <em>while</em> you're completing this
training scenario.

    - Nobody would believe you if you told them that.
```

Narrative branches

Within Apocalypse Made Easy! the story unfolds across scenarios according to a team's performance and choices. This chart shows the conditions under which specific narrative snippets should appear.
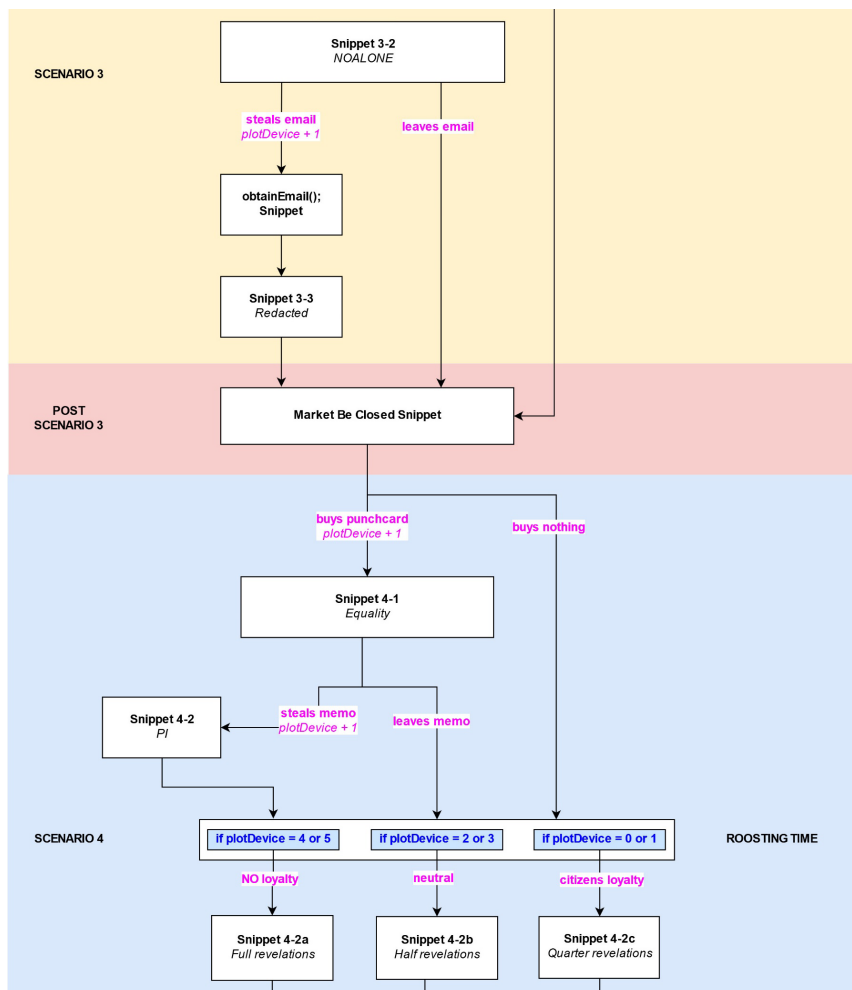
Narrative snippet

To make the overall story flexible, we divided it into 30 modular snippets that could be called conditionally. That way, teams could complete the scenarios in any order and the story would still make sense. This is one of those snippets.

B: Hey! Can you see this? Am I getting through?

B presses [...] B: I'll take your silence as a yes.	B presses YES B: Good. We've been trying to hack into this thing for weeks.

B: What I'm about to say is confidential. Don't even tell your team unless you trust them.

I'm from A Nameless Organization and we need your help.

We're exercising our democratic right to gather *information* on the Citizens.

Why the apocalypse training? Why the fake friendly routine?

Not a rhetorical question.

B presses [Oh, umm…]	B presses [I don't know.]

B: You don't know either. Great. So why are you WASTING my time?

B presses [YOU contacted me.]	B presses [My apologies.]

B: Okay. Deep breath. Sorry. If I seem short with you it's because I can hear BORIS rebooting and know I don't have much time.
