

Electrical Appliance Use in Blackwood Home and Care

Group16

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Introduction

Questions raised

- **What it is like** to live in a nursing home?
- Are there any **patterns** of electrical appliance use?
- How staff of nursing home **improve** occupants' life quality?

Audience

- Families of the occupants
- Staff of Blackwood nursing home
- People who are interested in the life in Blackwood

Introduction

Data

15 Blackwood nursing homes (csv files)

- **Timestamp**: from 2017 to 2020, e.g. 2017-05-19 10:00:00
- **Power Value**: electrical appliances' instantaneous power, e.g. 2368

Data Analysis

Cleaning

- Repetitive items (timestamp, ID...)
- Errors of sensor measurement

Analyzing

	Daily Life	Pattern	Purchase	Maintain	Abnormality
Time(when)	X	X			X
Duration(How long)	X	X		X	X
Frequency(How often)			X		X

Project

Design choice - An advertising video of nursing home


- Part 1 - A narrative **diary** to show daily life in nursing home
- Part 2 - How do we use data to improve the services in nursing home:
 - Improve **Customized Services**: Find **Habits and Patterns** of electrical appliances usage
 - Make **purchase decision**
 - **Maintain** appliances
 - Detect **abnormality**

Project

Implication

- Make families know more about the life in nursing homes
- Promote the service in Blackwood Homes
- Attract potential occupants

Project Video



Grandma's Diary

Source of material: "Animal Crossing"
Used only for this presentation, non-commercial use

Design Rationale

Diary

- Diary carrier
- Rolling small videos in the bottom
- “Animal Crossing”



"2020-11-25 Sunny Wed"

I also had a cup of coffee from the coffee machine.



bed and phone



fridge and juicer



vanity and workbench

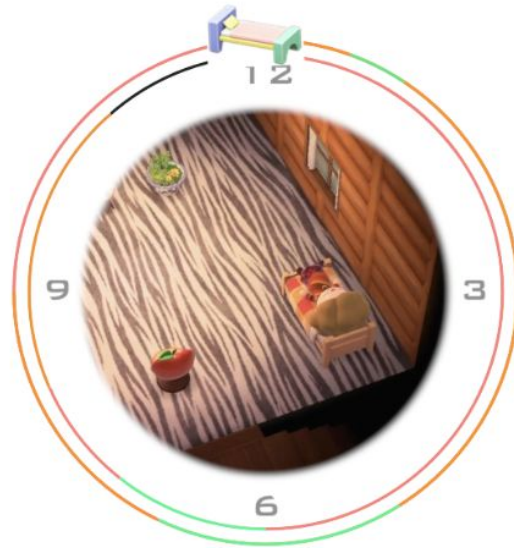


recliner and cooker

Design Rationale

Habits and patterns

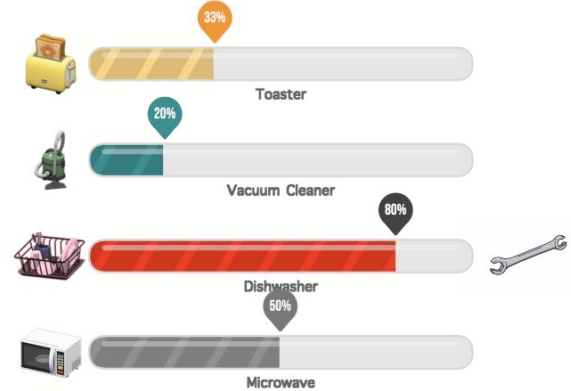
- Two circles
- Clock: time passing
- Rotating icon
- Traces of different colors



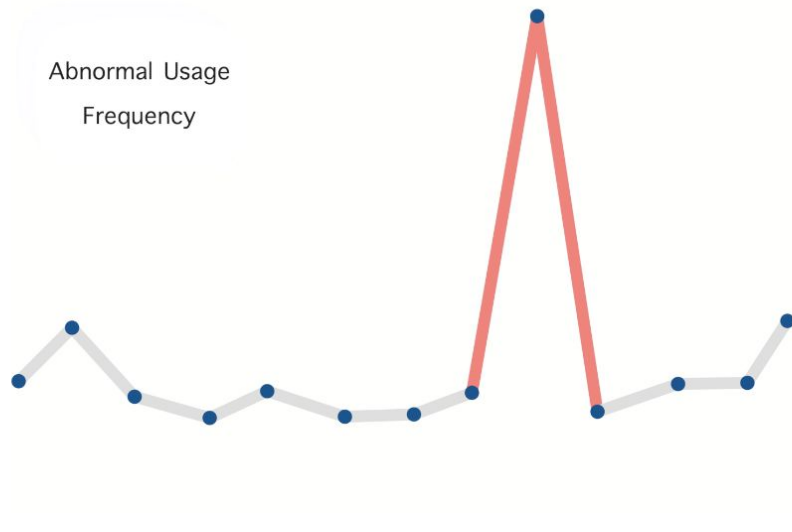
Design Rationale

Maintain appliances

- Progress bar: Indicate appliance life's passing
- Color the progress bar in red to give a sense of warning



Design Rationale



Detect abnormality

- Use different color in line chart when abnormality appears to give a sense of warning

Limitation and Bias

- Unstable sensor connection leads to missing data
- Lack more data about electrical appliances
- Lack more personal information data



Q & A



Thank you