



“But how?”

Methods and Techniques to Making a Good User Interface

by
Janne Jul Jensen, Ph.D.
Interaction designer

April 10th, 2013

MOBILE AGILE CLOUD
TRIFORK.

Questions and rating



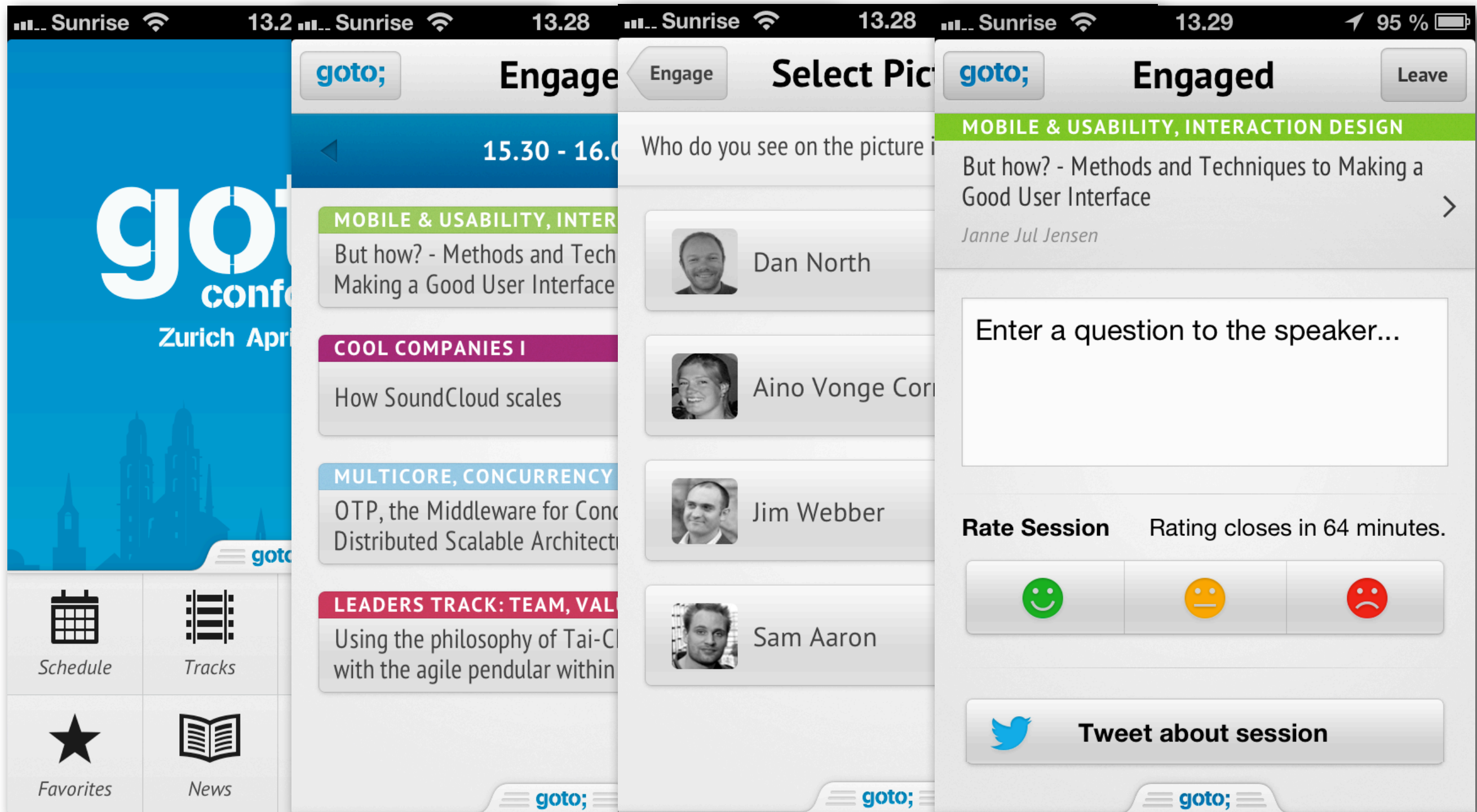
Questions and rating



Questions and rating



Questions and rating



Me

- Master in Software Engineering in 2003
- Researcher at Aalborg University
- Ph.D. in Human-Computer Interaction 2009
- Trifork January 2011
- twitter: @jjjtrifork



You?

- How many of you are from
 - A software company?
 - A large company's IT-department
 - A design bureau
 - Other?
- What do you do?
 - Software development
 - UX
 - Other
- What is your interest in Interaction Design?



Presentation



Presentation

- Good usability



Presentation

- Good usability
- Idea phase



Presentation

- Good usability
- Idea phase
- Your user



Presentation

- Good usability
- Idea phase
- Your user
- Idea to code



Presentation

- Good usability
- Idea phase
- Your user
- Idea to code
- Structuring content



Presentation

- Good usability
- Idea phase
- Your user
- Idea to code
- Structuring content
- Navigation



Presentation

- Good usability
- Idea phase
- Your user
- Idea to code
- Structuring content
- Navigation
- Early testing



Good usability

- Make clear exits
- Make shortcuts
- Give feedback
- Prevent errors
- Support recall
- Simple and natural dialogue
- Speak the user's language
- Minimize memory load
- Use constructive error messages
- Thrive for consistency

Creative Design Workshop

- Bring stakeholders together
 - Designers
 - Domain Experts
 - Users
 - Developers
- Set the Scene
 - Purpose: Design ideas
 - Timeframe: at least 4 hours, rather 6 hours or more
 - Groups: 2-3 groups of 3-4 people each, mix profiles
- Materials: The same as for making Christmas decorations