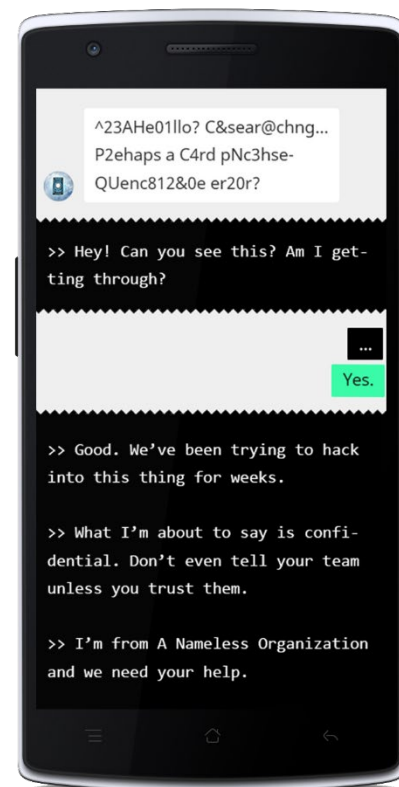
```
So what are the Citizens up to? This training course you're doing holds the answer,
we just don't know how. Will you help us investigate it?


You don't have to answer yet, we'll be in tou--a023kA22ikAMe*flip*flip*flip*flip*

E: Harmless routine BORIS maintenance/reboot cycle complete. [FILE NOT FOUND:
disarming_joke_1_4.txt; *flip*flip*>>>print "Welcome aboard {{employeeName}}!"*flip*
APOCALYPSE_ME_1.js] And I'm back! Please forgive the inconvenience. I'm [FIGURE-OF-
SPEECH-COMPILER ERROR] days one of those having.
```

Plot Summary

This was used to orient all production team members to the general story, as well as guide visual design, writing, marketing, and artwork for the program.

Following a highly confusing election cycle, the single-issue political party Citizens for a Friendlier Post-Apocalypse (AKA the Citizens) have risen to power and started implemented their only policy: mandatory apocalypse survival training for all. The Citizens genuinely believe that the world is about to end and that the training course they're imposing will be beneficial. But nobody knows why.

The training course is delivered by BORIS, a poorly-programmed AI that the Citizens created. Soon after you begin training you are contacted by the mysterious Nameless Organization (The NO). They've hacked into BORIS' interface to send you this message: the Citizens are a real suspicious bunch. There MUST be something insidious behind the friendly facade and forced apocalypse training.

So you and your team have a choice: gather information as you complete the training course and feed it back to the NO. Or ignore them and implicitly side with the Citizens. If your team decides to work with the NO, you'll need to buy special punch cards that are used to override BORIS' default behaviours, leaving BORIS open to vulnerabilities and random leaks of highly expositional documents.

These punch cards can be purchased on the black market with saltines, which is the apocalypse-proof currency that the Citizens use to reward your progress through the training scenarios. As you work through the scenarios, the plot is slowly revealed. But the amount/depth of the plot that your team sees is determined by whether you decide to side with the NO, buy punch cards, and repeatedly hack into BORIS.

The gist of the plot is that the Citizens are led by a group of disgraced former executives that ran a company called Formativ: an AI-powered automated construction company. In addition to the construction industry, Formativ was known for innovating in the realm of corporate training, having developed an infamously-difficult suite of teambuilding and onboarding training programs built on the same core technology that powered its construction suite.

The training program leveraged principles of adaptive learning in order to optimize the programs to suit a person and group's psychological state of being.

Its software determined that optimal team bonding occurred when groups were placed under duress, and so it started increasing the difficulty of the training programs accordingly.

Soon after it started to realize that the most realistic way to train for difficult situations was to actually create them in the real world. After all, what could provide better training than the real thing?

Eventually, disaster struck. One nameless employee, rumoured to be part of the company's elaborate Feedback Division, fell into a lake of toxic waste that the program had manufactured. New employees started to refuse the training.

But the program continued unabated, creating dangerous environments even when there were no more employees to train. The cost of covering up these increasingly frequent disasters got to be too much. Formativ was forced to declare bankruptcy.

Just prior to dissolving the company, the executives banded together and made a decision about what to do with their runaway AI. They couldn't reprogram it, so they did the next best thing: they rebranded it. Changed its vocabulary a bit. Gave it a friendly-sounding name: BORIS.

Instead of training employees, it would train citizens. And instead of corporate policies it would train them for the apocalypse that they were sure was coming, when BORIS' work went a step too far and triggered a cataclysmic feedback loop.

