Contra-Hacker 10-pager

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# Summary

You are an office worker in a large company that makes a fictional product. Your job is to administrate, where you talk to potential customers through the phone or the mail, as well as manage your personal e-mail (it wasn’t such a smart idea to mix the two, retrospectively, but you can’t change it now…) You may also have to complete some other tasks, such as printing files.

# Genre

Puzzle/Simulation

# Kind of Fun

Challenge. The player has to get as far as possible and try to make as few mistakes as possible so that they can go on to the harder level. They will face harder and harder levels as the game goes on.

Fantasy. The player is immersed in the world of hackers and is put in the shoes of a (bored) office worker.

# Theme

The boring life of an office worker. Phishing and social engineering. Capitalism.

# Mood

The game has a realistic but later hectic mood. Anything in the game should be able to happen in real life, and it should feel like you’re sitting bored at your desk, before it builds up and all hell breaks loose with the amount of mails to answer.

# Artstyle

The artstyle has simple textures and mostly to-scale models. Reminiscent of The Stanley Parable.



In accordance with the client’s wishes, no cartoon characters or proportions. This will also help with the realistic tone.

# Boundaries and Setting

The game is set in an office; a fictional company in a world very similar to our own. In this office you have your own workstation with a pc, mobile phone, printer and other various miscellaneous desk items. In this space, you can’t move around; you’re stuck in your chair. You can only click on these various desk items to use them; for example, clicking on the pc will show you the pc screen.

# Storytelling

The game’s story is told through different mails and messages you receive. Besides that, the environment gives you context clues about the main character’s personality and the company you work in.

# Story

This explains the entire storyline going on in the game. This storyline is told over multiple days.

You are a worker in a fictional company called Muisbakkers B.V. It is a company that makes cakes; it has the best bakers from all over the world and the company is huge. Your job in the company is one of administrator. You are the one that has to communicate with clients, through mail and phone. You start off as a simple mail person, but you get promoted over the days, being allowed to use the phone too after a few days.

Lately, a group of hackers has started new endeavors. They hate the current state of the economy; large corporations seem to have all the power. They are releasing waves of targeted phishing mails and social engineering, trying to cause chaos in these corporations. These can have different effects; some mails have a cryptolocker, others try to steal bank information, and some steal sensitive information about the company, such as the secret recipe of the cakes… Every day, the hacker group gets better at it; they find new ways to trick more people, using mails that look more real each time.

But the police is onto them; within a week, they will be caught (this is where the game ends).

# Game World

The game world is very similar to ours in many ways. The normal countries exist, it has the same laws of physics, etc. The society is a very capitalistic one; work hard, and you earn the money to buy luxury goods as well get as a better job eventually. But not everyone is happy with this; there are hacker groups who try their best to bring down these companies.

# MDA

## Aesthetics

The players should feel pressure to work fast and hectic juggling all the work around (to challenge the player), a relatable boredom in calm times, good when they see what they earned at the end of the day and fear when they handle a mail wrongly. The player should feel understanding towards the various ways hackers use. (as in, understand why a certain message is dangerous)

## Dynamics

* Time pressure, but moments where there’s low/high pressure. A rush hour, so to say. Calm start of the day.
* Mails that you can handle in different ways so the player checks the contents of the mail, instead of just looking at red flags. Possibility of being a phishing mail.
* Trinkets to fiddle with and fight off boredom for relatability.
* Earning something from doing well and using it.
* Switching between tasks quickly; sometimes mails, sometimes phone calls.
* Handling a mail wrongly can cause various severe looking consequences, causing worry.
* Some sort of report on the different hacker methods used each day.
* Game gets harder each day.

## Mechanics

### Actions

* Using various items on your desk by clicking them. The game will zoom in on that item and show a different screen where appropriate. You can click on PC, Phone and a trinket.
  + On PC: Check mailbox
    - In Mailbox: Select mail
      * In Mail: Delete mail
      * In Mail: Send mail to
      * In Mail: Click link
        + In internet: depends on mail
      * In Mail: Click attachment
        + In Attachment: Print
      * In Mail: Report Mail
        + In Report Mail: Select red flags (why are you reporting?)
        + In Report Mail: Lock in red flags (confirm)
  + On PC: Check news (displays new hacker methods and other info used in the content of some mails)
  + On Phone: Messages
  + In Messages (when selecting a message):
    - Block
    - Accept message
  + With trinket: Use
* Cancel button in every menu
* At the end of the day, buy items for on your desk. This is to give the player something to strive for and motivate them to handle their mails quicker.
* Antivirus Scanner: On your pc and your phone, you can use an antivirus scanner. With this, you can scan one part of a mail or message to see if it is secure. If it is not, it will tell you and explain why.