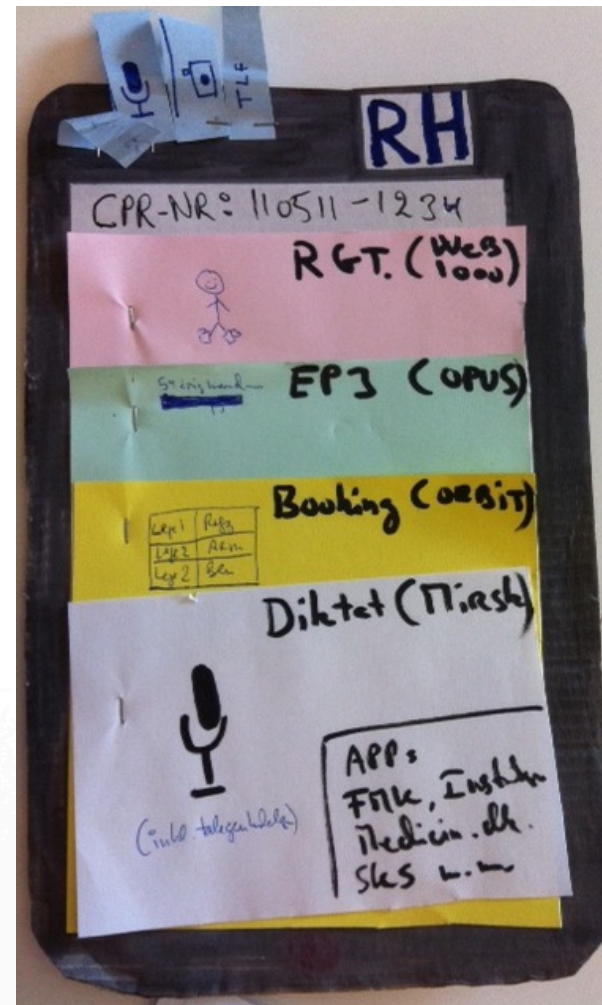
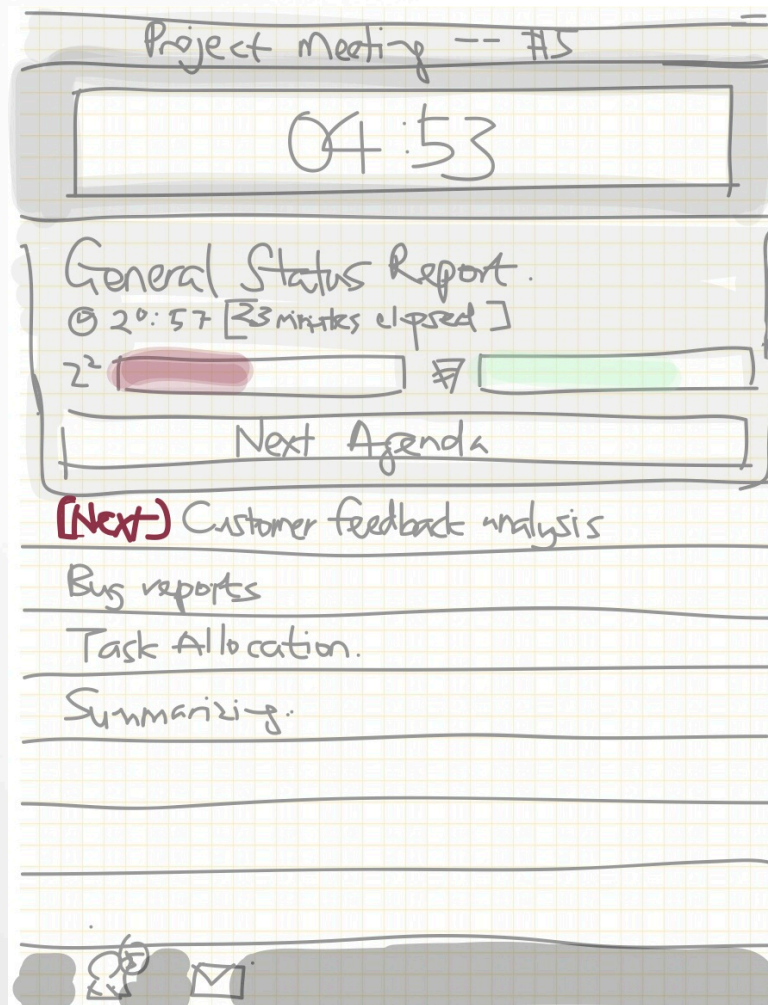
How?

- Outline project
 - What are we making?
 - To whom?
 - Why?
- Teach the platform
 - Tablet, smartphone, web, expert system....
- Explain the process
 - Yes, it IS cutting and pasting the old fashioned way!
 - Possibilities, not limitations
 - Conclude by a presentation

Why it works

- Everyone knows how to use the materials
- Pictures say more than a thousand words
- No computers: leveling the playing field
- Insight into others view of the field
- Benefitting from each others area of expertise
- Possibility of exploring alternatives
- Provides the designer with insight
- Support the visual imagination
- It is very concrete





The result

- Design ideas
- Potential problem areas
- Better understanding of the domain
- Heightened engagement from all parties
- Shared ownership of the solution



Personas

- Perception varies

- “My mom ...”
- Latest customer
- Stereo types
- Old/young
- Novice/Expert
- Gender?
- Occupation?
- Etc....

Personas

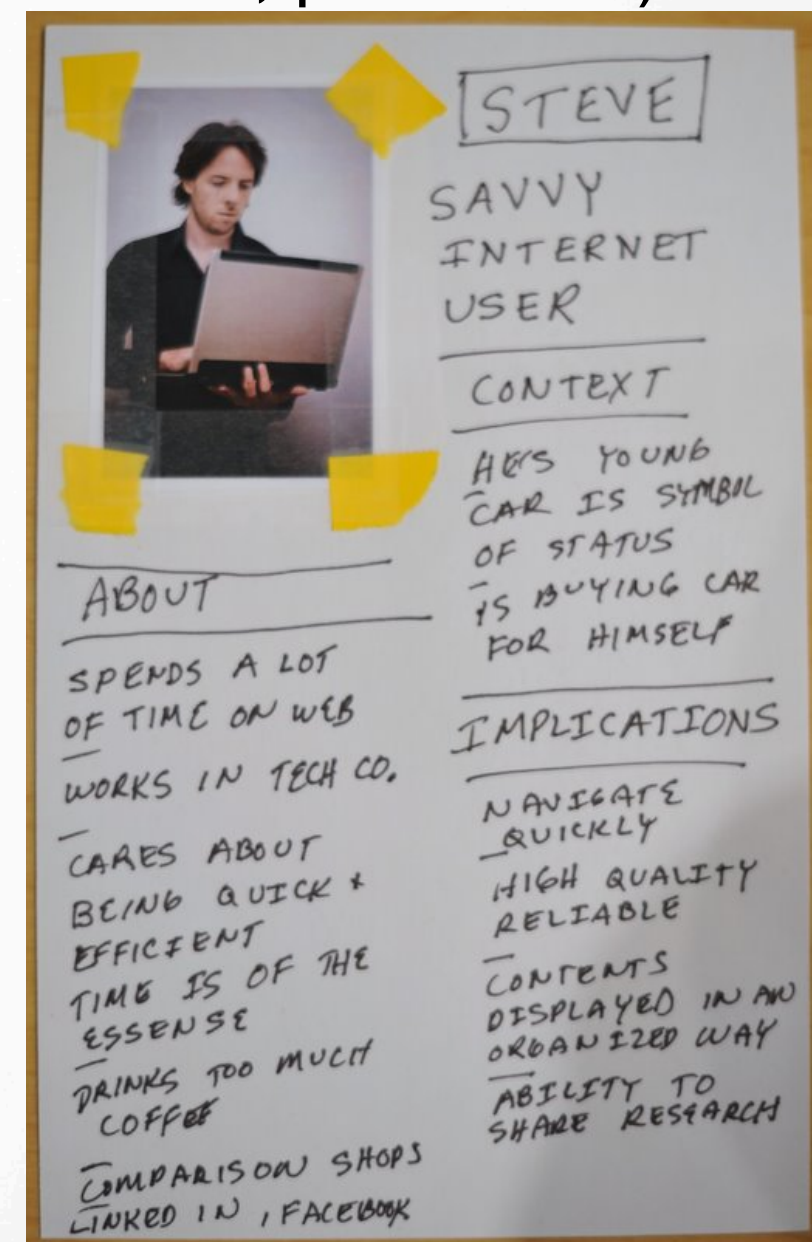
■ Perception varies

- “My mom ...”
- Latest customer
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- Gender?
- Occupation?
- Etc....



Personas

- Base it on your users! (If you haven't met them, please do!)
- What do they have in common?
- What varies?
- Group attributes into roles
- Convert to persona:
 - Name and age (picture)
 - Occupation
 - IT/domain-experience
 - Personality



Personas

- Context
 - Work alone or together
 - Leisure or work
 - Platform?
 - Frequency?
- Choose 1 primary og 2 secondary personas
- Use your personas when you sketch, design, prototype or code
- “What would my persona do/prefer/think?”



"Mel" Mommy Melanie the Mountain Biker

Context:

With birth of her daughter, "Sam", she needs new car; were driving a Jeep Wrangler. Comfortable vehicle but totally impatient & hates when doesn't work

About Melanie Implications:

Married, 32, New Baby
Passionate mountain biker
likes to cook
Lives outside Seattle, in
foothills of Cascade S
Speedster in her car
Active, adrenaline junkie
Green, environmental activism
Computer savvy, social network
Works in bike store

- Needs a car that still says "I'm Mel & being a mommy hasn't changed that."
- Only uses products that are super simple & easy to use
- No patience for extensive research
- Just want to go to one place
- Cares a lot about what her friends think about the car she drives.