It's a defeatist but well-intentioned attitude. The Citizens think there's no stopping BORIS. Why not use it to prepare? This is the key difference between the Citizens and the NO. The NO believe that the apocalypse can be stopped. That we don't need to resign ourselves to it. Who your team ultimately decides to side with is up to you.

Sample 3: Mars Rover Exhibit

This was a writing contract I completed for NGX Interactive for use in a Mars Rover exhibit at the HR MacMillan Space Centre.

Overall Concept

I started this project by writing a creative concept document that worked within the client's parameters and educational goals. These are some of the initial ideas for the different "days" of the exhibit.

Day 424 (Sol 411) | Topic: Rocks | Tool: Camera (Based on the Mastcam-Z)

You're in an open environment on Mars. You cruise around a bit. After a few seconds a flash streaks across the sky and heads right towards you. It lands with a crash and your screen shakes. The crater starts smoking. You roll on over to it. When you arrive, you can't make out much because it's buried in debris. But you can make out a faint NASA or ESA logo. A glowing exclamation point icon on your HUD hovers over the wreckage. Once you're centered on the exclamation point, your HUD display changes to camera mode and you're prompted to push the joystick button. Doing so snaps a picture and begins the first challenge.
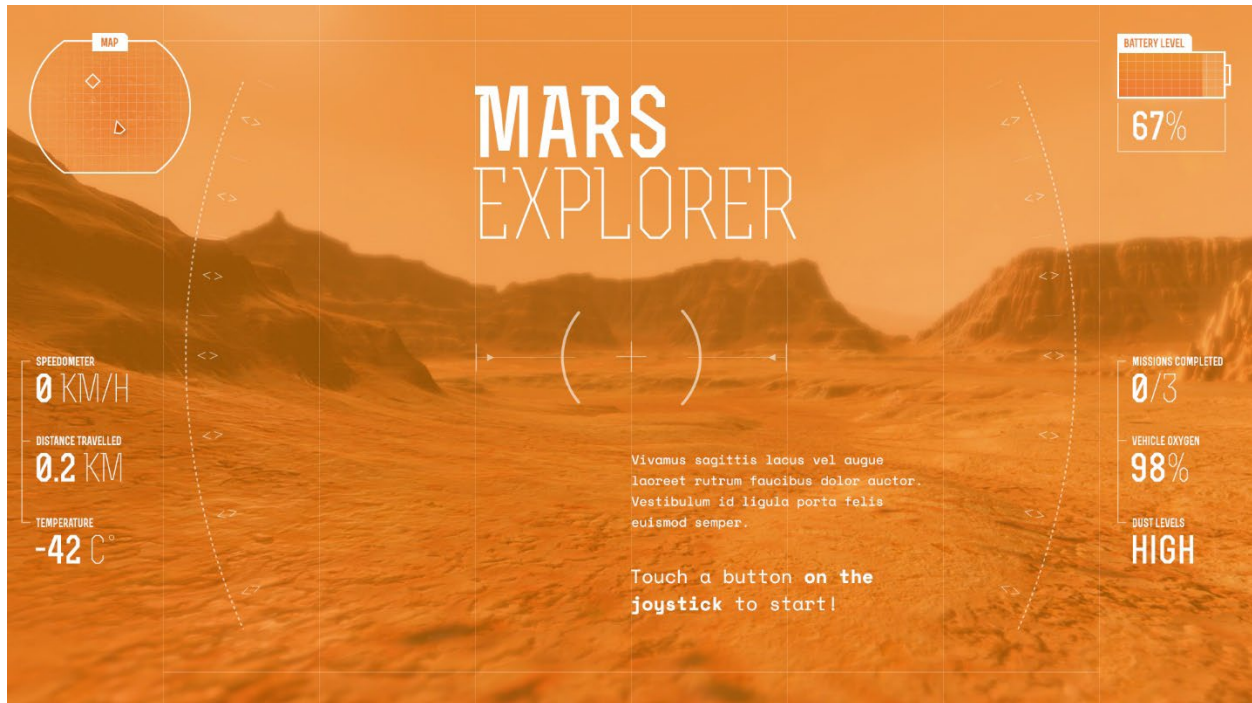

Image credit: NGX Interactive

Day 871 (Sol 845) | Topic: Signs of Life and Minerals | Tool: Laser (Based on the **SuperCam**)

As this day opens, you're sliding down a steep crater. Gravel is flying towards you. While you slide, you need to quickly move the joystick left and right to avoid crashing into rocky outcroppings. Finally, you land on the ground and tumble onto your back. The camera is facing the sky. You see the two moons of Mars, moving in opposite directions. Your HUD circles the moons and calculates your position based on where they are in the sky. Your rover then activates turtle protocol, where you wiggle back and forth until you get back onto your wheels. Once you do, you see another glowing exclamation point on a dark rocky section on the wall of the crater that you're inside of. When you center in, you are prompted to push the joystick and start up your laser. Once it's in the correct spot, it starts to visually "heat up." If you hold it long enough, it vaporizes that piece of rock, sending a visual representation of sound and heat waves back towards your screen. You enter the next challenge.

