

health guard

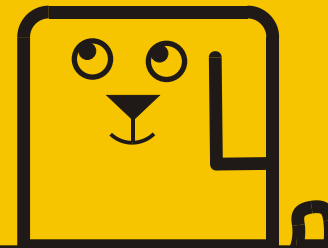
by Izabela Cichecka & Marcela Kawka
scientific promotor : prof. M. Stefanowski

NOKIA

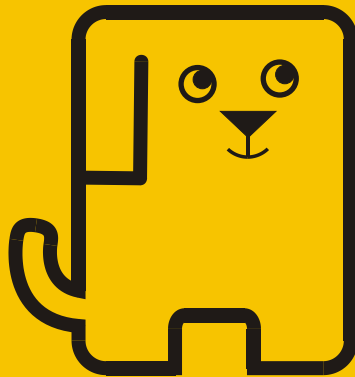
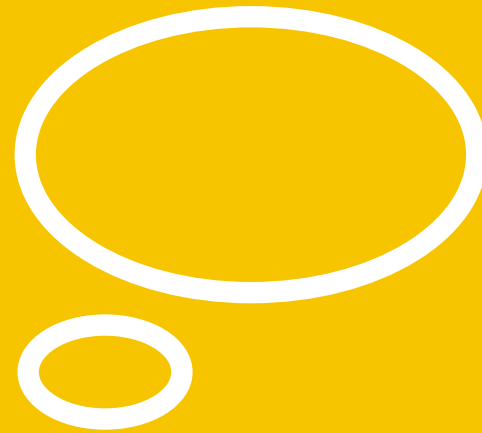
Design for All
Academy of Fine Arts in Warsaw
Faculty of Industrial Design

PROBLEMS

we have found and focused on



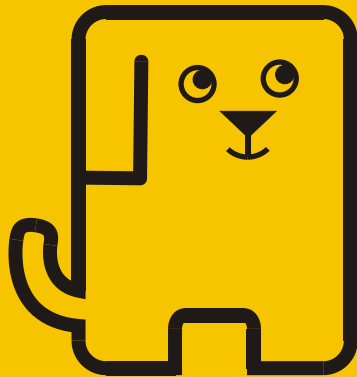
UNFRESH FOOD
IN FRIDGE



- ELDERLY PEOPLE LIKE FREQUENT SHOPPING AND OFTEN BUY **UNNECESSARY** PRODUCTS OR SIMPLY TOO MUCH.
THEY DO NOT NOTICE THAT GROCERIES STORED IN REFRIDGERATOR **BECOME UNFRESH** AND MAY CAUSE **SERIOUS HEALTH PROBLEMS.**



I CAN'T GET NO INFO
ABOUT MY FOOD ...

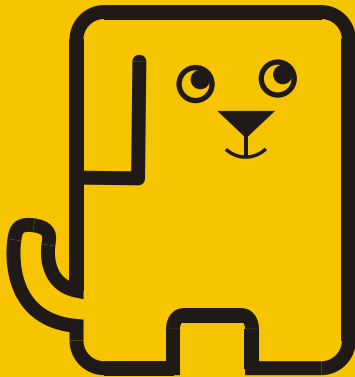


EVERY CUSTOMER SHOULD BE WELL INFORMED ABOUT WHAT HE / SHE EATS .

BAD NUTRITION CAN CAUSE HEALTH PROBLEMS.

EXISTING INFORMATION LOCATED ON PACKAGES IS **TOO SMALL AND HARDLY READABLE** FOR THE ELDERLY.

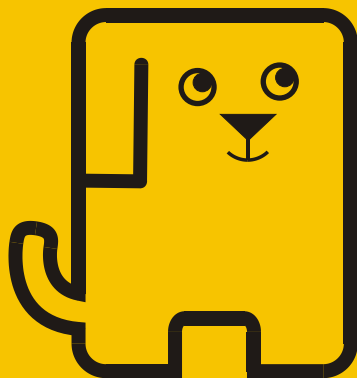
I REQUIRE SPECIAL DIET ...
CAN I EAT THIS ?



INFORMATION ABOUT CONTENT OF
FOOD CAN BE **CRUCIAL** FOR PEOPLE
SUFFERING FROM VARIOUS ILLNESSES
FOR EXAMPLE : DIABETES, ALLERGIES,
HIGH BLOOD PRESSURE.

ALSO OVERWEIGHT IS A POPULAR
PROBLEM AFFECTING SOCIETIES.