"Mel" Mommy Melanie the Mountain Biker

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needs a car that still says "I'm Mel &



IRA
38
MANAGER

CONTEXT

- HEARD ABOUT APP CNN MONEY
- OUTGROWING CURRENT VEHICLE
- NOT SURE GOT GREAT DEAL LAST TIME

ABOUT

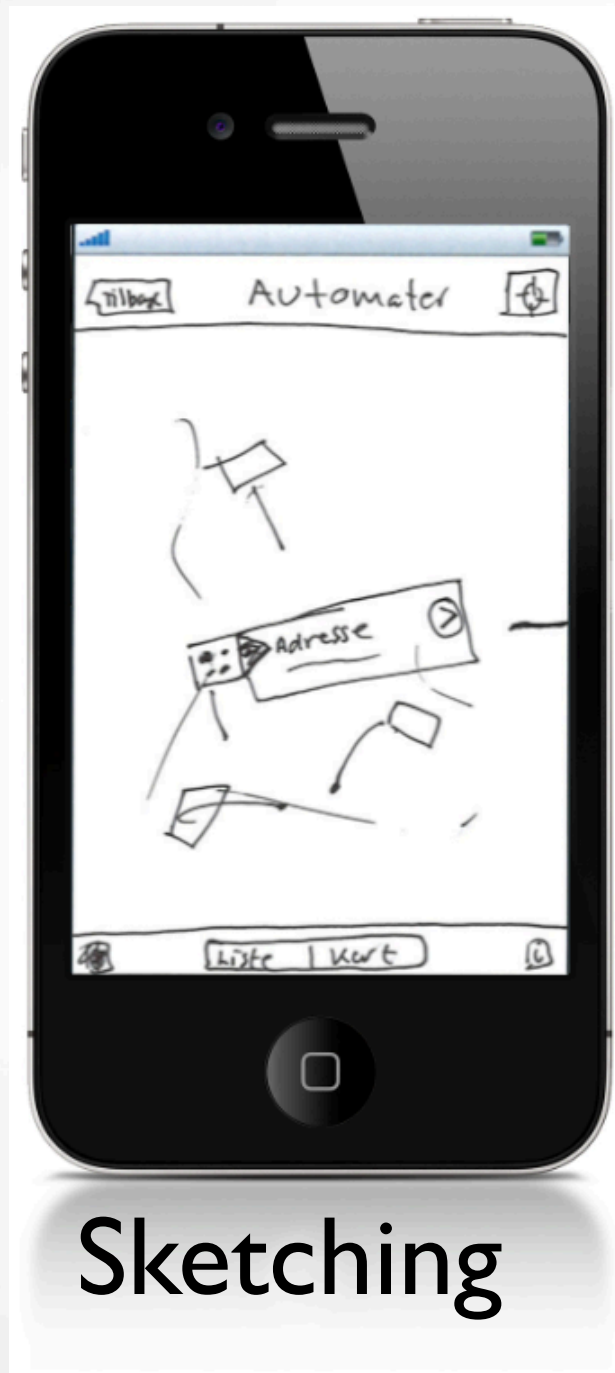
- HAVE SMARTPHONE
- USE INTERNET DAILY
- FULL TIME JOB
- COLLEGE EDUCATION
- MARRIED
- KIDS
- PURCHASED CAR BEFORE
- ~~GOT BAMBOLIZED~~

IMPLICATION

- HAS TRADE-IN
- DIDN'T USE EXTENDED WARRANTY PURCHASED LAST TIME
- WANT APP FOR RE-ENFORCEMENT OF CURRENT DEAL
- COMFORTABLE USING TECHNOLOGY
- USING 4SQUAD MAKES H.M. FEEL LESS VULNERABLE