### Rules

* Each new day, new red flags are added, and certain mechanics will only appear from a certain day (marked). This is to ramp up the difficulty, fitting with the challenge aesthetic.
* The day is timed. There is a certain amount of real time before the day ends. This is displayed on a digital clock.
  + During day: Receive mails and messages on phone
    - The day has a rush hour; by far the most mails come in during this. This is to create a split between calm and hectic moments and make the game more realistic too.
    - Some mails are marked as urgent and must be handled within a certain amount of time. This is to increase the pressure.
  + During the day, you get 1 break (lunch).
  + End of day: get paid for every mail you handled correctly, and get paid extra for every phishing mail you report.
  + End of day: pay expenses. If you cannot pay, you will have to restart the game. This only happens if you really neglect your job.
  + End of day: go to the shop and buy stuff for on your desk.
* If you handle a mail wrong, something may happen depending on how you handled it:
  + If you deleted an important mail before following its instructions, you’ll get a warning mail from your boss. At 3 warnings, you’ll lose your job and you will have to restart the week. If you delete a phishing mail, you will not get extra money from it, and you will be shown that it is indeed a phishing mail.
  + If you send a mail to your co-workers without it being necessary, it will also trigger a warning mail. If you sent a phishing email to your co-workers, you will be held responsible and also get a warning.
  + If you handle a phishing email in the wrong way, three things can happen:
    - If it’s a crypto locker, you will lose a lot of time of the day, as somebody has to come and fix it.
    - If it’s a scam, you will lose money at the end of the day, as your bank account gets plundered.
    - If it steals sensitive information from the company, you will get a warning from your boss.
  + If you report a phishing email, you will have to choose what you think is wrong with it.

A diagram of a diagram

Description automatically generated with medium confidence

* If you have any leftover mails at the end of the day, they will be removed from your mailbox.
* If you wrongly handle a phishing mail, you’ll see the red flags light up red, and you get time to read them before the consequence happens. If you hover over it, you can see why it’s a red flag.

### Resources

* You gain money (euros) with each correctly handled mail. These can be spent on trinkets for your desk at the end of the day.
* Reporting a mail correctly gives you additional money. This is to encourage players to handle phishing mails correctly, instead of deleting them.

# Game loop

# Sound and Music

At the start of the day, the player will hear no music, instead hearing the silence, perhaps the sound of the lamps buzzing. As more mails start to come in the music builds up, until the rush hour where the music gets hectic and quick after which it calms down again.

The player’s actions make the sounds it would make in real life; clicking something makes a mouse click sound, printer makes a buzzing sound, etc.

To scare the player when they wrongly handle a phishing mail, there should be a sound for that as well; a dissonant sound that makes the player feel off.

<https://study.com/academy/lesson/dissonance-in-music-definition-examples.html#:~:text=Dissonance%20is%20when%20two%20or,but%20work%20together%20in%20music>. (explanation on dissonance.)

# Pacing

Across a single day, the pacing goes as follows;

1. Morning. There aren’t many mails yet during these hours, most around 10:30. Starts at 9:00 till 18:00.
2. Lunch break.
3. It starts to ramp up around 2; rush hour at 15:00 usually
4. At 16:00 it starts to calm down again and by 17:00 there’s almost no mails

Time will pass at a rate of 1 minute = 1 hour. This means every level takes around 8 minutes.

# Level (day) design

Each day, the game gets more difficult and adds more rules into the mix. It goes as follows:

Days:

1. Tutorial level. One (obvious) phishing mail.
2. First real level. Rush hour is introduced.
3. You get a promotion. you can now use the phone.
4. Urgent mails become a thing now.
5. More urgent mails and rush hour
6. You now receive urgent phone messages too.
7. Final level, very hectic.

## News based on day

1. Tutorial day: The news should display that the company you work at has just hired new members, and explain the large investments they make.
2. Day 1: The news should display that the hacker group is active. It should elaborate on phishing mails and how people should watch out.
3. Last day: The news should display how the police is on the hackers’ tail, and how they will likely have caught them by the end of the day. They have already caught one: Penny de Groot (your own daughter!)

# Player Feedback

This game has both a positive and negative feedback loop. When you handle the situation correctly, you receive more money to buy things for your desk, but if you click the wrong thing, it has repercussions.

The player receives feedback in the following ways:

* If you fall for any wrong mail or message, the message will glow up the red flags and pause the game, giving the player a chance to see what they did wrong before they get to the consequence. You can then see the errors in more detail by hovering over it. There will be a “scary” sound.
* If you don’t correctly list all the red flags, there will be ones displayed in yellow.
* If you list any correctly, they will be green.
* Every correctly handled mail will grant you money, while the ones that you handle wrongly (such as deleting when it’s important or reporting a non-phishing mail) will get you a warning from your boss and lose you money. On said warning, it will detail the reason, such as “deleted important mail” or “falsely reported: \*red flag\* was valid.”
* If the day is almost over, the player will receive dialogue detailing this.

# UI and functional artstyle

There are only a few main UI elements, everything else is displayed on the device you are using. The main elements are a pause button and a clock in the bottom right. Hovering over an item in the desk menu will make a glowing outline, showing that you can interact with it.

# Mail setup

* Mails have the following components: From, To, Date and Subject. Then there is the main text of the mail, which can potentially have a hyperlink. There can also be attachments. Some mails also have logos added at the bottom of the mail.
* In the code, for every component, there is a normal version and a red flag version. If it is decided that a mail is a phishing mail, the red flags chosen for that mail are added, and the content will be replaced with the faulty one.

The mails will be generated using the Factory design pattern.