I CAN'T EAT
CERTAIN FOOD
DUE TO MY ILLNESS...

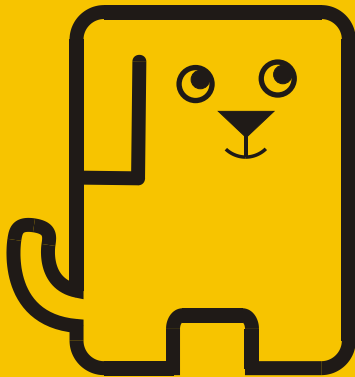


EXISTING INFO ON GROCERIES IS SIMPLY
NOT ENOUGH FOR MOST PEOPLE
SUFFERING FROM DIET DEPENDENT
ILLNESSES.

PRODUCT INFO
CONTAINS ONLY BASIC FACTS,
WHICH DON'T MEAN ANYTHING
FOR AVERAGE CUSTOMER.



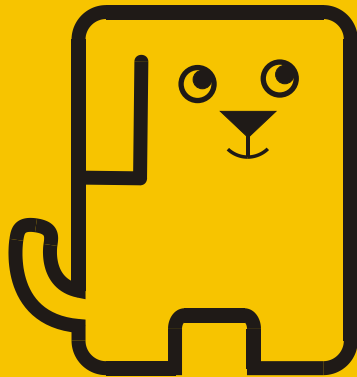
PRICE LABELS
ARE TOO SMALL!



LABELS CONTAIN MANY USELESS
INFORMATION, SIZE OF TYPEFACE USED
IS ALSO HARDLY READABLE.

ESPECIALLY THE ELDERLY HAVE PROBLEMS
IN READING PRICE LABELS BECAUSE OF
COMMON SIGHT PROBLEMS.

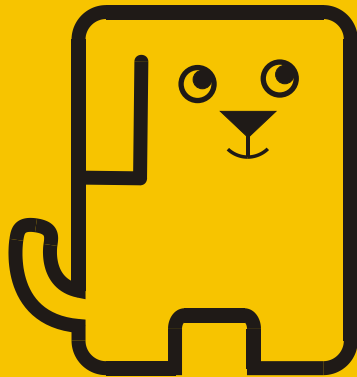
FORGOTTEN MEDICINES



MEMORY PROBLEMS ARE OFTEN
ASSOCIATED WITH AGEING.
ELDERLY PEOPLE CAN EASILY FORGET
TO TAKE THEIR MEDICINES WHICH CAN
RESULT IN SERIOUS DANGER.



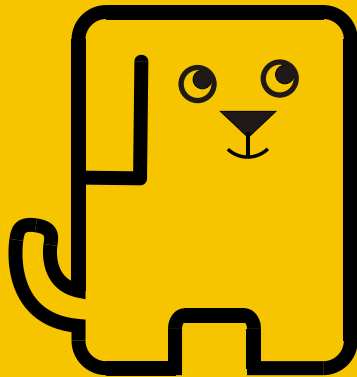
HOW WAS IT ?
TWO OR THREE
TIMES A DAY ...?



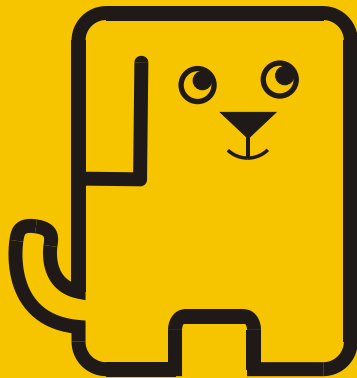
OVERDOSING MEDICINES
CAN BE AS HARMFUL AS FORGETTING
OF TAKING THEM.
RIGHT DOSING IS ESSENTIAL IN TREATING
MANY ILLNESSES.



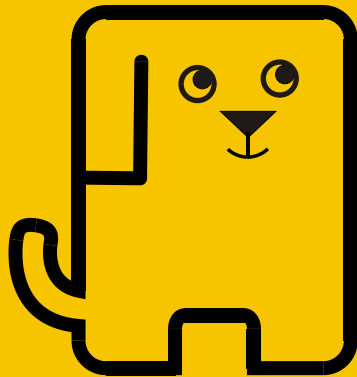
I CAN'T EAT CERTAIN FOOD
BECAUSE OF
MEDICINES I TAKE...



ARE MY MEDICINES
NOT OUTDATED ?