The Design Process

The Design Process

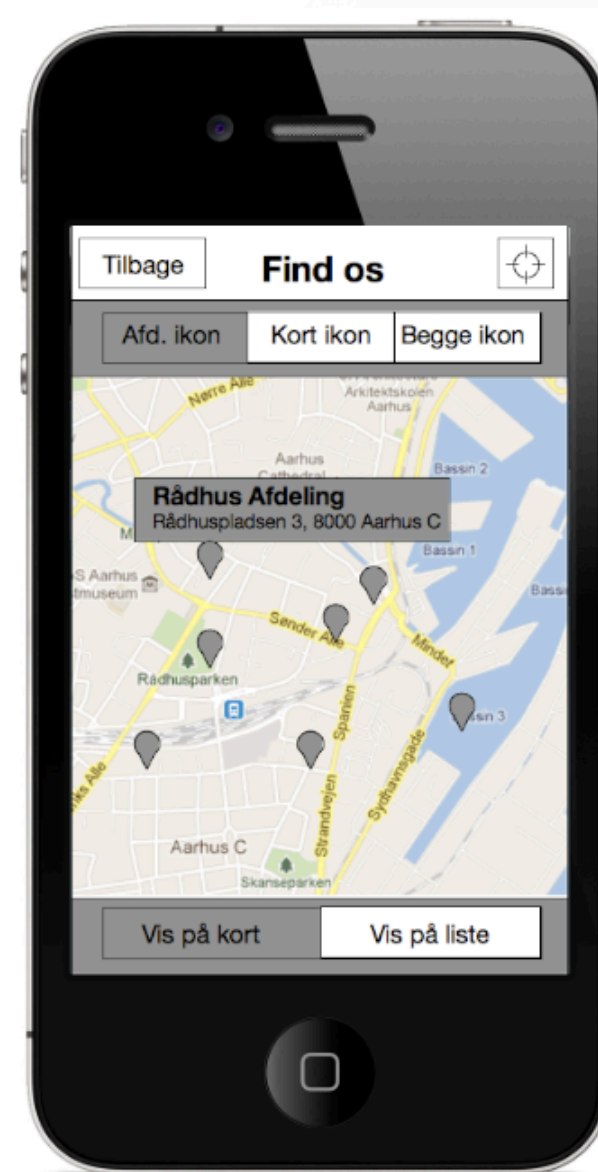


Sketching

The Design Process



Sketching

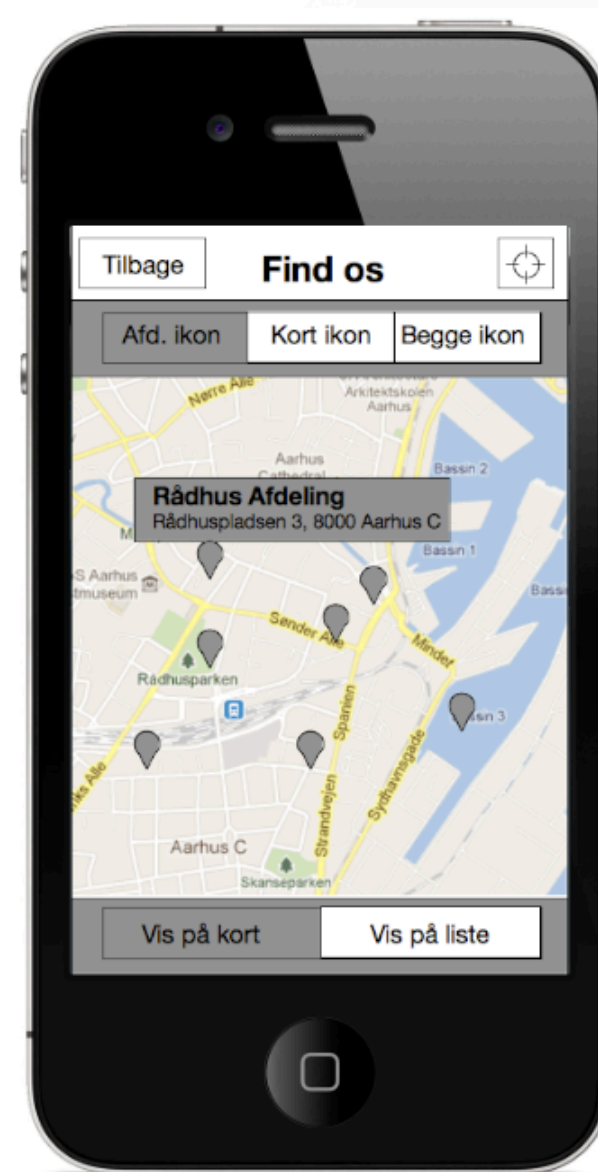


Wireframing

The Design Process



Sketching

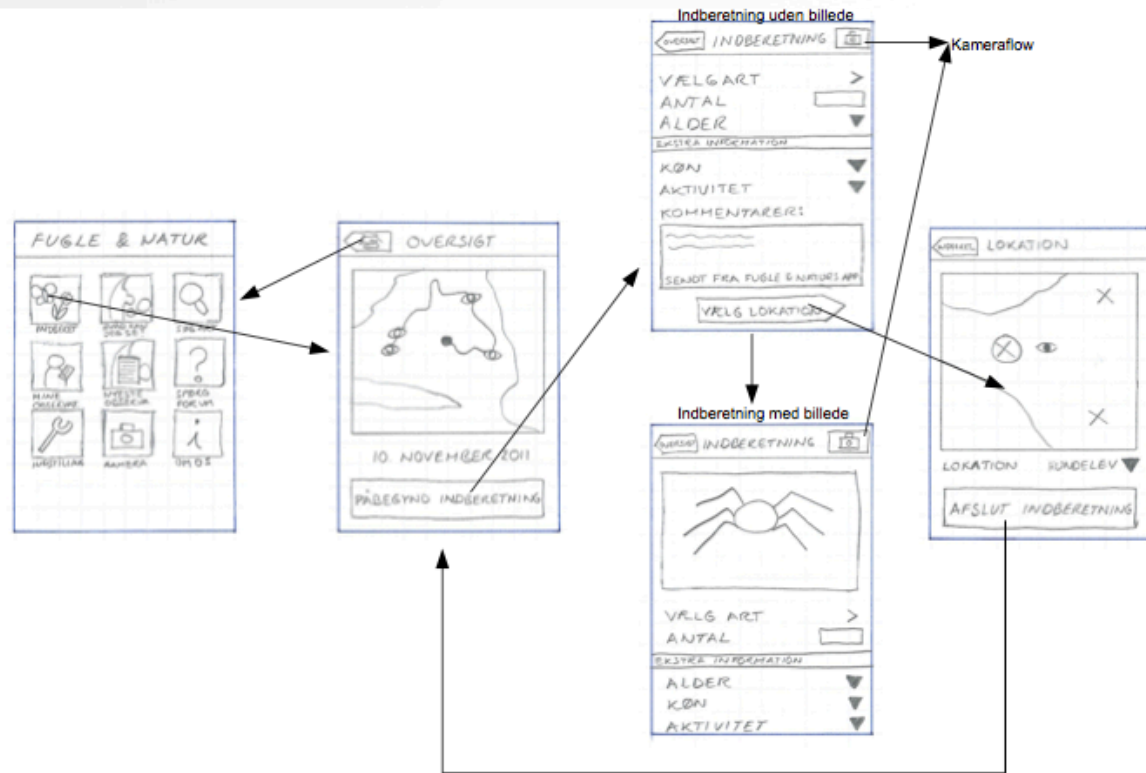


Wireframing



Graphics

Workflows

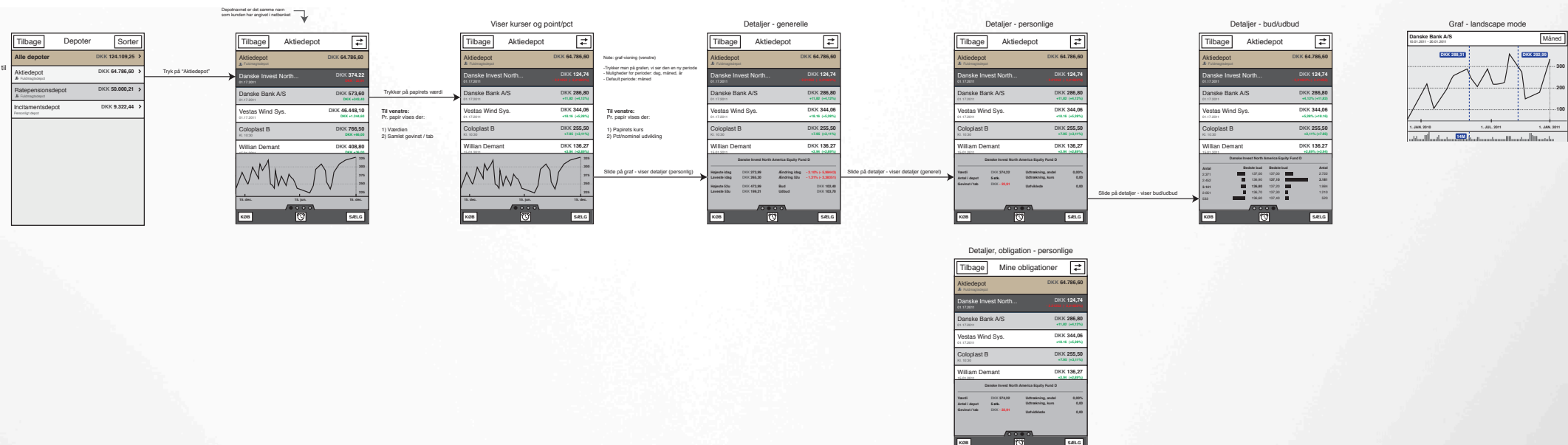


1:



Flow 1: Depoter

Mål: at navigere fra Depotoversigt og ned til detaljvisning for et depot



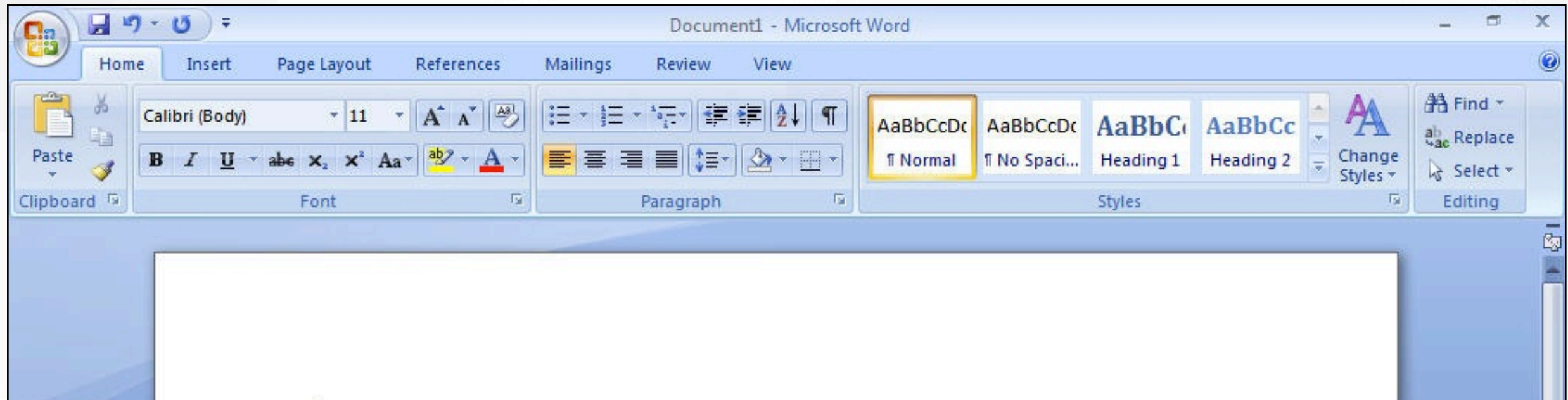
Card Sorting



- Open or closed
- Insight into mental model
- Informs navigational structure



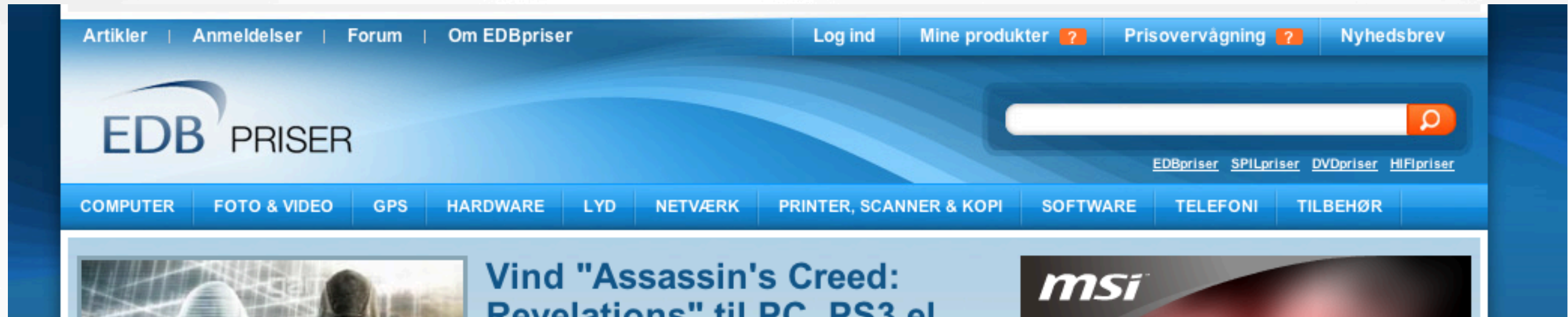
Card Sorting Example



Some key highlights from the design process of the Ribbon:

- The genesis of the Ribbon came out of an analysis of 1.3 billion usage sessions. Each one of these usage sessions had more than 6,600 data points
- As the design of the Ribbon evolved, we did card sorting in both directions – we asked one group to sort functions into groups and name the groups
- We asked a second group to take the groups from the first card sorting exercise and sort functions back into those groups – the sorting matched up (A ha! a trend!!)

Card Sorting Example



- Where do I find a headset?
- What is the problems with the categories?

Progressive disclosure

“Divide, simplify and let the user conquer”

- Steps:

- Long complex tasks
- Avoid overload
- eCommerce, Wizards

- Levels:

- Multiple levels of user experience
- Gradual introduction
- Advanced setup, detailed description



eCommerce



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FLORISTS CHOICE

En smuk buket med blomster valgt af blomsterhandleren

En blomst siger mere end 1000 ord.
Billederne illustrerer stil, størrelse, farve og form.
Der kan forekomme afvigelser på grund af sæsonudsving og den enkelte forretnings varesortiment.

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- ☐ Kr 100,00
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- ☒ Kr 200,00
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Bestil

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med en elegant æske
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er baseret på 100% naturlige
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Chokolade			
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Chokolade			
540 gr.	DKK	230,00	☐
Chokolade			
2 stk.	DKK	45,00	☐
marcipanhjerner			
Dragémandler	DKK	35,00	☐
blue			
Rødt hjerte	DKK	65,00	☐
med chokolade			
6 stk. Deco-	DKK	60,00	☐
chokolade			

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☐ Kr 250,00

☐ Kr 300,00

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Som på billede kr. 200,00 ekskl. vase





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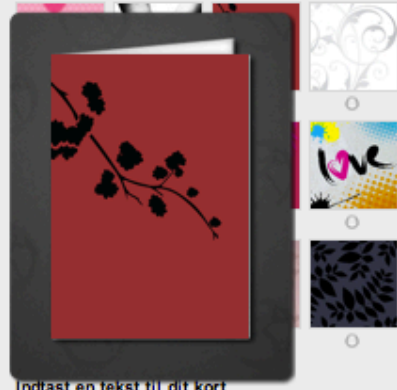
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Lav dit eget kort.



..eller vælg et færdigt kort og indsæt din kortekst nedenfor



Indtast en tekst til dit kort

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Kurv er tom  

UDLANDET

ekskl. vase



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540 gr. Chokolade	DKK	230,00	☐
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Dragémandler blue	DKK	35,00	☐
Rødt hjerte med chokolade	DKK	65,00	☐
6 stk. Deco-chokolade	DKK	60,00	☐

Vin [Info](#)

Du kan supplere din bestilling med en elegant flaske vin (Louis Perdrier Brut 1/4).

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Ja tak ☐

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Ja tak ☐

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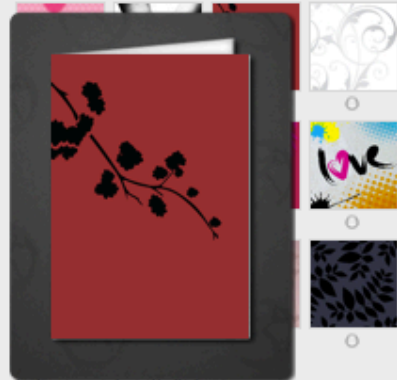
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Her skal du oplyse hvem der skal modtage din bestilling

Modtagers telefonnummer *

Modtagers navn *

Evt. firma eller C/O navn

Gade/vej *

Adresselinie 2

Leveringsdato * 1. November 2011

Postnummer eller by

Land Danmark

Vælg butik

Vi leverer ikke søn- og helligdage. (I Danmark er Mors Dag, Fars dag og Valentins Dag undtaget). Se i øvrigt [leveringsbetingelser](#) og [Timeservice](#) for ekspreslevering.

Specielle ønsker vedr. levering

Hvis modtager ikke er hjemme, må Interflora:

☐ Sætte bestillingen udenfor døren

☐ Aflevere bestillingen ved naboen

[Hvis modtageren ikke er hjemme, hvad så?](#)

Kort

Din bestilling vedlægges et kort

Skriv din korttekst herunder (Maks. 10 linier og 230 tegn)

Du har 10 linjer og 230 tegn tilbage

Godkend

Tryk kun en gang på "Tilføj" og afvent. Der kan gå nogle sekunder! Du tilføjer en vare hver gang du trykker på knappen

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405 gr. Chokolade	DKK	180,00
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Dine varer

Anders And [\[ret\]](#) [\[slet\]](#)

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Levering: Fredag d. 18-11-2011
Pris: 200,00 DKK

Levering:
1 sted/dag á 70,00 70,00 DKK

Pris i alt 270,00 DKK

GODT
★★★★★
2456 kunder har anmeldt sig til Trifork på



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Modtag bestillingsbekræftelse pr. SMS ☐

Dit navn *

Evt. Firma eller C/O navn

Gade/vej *

Postnummer * By

Land *

E-mail *

Du skal oplyse en gyldig e-mailadresse, for efterfølgende at kunne modtage en bekræftelse pr. email samt for at kunne se status på din ordre her på sitet.

