HUMAN-COMPUTER INTERACTION

Home and Human Life

TOPICS

SMART HOME

SPORTS AND
ENTERTAINMENT

TECHNOLOGIES FOR
SPECIAL NEED PEOPLE

FUTURE HOME
SCENARIOS

VALUE?

With all new products and technologies, we should always ask:

"What is the* value *that this product provides?"

The companies are trying to come up with needs their products solve.

But not all products improve our quality of life.

ROBOT VS. SMARTPHONE/TABLET

What is the added value of the robot?

$999

from $329

IT'S NOT "JUST" A DEVICE!

IT CONSUMES THE
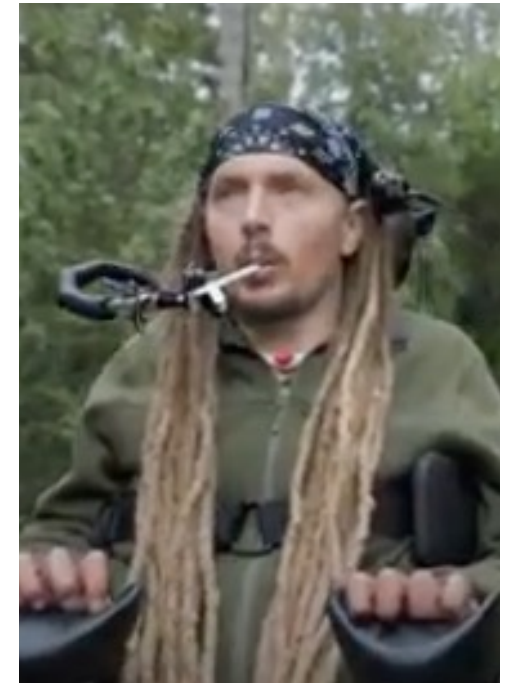EARTH'S RESOURCES

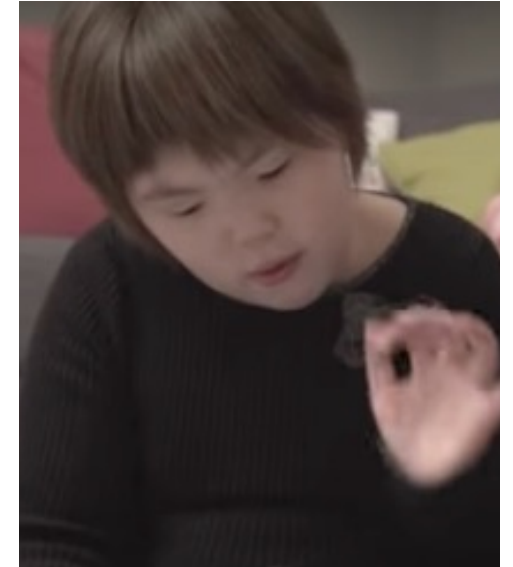IT GENERATES
WASTE

IT CONSUMES
ENERGY

IT NEEDS SPACE IN
YOUR HOUSE

REAL VALUE

- Make sure the **device provides added value**!

- **Interaction is in a big role**: if the interaction doesn't work well, it cancels the possible added value that the device provides in terms of functionality

FOR SOME, THE VALUE COULD BE ENORMOUS

- For certain special needs people (like in the videos), the value technology can bring is just incredible
  - Help with movement
  - Help with communication
  - Empower to do things like web design
  - To live a life that would not be possible without technology!

GROUP ASSIGNMENT

- Let's do a group assignment, where you analyze products and HCI

- 7 groups (by the tables)

STEP 1: CHOOSE A PRODUCT

- There are 8 photos of devices

- Use this sign-up sheet to choose the most interesting one for your team
  - You can also choose your own topic – but there is limited time

- Think about a typical use case – how do you use it, when, why?

STEP 1: CHOOSE A PRODUCT

- For each topic, you can find a Google Slides document inside the given folder

- After choosing your product, open your Google Slides document and fill it out according to the steps given

- *Note: the Google Slides document does not have any styling, so feel free to use creativity to design your slides!*

STEP 2: ANALYSE

(Think about a typical use case – how do you use it, when, why?)

1. What is the **value proposition** of the product (how does it improve your quality of life)?

2. Which **modalities** do you use when you interact with the device?

3. What **data** do you try to **modify/obtain** from the product in those situations?
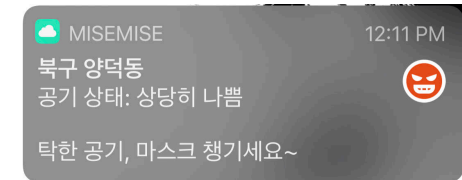
Modalities:
Vision
Sound
Touch
Body movement
Smell
Taste
Bioelectrical signals

STEP 3: DECOMPOSE A USE CASE

- In your groups, think of a common use case for this product

- The use case should have 4 or more steps

- Then, fill out the form on the right

Title	Step	Human Action	Computer's Action
	1		
	2		
	3		
	4		
	…		

DECOMPOSITION OF INTERACTION (EXAMPLE)

Title	Step	Human Action	Computer's Action
Mise Mise alert	1	I <u>allow</u> this app to notify me about air quality information.	This app provides me a <u>push notification</u> about the current air quality a few times everyday.
	2	I <u>get information</u> about the current air quality by the push notification and I <u>decide</u> what to do. (*interaction finished*)	
Mise Mise search	1	I <u>want to know</u> about tomorrow's air quality. I <u>open</u> the app.	It <u>shows</u> the current situation at first.
	2	I <u>assume</u> that there's more information below. I know this <u>based on my previous experiences</u> with smartphone apps. I try to <u>swipe its screen up to find</u> more information.	The air quality forecast is <u>already available</u>. Therefore, this app can <u>immediately show</u> the information I wanted to get.
	3	I get what I wanted to know. (*interaction finished*)	