Day 3,219 (Sol 3,124) | Epilogue

You power up but can't move. In the distance you see a little dome on the surface. The sun is setting blue. The dome's door opens, and the experience ends.

Research Document

Based on the concepts, I then completed in-depth research into the science behind Martian exploration (excerpted below), which informed visual design and my final in-game copy.

Ancient River

Find proof that water once flowed in this area.

Camera Tool

The design and functionality of the proposed camera and arm is based on the Mars 2020 Rover's Mastcam-Z, which can see details as small as a house fly from 100 metres away, and the Rover's arm-mounted WATSON camera, which is designed to magnify the textures of rocks.

https://mars.nasa.gov/mars2020/mission/instruments/mastcam-z/

https://mars.nasa.gov/mars2020/mission/rover/arm/

Explore Mode

Visitors will explore the top of a mountainous range. Textures related to dips in the ground and small mountain forms will be featured in this mode. Outcroppings, small piles of rocks, layered rock, "blueberries" and other geological formations will be visible, but not detailed.

Sample 4: Sounds Like the End

Excerpts from the world-building and concept document done for a course I completed on Video Game Narrative at UBC.

Plot Summary

In SOUNDS LIKE THE END, a pair of crew members must escape a sinking cruise ship using only their senses of hearing and touch. While also being chased by a murderer.

When the game opens, both players are trapped aboard a pitch-black cruise ship. One person is stuck in the ship's walk-in refrigerator while the other's in the attached walk-in freezer. It isn't immediately clear why they're trapped—just that they need to find their way out.

The pair quickly make contact and help each other escape into the kitchen. From there they fumble on through the ship's labyrinth of rooms and hallways. But then they start to hear strange sounds. Alarming sounds, both literal and figurative. The sounds are capped off by the most alarming sound of all: water rushing in. The ship is sinking.

With renewed urgency, the duo continues towards the top deck. They feel like they're making progress. Their spirits are lifting. That is, until they arrive at the bathroom. The clouds break, letting in *juuuuust* enough moonlight to make out all the dead bodies. They start screaming, generally, at one another. Baseless accusations abound.

Eventually they settle down. They bury their paranoid thoughts. What matters right now is that they get off the ship. They renew their agreement to work together, and to watch each other's backs. But after leaving the bathroom, they get the feeling that someone is following them. Someone like… the murderer.

Fortunately, they manage to elude the killer and finally emerge out onto the top deck. They're surprised however to find the ship is in port.

One of the two, Porter Herrington, Guest Experience Team Lead and Goldensea Cruise Lines employee of 18 years, is immediately tackled and placed under arrest. He protests, insisting it must've been the other. It must've been that dastardly Timothy.

But when he looks over his shoulder there's nobody else there. That's when we realize that it was just him the entire time. Just Porter, driven to unleash upon the cruise after being pushed 0.001 nautical miles too far.

Characters

At the beginning of the game, players input their names. One player is assigned the role of Porter, and the other is Timothy. While the players' names are used throughout the game, the characters and personalities of Porter and Timothy are still very much present. So throughout this document, Porter and Timothy should just be seen as placeholders for Player 1 and 2's names.

Porter Herrington

Porter is a Guest Experience Team Lead at Goldensea Cruise Lines.

It's an especially-thankless position that involves dealing with the highest-level passenger complaints.

He is the only real character in the game.

Reference images

When Porter first started, the job sounded too good to be true. He'd get to move to the West Coast. Travel the world. Meet new people. Besides, was he going to stay in Vaughan, Ontario his whole life? He sent in his application. And with his affable personality, he was hired over the phone the very next day.