☐ **Gem ovenstående betaleroplysninger til næste køb (cookie)**

☐ Jeg ønsker at modtage E-mail nyhedsbreve fra Interflora vedrørende blomster og vin. Du kan når som helst framelde dig denne service igen.

☐ Jeg ønsker at deltage i Interflora's tilfredshedsundersøgelse og vinde en gratis buket blomster.

☐ Jeg accepterer Interfloras [bestillings- og lev. betingelser](#) *

Vælg betalingsform



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Modtagers navn *

Evt. firma eller C/O navn

Gade/vej *

Adresselinie 2

Leveringsdato *

Postnummer eller by *

Land

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Printer Settings

Udskriv

Printer

Navn: Microsoft XPS Document Writer

Status: Ledig

Type: Microsoft XPS Document Writer

Hvor: XPSPort:

Kommentar:

☐ Skriv til fil

☐ Manuel duplex

Sideområde

☒ Alle sider

☐ Aktuel side ☐ Markeringen

☐ Sider:

Skriv sidetal og/eller sideområder adskilt af kommaer regnet fra starten af dokumentet eller sektionen. Skriv f.eks. 1, 3, 5-12 eller p1s1, p1s2, p1s3-p8s3

Kopier

Antal kopier:

☒ Sætvis

Udskriftsområde:

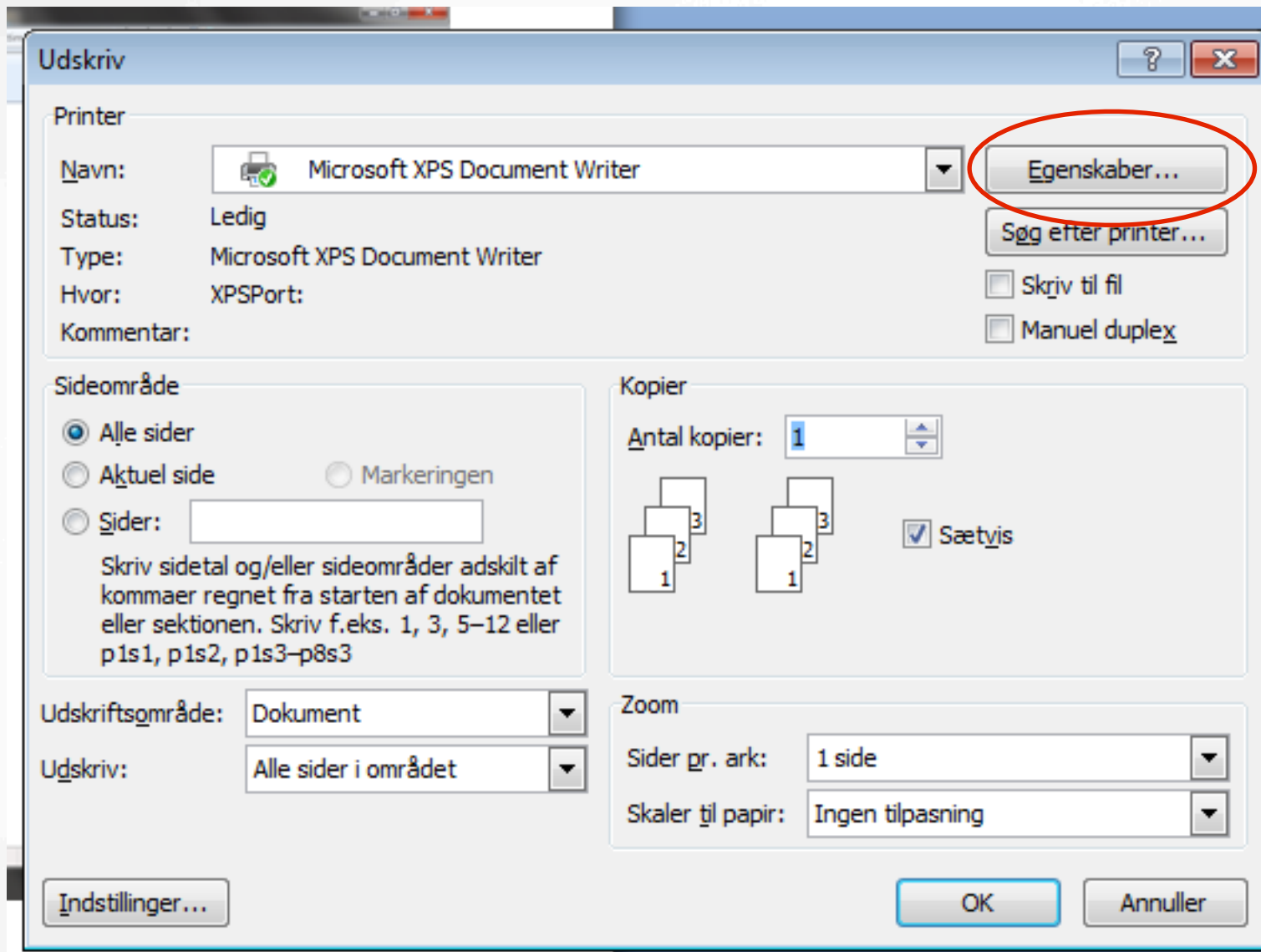
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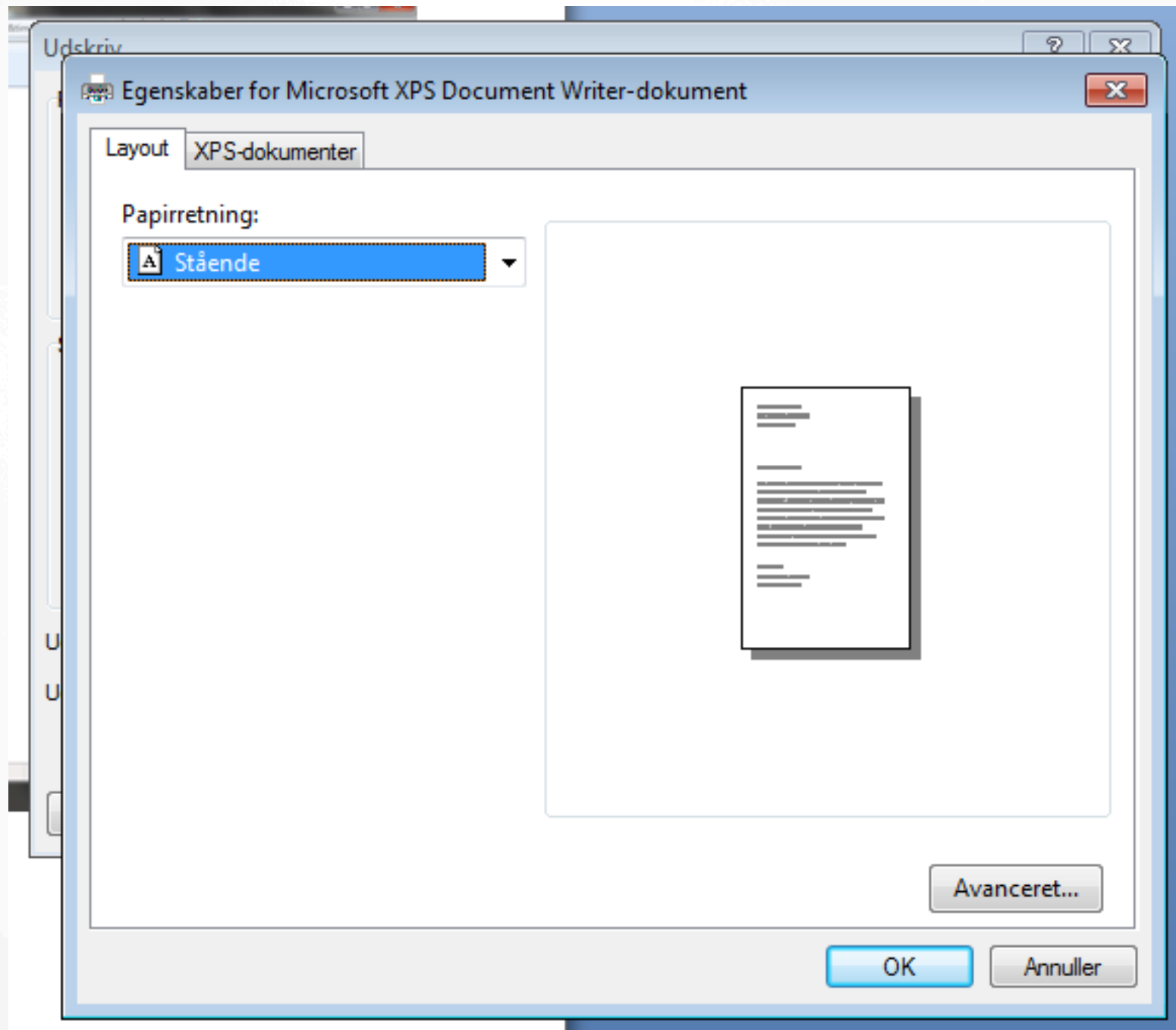
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Skaler til papir:

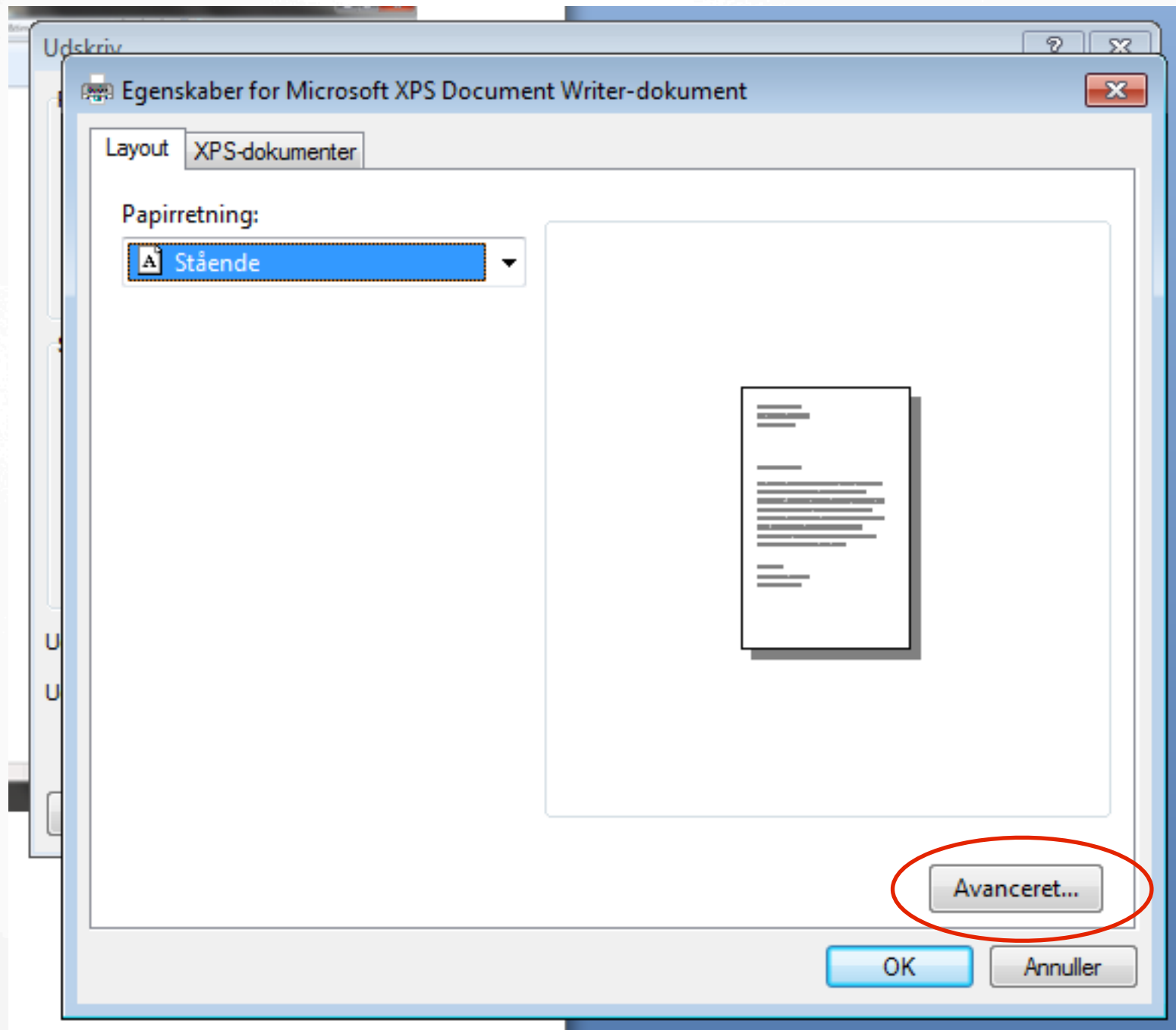
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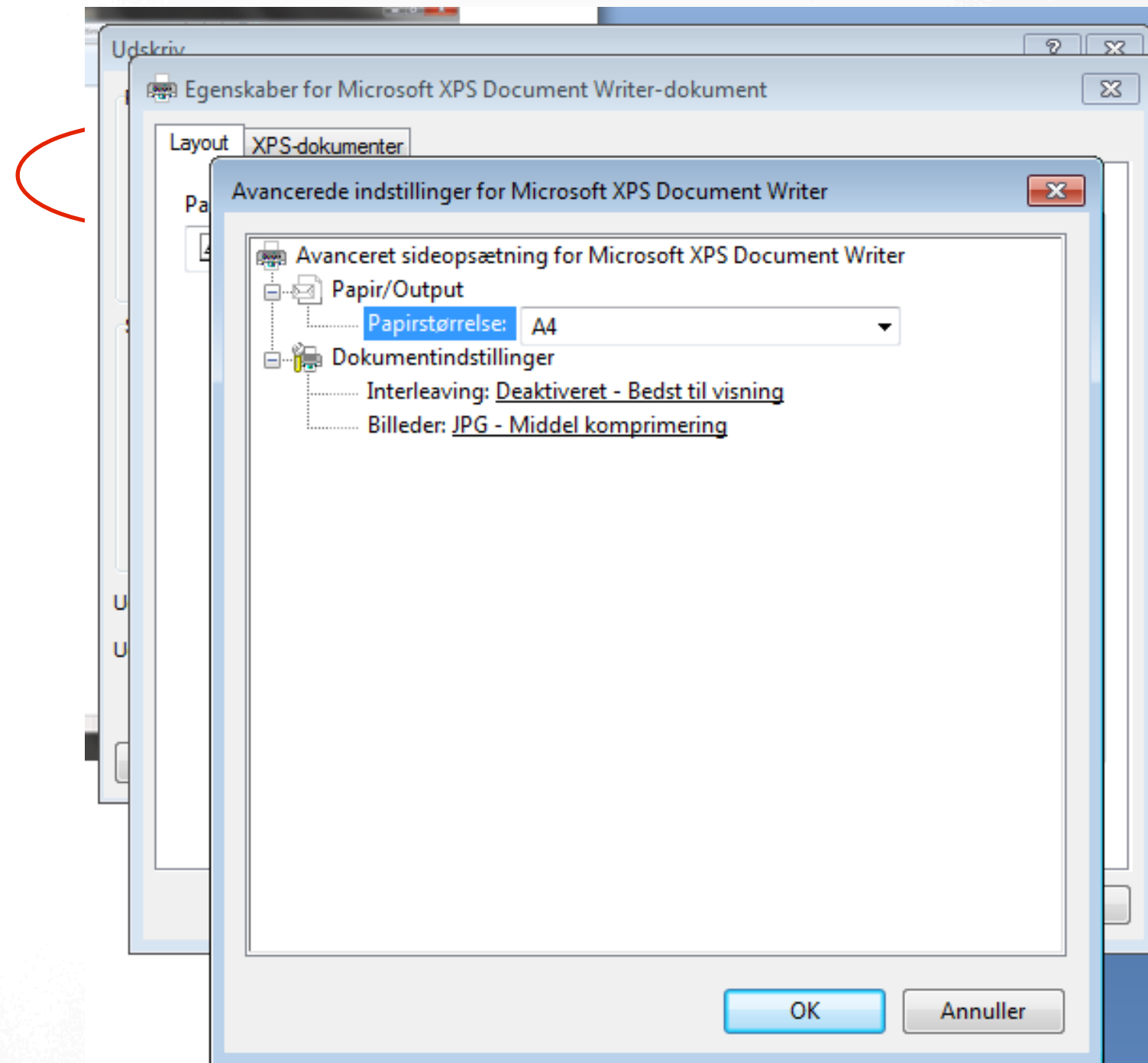
Printer Settings