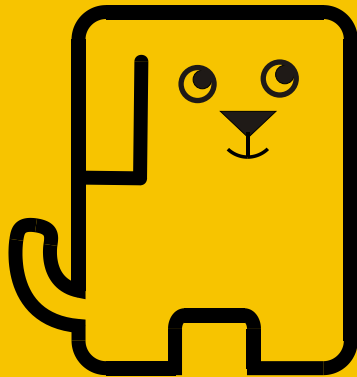
OH MY GOD!
I'M OUT OF
MY MEDICINES...



IT HAPPENS VERY OFTEN THAT WE RUN
OUT OF MEDICINES THAT WE NEED TO TAKE
EVERYDAY. SOMETIMES CONTACTING
PHYSICIAN IN ORDER TO GET
A PRESCRIPTION RIGHT AWAY IS IMPOSSIBLE.

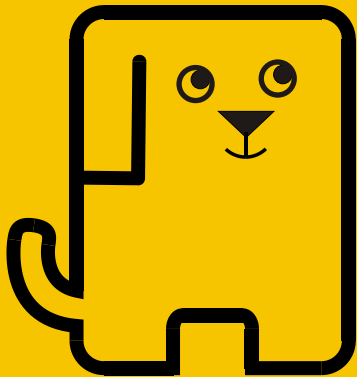


I WANT TO KEEP IN TOUCH
WITH MY
HOUSEHOLD MEMBERS...



WE OFTEN LEAVE YELLOW LABELS TAPED TO
FRIDGE WITH VARIOUS INFORMATION FOR
OUR HOUSEHOLD MEMBERS.

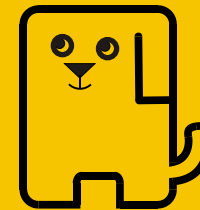
WHAT I NEED TO BUY ?



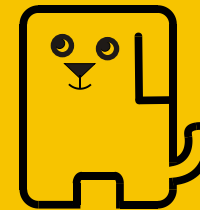
MOST PEOPLE BUY THINGS THEY REALLY DON'T NEED BECAUSE THEY DON'T KNOW WHAT EXACTLY IS MISSING FROM EVERY DAY PRODUCTS.



SOLUTIONS



WHAT IS
HEALTH GUARD ?



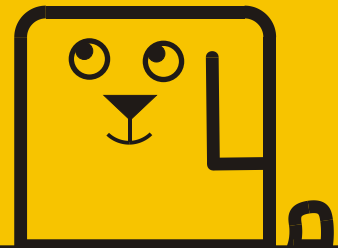


HEALTH GUARD
IS A MULTI PURPOSE
ELECTRONICAL DEVICE THAT HELPS TO SOLVE
PREVIOUSLY SHOWED PROBLEMS.

DEVICE IS DIVIDED IN TWO PARTS :

- TOUCH DISPLAY - THE BASE, BINDED TO FRIDGE
- PORTABLE RFID READER USED AT SHOP

WHAT
DOES HEALTH GUARD DO?



- **SUPERVISES FRESHNESS OF STORED FOOD**

- **ALLOWS VIEWING INFORMATION ABOUT FOOD WE BUY :**

- NUTRITION FACTS
(FAT, ENERGY VALUE, CARBOHYDRATES,
PROTEINS ,SALT)

- POSSIBLE ALLERGY FACTORS

- OTHER FACTORS KNOWN TO BE UNHEALTHY
(F.E: ARTIFICIAL FLAVOURS)

- PRICE;

- **WARNS IT'S USER AGAINST EATING PRODUCTS:**
- WHICH ARE OUTDATED
- WHICH ARE FORBIDDEN OR NOT RECOMMENDED
IN HIS/ HER ILLNESS OR DIET
- WHICH MAY CAUSE AN ALLERGY REACTION