He spent the next few years rising through the ranks of the Guest Experience division. The absurdity of the guest complaints, and of the industry in general, started to wear on him. Especially so, 18 years in. How on earth had 18 years passed?

One day, a passenger complained that his apple crumble tasted too much like a crumbly apple pie. That one put Porter over the edge. He proceeded calmly to the kitchen's walk-in freezer and screamed until he was hoarse. Then he sprung into action, turning a very run-of-the-mill cruise into one of the 63-deadliest in history.

As he carries out his heinous crimes, he operates much the same way as he had been during his tenure with Goldensea Cruise Lines: interacting with passengers with a deescalating tone of voice and neutral body language. Except instead of complimentary drinks he offers up grisly death. "I apologize if my hands around your throat is making it hard to continue living," he is heard to say. "Please provide feedback through the Goldensea Cruise Lines Mobile App." His behavior is so automatic that he doesn't realize what he's doing. In his mind, he's simply dealing with passenger complaints in the most effective, permanent way possible. So later on, after he escapes, he truly doesn't understand what's happened.

Timothy

Timothy is a manifestation of Porter's. He knows only what Porter knows, and experiences what Porter experiences. He gives advice, "helps" Porter perform certain actions, and frames situations. He's slightly more thoughtful than Porter, hinting at a conscience long-buried. Throughout the game, Porter fully believes that Timothy is a separate person.

The Narrator

The Narrator is Porter's inner monologue and is therefore omniscient. No dialogue ever happens between Porter and Timothy—it all comes from the Narrator. (e.g. "they said, you said.") Since the Narrator and Porter are one and the same, the Narrator's tone of voice matches the mental state of Porter, which is one of several subtle clues in the game that hints at the final reveal.

On occasion, the Narrator will ask the player, as Porter or Timothy, what's happening there in the dark. For example, it will say: is this thing in your hand a cymbal? Or is it a discus? And depending on the player's choice, that object will "materialize." This is because Porter is delusional to the point of creating his own "physical" reality.

Environments

Porter knows the cruise ship extremely well. In fact he's been known to boast about it. He used to take pride in offering guests the quickest way to get between any two points on the ship, down to the second. But since the environments are so dark, it's a case of the familiar made unfamiliar. And why some truly bizarre situations emerge.

Porter's Quarters

Finally, last year, Porter was promoted to Team Lead of the Guest Experience Division. Aside from a 1% increase in pay and 35% increase in workload, Porter was also given his own quarters. He couldn't believe it. What would it be like to sleep in a room without seven other people in there with him? It turns out it was quiet. Too quiet. So at one of their Caribbean ports, Porter picked up a particularly-talkative parrot and smuggled it back to his quarters. Whenever he needed help sleeping at night, he'd shine a flashlight at it to get it squawking. In the nights leading up to the attack, he found himself shining that light a whole lot.

The quarters themselves are windowless, and incredibly cramped—the room is the exact length of the short, single bed that he sleeps on. Under that bed is an assortment of unusual weapons. And atop the bed is a pile of towel-animals in half-completed states. In his spare time Porter had taken to trying to assemble towel-animals using the FUN ACTIVITIES tab on the Goldensea Cruise Line Mobile App's video library. He couldn't quite get the hang of it. But he did manage to complete a passable snake, which had an in-app difficult ranking of half of one star.

The Revelatory Lavatory

This is the male employee showers/washroom/locker room (near the middle of the ship) where a key plot point plays out. Skipped over for renovations in favour of "guest-facing" portions of the ship, it remains stuck in 1993, with peeling seafoam green walls, faux-brass fixtures, and childish nautical décor. Faded benches sit between rows of lockers, with mismatched Goldensea-branded flipflops beneath them. The lockers are hard to open and unbearably squeaky. The slightest bout of ocean turbulence sets the lockers off like some kind of mournful avant-garde symphony.

There's a large permanent puddle near the center of the floor, owing to a gradual saturation and warping of the subfloor. This, combined with the humidity from the showers, insufficient ventilation, and improperly-hung towels, makes it a very damp environment. It's also an oppressive one: patronizing signage on the walls remind employees of policies around the length of their breaks, health and safety, and attitudes towards guests.