BONUS STEP: SIMPLIFICATION

- If you have time left, you can do this step as well

- Think of how you can simplify the decomposition so that the action needs less steps and the usability is improved

SIMPLIFIED INTERACTION (EXAMPLE)

Title	Order	Human Action	Computer's Action
Mise Mise search	1	I <u>want to know</u> about tomorrow's air quality. I <u>open</u> the app.	It <u>shows</u> the current situation at first.
	2	I <u>assume</u> that there's more information below. I know this <u>based on my previous experiences</u> with smartphone apps. I try to <u>swipe its screen up to find</u> more information.	The air quality forecast is <u>already available</u>. Therefore, this app can <u>immediately show</u> the information I wanted to get.
	3	I get what I wanted to know. (*interaction finished*)	

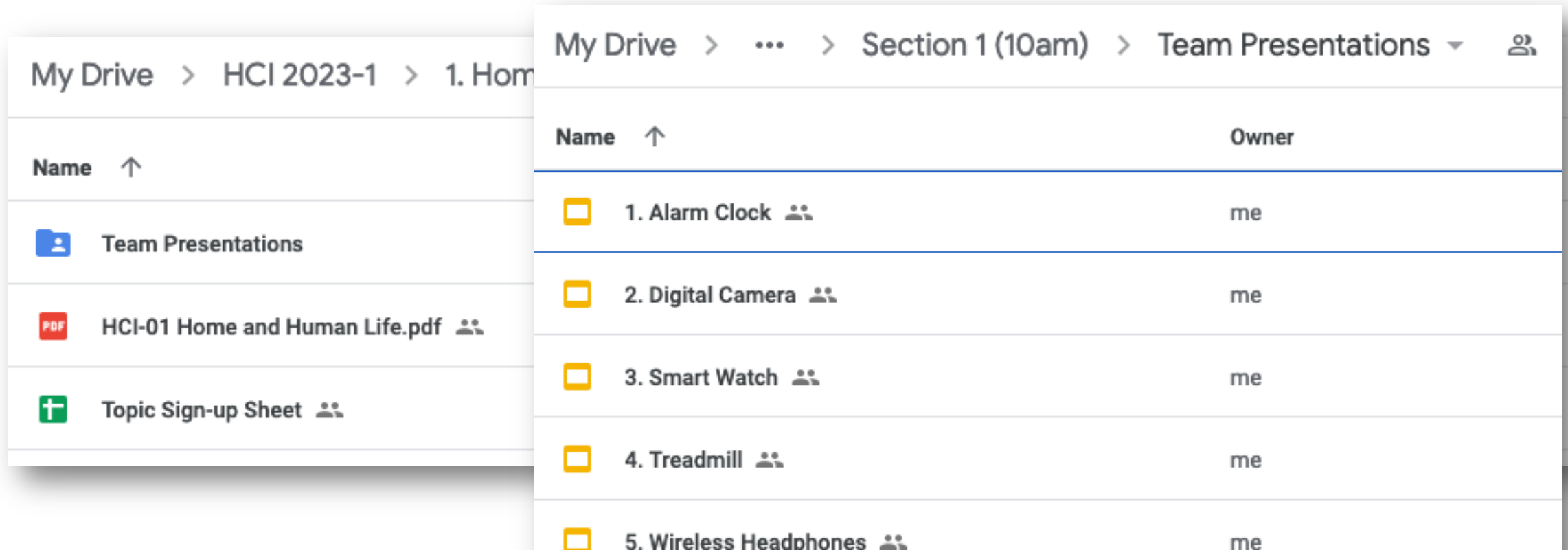| Title	Order	Human Action	Computer's Action
Mise Mise search (simplified by using shortcuts feature)	1	I <u>want to know</u> about tomorrow's air quality. I <u>tap on the custom app icon</u> for the Mise Mise search shortcut.	The air quality forecast is <u>already available</u>. Therefore, this app can <u>immediately show</u> the information I wanted to get.
	2	I get what I wanted to know. (*interaction finished*)	

STEP 4: PRESENTATION

- Present your work by using the Google Slides document

- Choose one team member to give the presentation

HOW TO ACCESS FILES

- You can find the sign-up sheet, a copy of these slides, and templates for team presentations from a Google Drive folder

SUMMARY

As the HCI is a broad concept, we focus on <u>services</u> that computers (=any electronic product that uses a chip) provide.

How computers work to make your life better?
- By <u>automatizing</u> daily/frequently jobs (e.g., temperature control, cleaning, feeding pets, watering plants …)
- By providing <u>necessary information on time</u> through a <u>natural way</u> (e.g., smart speaker's voice communication)
- By helping you to <u>be healthy physically/cognitively/emotionally</u>
- By <u>assisting a disabled person</u>
- By making your family/friends <u>to be connected</u>
- By <u>increasing our work performance</u>

SUMMARY

- By <u>reducing time waste</u> (e.g., laundry machine, robot cleaner)
- By <u>shortening</u> working hours
- By helping people to <u>stay in a safe and secure circumstance</u>
- By <u>maximizing the quality of life</u>
- By supporting your life to be more <u>fun, joyful, peaceful, entertained</u>, …
- …