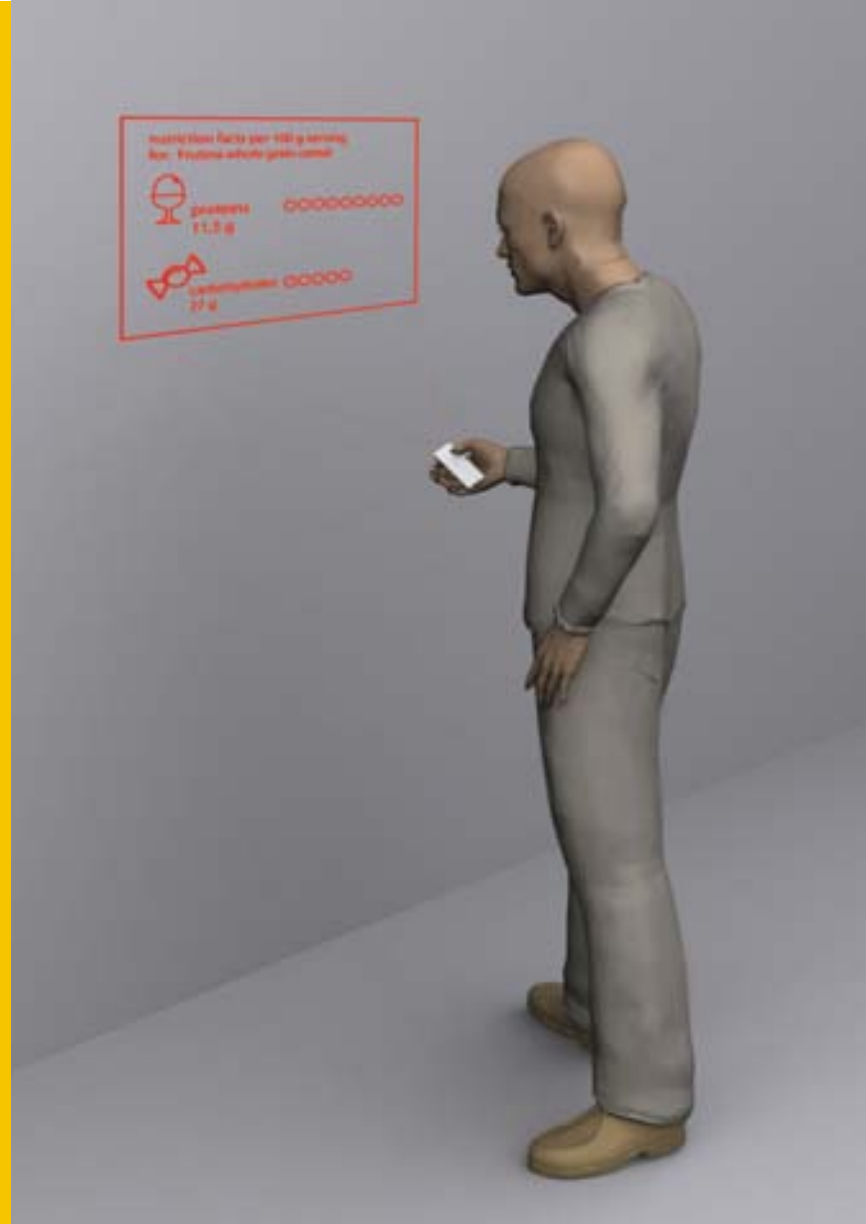
- **REMINDS OF TAKING MEDICINES**
- **INFORMS WHICH MEDICINES ARE OUTDATED**
- **INFORMS WHICH MEDICINES ARE RUNNING OUT**

WARNINGS AND REMINDERS
ARE BASED ON PREVIOUSLY ENTERED
PERSONAL DATA CONTAINING :
ILLNESSES, ADMINISTERED MEDICINES,
ALLERGIES, DIETS.

- HELPS IN ORGANISING SHOPPING LIST**
- ALLOWS LEAVING VOICE MESSAGES FOR HOUSEHOLD MEMBERS**



HEALTH GUARD SCANS RFID CHIPS LOCATED ON PACKAGES TO GATHER INFORMATION ABOUT PRODUCT. IN OUR OPINION RFID CHIPS WILL REPLACE BARCODES IN NEAR FUTURE. THOSE CHIPS CAN STORE UP TO 2 MB OF DATA.



PORTABLE PART OF HEALTH GUARD, READS INFO ABOUT PRODUCT, THEN DIPLAYS IT ON ALMOST EVERY FLAT SURFACE USING BUILT-IN LASER PROJECTOR.

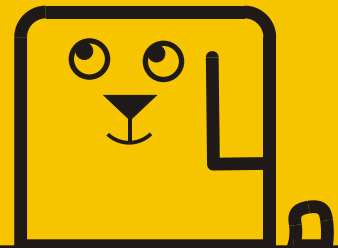


AT HOME PORTABLE DEVICE IS BEING ATTACHED TO BASE. CONNECTION ALLOWS TRANSFERING DATA COLLECTED IN SHOP TO BASE AND CHARGING. BASE DISPLAYS OUT-OF-DATE WARNINGS, ALLOWS BROWSING INFO ABOUT STORED PRODUCTS AND LEAVING VOICE MESSAGES.