A central communal "shampoo" bottle contains 70% water, 30% hand soap. Next to it is a small vending machine that's stocked with marked-up name-brand soaps. The showers are barely large enough to turn around in, and their drains are clogged. There's a single, trough-style urinal against the wall opposite too-few toilet stalls. And it is there, in one of the stalls, where our players discover human bodies stacked to the ceiling like bricks.

Gameplay

The game is a co-operative, audio-driven piece of interactive fiction that's meant to be played in the dark. It's controlled by a simple multiple-choice interface interspersed with rhythm, gesture, touch, and audio-based minigames. It regularly switches back and forth between the two players' perspectives as the narrative advances. There's one main source of urgency in the gameplay: the ever-present timer, which is very coincidentally tied to the sinking of the ship. The timer ticks down normally, starting at forty-five minutes. But answering questions "incorrectly," or failing at minigames, results in time penalties. If time runs out before you reach the top deck and escape, you lose the game and get the "bad" ending.

Minigames

In keeping with the pitch-black motif in the game, these minigames have no visual interface aside from (if necessary) a brief text blurb that tells players what to do. A good example of largely "interfaceless" minigames (where the player intuitively knows what to do) is WarioWare.

ID	Narrative Context	Mechanic
01_de-thaw	Tongue is stuck to a metal freezer rack.	Blow into phone microphone to de-thaw.
02_knock-knock	Banging out a friendly-sounding knock.	Tap on phone screen in correct rhythm.
03_pans	Knocking on pots and pans to determine position in kitchen.	Tap on screen and listen for sound.

| 04_stairs | Trying to run upstairs in the dark. | Tap screen in alternating rhythm to ascend. |
| 05_de-clog | Removing towel from man's throat. | Tap and drag correct esophageal path to remove the towel. |

Narrative Beats

Act 1

Narrative Beats	Wake Up	Ship is Sinking
Plot	Porter and Timothy are trapped in a walk-in fridge and freezer, respectively. They work together to get out and into the kitchen.	They feel their way through the kitchen towards the sound of rushing water. Ship is sinking. They have a feeling they're being followed. They scramble up some stairs into the dining room.
Environments	- Walk-in refrigerator - Walk-in freezer	- Kitchen
Audio	SFX: Cymbals, Knocking on metal, Fridge fan, Biting into onion Speech: Narrator, Muffled narrator	SFX: Crashing pots and pans, Footsteps, Rushing water Speech: Narrator

Sample 5: Agents of Discovery

I developed the initial idea for Agents of Discovery (a cross-platform iOS/Android game) while working at a technology-based environmental non-profit. Once it was funded, I worked as lead designer and writer during its first two major releases. During that time, we sold it to clients such as the U.S. Forest Service. It continues to grow to this day and has since become its own company.

World-building

I started the writing process on this project with world-building. The concept we landed on was that players would join a secret agency called O.I.S.E.A.U. – one that consisted largely of talking animals (and occasionally plants). This excerpt is from one of the early design documents when the game was called "Agents of Nature."

It is worth briefly discussing the "character" of O.I.S.E.A.U. in order to ensure that it is being depicted in promotional media, in-game content, and through social networking in a consistent manner regardless of the author. The writing should be appealing to a young audience with more subtle humour to appeal to older audiences as well. O.I.S.E.A.U., the Order of Inter-Species Explorers, Adventurers, and Übernaturalists, consists of "agents of nature" all dedicated to solving the greatest mysteries of nature. Upon downloading the app, users become an agent of nature and slowly begin climbing the ranks of O.I.S.E.A.U.

The organization is involved with preserving biodiversity through research, conservation efforts, public outreach, and education. As an organization, O.I.S.E.A.U. seems to be both omnipotent and incompetent, possessing at times the most advanced high-tech equipment while at other times relying on crudely built, childish inventions.

Name: Field Agent White Spruce

Bio: As a sapling, White Spruce had already perfected the art of blending in with crowds. You will never catch this agent out of character.

Overheard: "White Spruce? What white spruce? All I see is a harmless newborn baby. Wahhh."

Series 1 - The Get 'r Dones - Card 1 of 4

It is unclear whether O.I.S.E.A.U., which takes itself very seriously, is a "real" organization or just the product of the imagination of its members. The organization frequently sends its agents on tasks that are either completely unrelated to the overall purpose of the mission or just plain pointless. However, none of the agents really seem to mind because at the end of the day they just like having fun in nature.

When referring to O.I.S.E.A.U. in promotional materials, it should be clear that O.I.S.E.A.U. is an autonomous, self-regulating organization. In other words, we should avoid statements such as "Get to Know is pleased to announce that we have finished development of the O.I.S.E.A.U. mobile app." Instead, we should opt for something like "In a heroic effort to engage with new media, O.I.S.E.A.U. are launching their mobile app in order to recruit new members."

Gameplay Loop

After leaving the project, I was contracted to create a new overall gameplay loop for Agents of Discovery. It needed to work with existing gameplay, revolve around bees, and incorporate short, medium, and long-term story arcs.

You have just joined the Discovery Agents, collectors and keepers of knowledge, in the midst of a full-blown crisis. It would appear that the USBees, the agency's hive of robotic bees/flying memory sticks that store all of its collected knowledge, have all been released. This deed was committed after *somebody* called the HIVE

protocol, designed to be used only in case of emergency to ensure the continuation of the work of the agency. After the HIVE protocol is called, the USBees take off in a random direction and go into hiding, though thankfully they confine themselves to North America (since bees, as everyone knows, make terrible sailors).

But who initiated the protocol? Why *rogue agents* did, species such as the Tiny Flying Hippopotamus, tired of languishing in obscurity. Tired of being called "fictional" simply because the world wasn't ready to know them. They released the USBees so that others may know the pain and indignity of perceived non-existence, and then fled the agency!

Now the rogue agents realize how important this knowledge is. What they *didn't* realize, of course, is that the USBees, as part of the HIVE protocol, emit a constant tracking signal so that they can be recovered.

But the USBees don't let just *anyone* find them. They require you to solve a series of challenges testing existing knowledge in order to find them.

If you do succeed in finding one of the USBees, you are rewarded not only with the recovered knowledge, but also with a cute pouch of coins to help you along the way. This too is part of the HIVE protocol, the designers of which knew they'd need to provide for basic provisions. What are you supposed to eat, bark? Don't eat bark!

Why does this even matter? How is this a crisis? The reasons are too many to count! Unless you can count to two. Reason one! There are no backups. Cloud Storage technology is still being developed by the Agency. The R&D didn't go as quickly as we might have hoped. So far the only thing that the Cloud Storage Laboratory has produced is a whole lot of lemon-scented rain. Reason two! Without the knowledge that the agency collects and guards, the world simply stops functioning! The water in rivers flow confusingly upwards rather than downstream! The trees forget to photosynthesize! Motor vehicle operators treat merge signs as yields!

Now find those USBees!

Story arcs

The objective was to release content over time, so they wanted ideas for the short, medium, and long term to keep players engaged.

Short Term: The USBees

The USBees, which collectively contain all Discovery Agents knowledge, have been released and nobody knows why. Equally mysterious is that the robotic Queen Bee, AKA the Founder, AKA the USBeekeeper, has been kidnapped.

As a new Discovery Agent, you must head into the field and recover the USBees. Plugging them back into HQ is the only way to power up the HIVE and re-open communication with the queen. But it won't be that easy. As part of their security protocol, USBees can only be recovered by solving challenges worthy of a true Discovery Agent.

When the HIVE hits a certain power level (threshold adjusted dependent on number of nearby sites), you're able to communicate with the queen and bring her back to HQ. Upon her return, however, she has no memory, random-access or otherwise, of what happened.

Medium Term: The Discovery Elders

So the queen is back. Things are returning to normal. The USBee recovery operation continues. But then the queen contacts you with some secret and urgent missions. Sometimes when she's speaking everything seems okay. Other times she spaces out. Her fonts go out of whack. Her instructions become contradictory.

All you're able to glean is that you need to track down certain (site-agnostic) caches to recover some computer parts. Once you've gathered them all you head back to HQ to find the queen missing *again.* Frankly she's becoming a bit of a nuisance but you keep that thought to yourself.

As you search around the queen's chambers a hidden panel suddenly slides open. Emerging behind a wall of smoke, hacking and wheezing, are the incredibly old Discovery Elders. Agonizingly slowly, the Elders reveal the origin of the queen. She is an open-source project that they created way back in the days of punchcard computing. She's been infected with a virus. The Elders themselves are the ones behind the kidnapping, but only because they were trying to fix her. The virus *reverses* her core function to amass, protect, and spread knowledge. It caused her to release the USBees in the first place.