SCHEMATIC VIEW AND DESCRIPTION OF PORTABLE PART

USER'S INTERFACE



OUR GOALS IN USER'S INTERFACE DESIGN WERE :

- PROVIDE SIMPLE PICTOGRAMS INSTEAD OF WRITTEN TEXT;
- CONTRAST KEYS WITH THEIR BACKGROUND AS MUCH AS POSSIBLE;
- PROVIDE GRAPHICAL FEEDBACK TO INDICATE ACTIVATION;
- USE OF SIMPLE FONT (SANS SERIF) - MYRIAD PRO
MIN. FONT SIZE 14;
- PUT MOST IMPORTANT INFORMATION AT THE BEGINNING OF MENU;

OUR GOALS IN USER'S INTERFACE DESIGN WERE :

- MINIMIZE THE NUMBER OF STEPS NEEDED FOR OPERATIONS
- PROVIDE ADEQUATE SPACING BETWEEN WORDS AND ICONS
- ARRANGE FUNCTIONS IN ORDER OF PRIORITY AND FREQUENCY OF USING
- REDUCE THE NUMBER OF CHOICES
- DESIGN FOR ALL - PRODUCT IS DESIGNED ESPECIALLY FOR THE ELDERLY PEOPLE WITH SPECIAL NEEDS HOWEVER IT SHOULD NOT STIGMATISE ITS USER;



WELCOME SCREEN

1. **USER PROFILE** - EDITS PERSONAL SETTINGS;
2. **MY MEDICINES** - REMINDS OF TAKING MEDICINES;
3. **HEALTH ADVISOR** - LISTS DIETS, ALLERGIES, ILLNESSES;
4. **PRODUCT SCAN** - RFID CHIP SCAN FOR GATHERING PRODUCT INFO;
5. **MY FRIDGE**- LISTS FRESH, NEARLY OUTDATED AND OUTDATED PRODUCTS;
6. **MY SHOPPING CART** - LISTS PRODUCTS ADDED TO SHOPPING CART;
7. **MY SHOPPING LIST** - SHOWS WHICH PRODUCTS WE NEED TO BUY;
8. **VOICE MESSAGES** - RECORDS VOICE MESSAGES FOR HOUSEHOLD MEMBERS;
9. **SETTINGS** - EDIT SETTINGS F.E.: WEB UPDATE, SCREEN PROPERTIES ;



scan results



nutrition facts

price

best before

health advisor

to basket

20:16
tuesday May 13th 2008



1 new message !



SCAN RESULTS SCREEN

nutrition facts per 100 g serving
for: Frutina whole grain cereal



proteins
11,5 g



carbohydrates
27 g



20:16
tuesday May 13th 2008



1 new message !



NUTRITION FACTS SCREEN 1

nutrition facts per 100g serving
for : Frutina whole grain cereal



fat
200g



allergy factors - peanuts !

20:16
tuesday May 13th 2008



1 new message !



NUTRITION FACTS SCREEN 2

nutrition facts per 100g serving
for : Frutina whole grain cereal



calories ●●
100 kcal



salt ●●●●
0,3g

20:16
tuesday May 13th 2008



1 new message !



NUTRITION FACTS SCREEN 3

price

Frutina whole grain cereal
200gr.

3.50 EURO

20:16
tuesday May 13th 2008



1 new message !



PRICE LABEL



my fridge



fresh products



nearly out of date



out of date

20:16
tuesday May 13th 2008



1 new message !



MY FRIDGE SCREEN

health advisor



Serious health hazard!

You must not eat this product because of :

- diabetes
- medicines you take (Haloperidol)

20:16
tuesday May 13th 2008



1 new message !



HEALTH HAZARD WARNING SCREEN

health advisor



Allergy warning!

Product may contain gluten and peanuts !

20:16
tuesday May 13th 2008



1 new message !



ALLERGY WARNING SCREEN

health advisor



Out of date warning!

Product has expired
on 21.04. 2008 ! (13 days ago)

20:16
tuesday May 13th 2008



1 new message !



OUT-OF-DATE WARNING SCREEN

THANK YOU
FOR YOUR
CONSIDERATION