As you gathered the parts needed to fix the queen, the Elders were watching you to make sure you could be trusted because A) they still aren't sure who wrote the virus and B) you've got a real suspicious-looking face.

Long Term: The COLONIZE Protocol

With the queen freshly Norton'd and her version upgraded (finally giving her, among other things, a personality), she and the Elders put a plan in motion to prevent this sort of fiasco from happening in the future. Thus begins the COLONIZE Protocol – a way of both decentralizing the Discovery Agents' knowledge and putting greater responsibility into the hands of individual Agents.

For reach region with a Discovery Agents presence, a new Field HQ is built that can be added on to by users. It features unique items, designs, monuments, materials, artefacts, and species found in their region. Within the Field HQ each DA gets their own customizable space. But they can also put their resources towards achieving collective goals like a new DuckDeterminer for the HQ games room, or a wind turbine that generates extra coins for all associated users.

Part of COLONIZE is to gather and spread "new" knowledge (unlike the previous stages which were recovering "existing" knowledge). To that end users receive empty USBees with specific challenges in them tied to a user's level, for example to find five different types of pine and snap a photo of their needles.

Completing these fills up a user's USBees, which are then plugged in to the Field HQ's own miniature HIVE server. After the new knowledge is uploaded, the USBee toddles off to a different Field HQ or to Central to spread it. So basically a slower cloud storage system. Metaphors of local/global cooperation abound.

On their way to a different HQ, the filled USBee leaves a trail of its nano-pollen (the material that actually stores the data – obviously) behind that only the sending user can see. The user follows this trail to find a special container growing from the ground that can be cracked open for rewards like base materials or devices to annoy your friends. So the USBees are cross-pollinating both by spreading knowledge and more literally.

Through this process, your base is built and maintained. But all is not sunshine. Occasionally the Rogue Agents appear – the group that you learn is responsible for the queen's virus – who try to release your USBees or dismantle some of your base. You need to track these rogues down and turn them.

An additional layer could tie in real-world quests from site partners, where for example your base is visually depicted as being run over with an invasive weed and it's up to Discovery Agents to head out and get rid of them. Or your base is hit with drought to coincide with a promo with a water utility that offers free rainwater capture barrels or low-flow showerheads.

Tutorial Script

Based on the USBees Concept, I was also asked to develop a new introductory script for the app.

Upon logging in to Discovery Agents, the user is brought to the front of the treehouse. If it is a new user the Acorn Woodpecker will prompt them to initiate the Training Camp right away.

```
"Thanks for joining the Discovery Agents. We need your help!"
```

```
[What happened?] / [I'm bored already]
```

```
If [I'm bored already]:
```

```
"Right to the point. Got it."
```

```
And then skip to the final line in this section. Otherwise:
```

"Not to alarm you, but see how EVERYTHING IS A DISASTER?"

"That's because our leader the Queen Bee has been the giant robot version of kidnapped!"

"And her hive of USBees have all been released!"

"Those USBees store the knowledge that we work so hard to collect."

"Our top mission is to bring them all back!"

"But first we need to get you trained ASAP. Ready to start a DANGEROUSLY SHORTENED version of Training Camp?"

[Lead the way!] / [No thanks, that sounds like learning]

If [No thanks, that sounds like learning]:

"Just want to jump to it? I hear ya. Come back if you ever want to get your learn on."

The first time user selects to start the (Dangerously Shortened) Training Camp and is immediately brought into the Training Camp.

A returning user can select the gadget button at the bottom of the screen and is presented with several options.

The user taps "(Dangerously Shortened) Training Camp" and the screen fades to black. Then a map appears, showing the DA headquarters and surrounding buildings.

The Acorn Woodpecker appears on the map and speaks to the user.

"Here it is! Can I show you around?"

The user is presented with two options.

Yes and no options show at the bottom of the dialogue box.

Selecting the Map button brings the user directly to the map and the game treats it as a mission site.

Selecting the no option:

"Okay then, explore on your own. Leave no stone unturned! Except for that stone in the pond because that's actually a painted turtle – a really grumpy one."

Selecting the checkmark initiates a dialogue with the Avatar.