Printer Settings

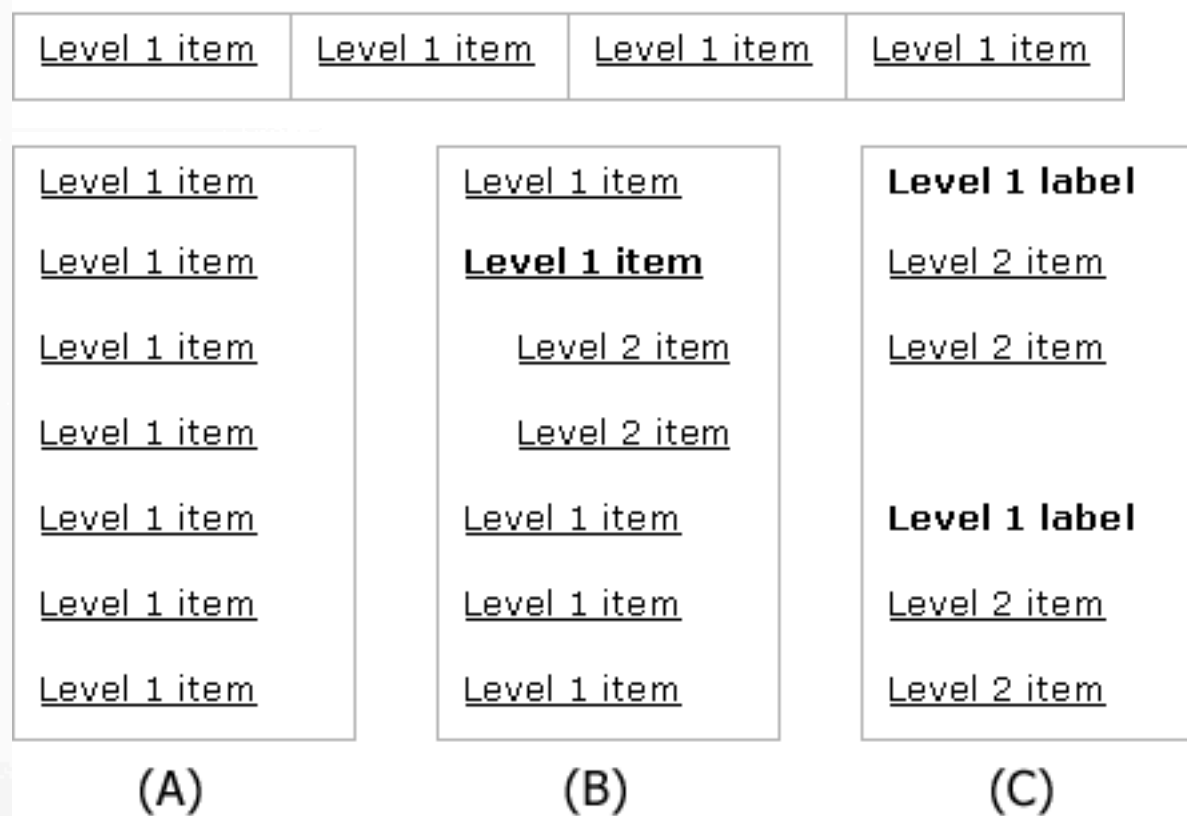


Printer Settings



Interaction Design patterns

- Avoid reinventing the wheel
- Main navigation:



Basket:

Description	Quantity	Availability	Remove	Price
Items description	1 + -	In stock	remove	\$ 6.50
Item2 description	2 + -	On order	remove	\$19.50
				Subtotal \$26.00
Express mail \$3.95 ▾				Shipping \$ 3.95
				Total \$29.95
<< Proceed Shopping Checkout >>				
 •We accept Visa and Mastercard. •Transactions are done using secure connections.				

Resume

- **Good usability:**
- **Idea phase:**
- **Your user:**
- **Idea to code:**
- **Structuring content:**
- **Navigation:**
- **Early testing:**

Resume

- **Good usability:** Ten universal guidelines
- **Idea phase:**
- **Your user:**
- **Idea to code:**
- **Structuring content:**
- **Navigation:**
- **Early testing:**

Resume

- **Good usability:** Ten universal guidelines
- **Idea phase:** Creative workshop
- **Your user:**
- **Idea to code:**
- **Structuring content:**
- **Navigation:**
- **Early testing:**

Resume

- **Good usability:** Ten universal guidelines
- **Idea phase:** Creative workshop
- **Your user:** Personas
- **Idea to code:**
- **Structuring content:**
- **Navigation:**
- **Early testing:**

Resume

- **Good usability:** Ten universal guidelines
- **Idea phase:** Creative workshop
- **Your user:** Personas
- **Idea to code:** Sketching, graphics, code
- **Structuring content:**
- **Navigation:**
- **Early testing:**

Resume

- **Good usability:** Ten universal guidelines
- **Idea phase:** Creative workshop
- **Your user:** Personas
- **Idea to code:** Sketching, graphics, code
- **Structuring content:** Card sorting, progressive disclosure
- **Navigation:**
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- **Idea to code:** Sketching, graphics, code
- **Structuring content:** Card sorting, progressive disclosure
- **Navigation:** Interaction design patterns
- **Early testing:** Paper prototype testing

Usability Guidelines for Mobile

- Prioritize functionality
- Use native UI elements and gestures for each platform
- ... And use them correctly!
- Use the platformen (gyroscope, GPS, camera, etc.)
- Help should not be necessary

Prioritize!

- Danske Bank, in scope
 - Account overview
 - Transactions
 - Transfer money
 - Pay bills
- Danske Bank, out of scope
 - Budget planning
 - Pension & Insurance
 - Foreign transfers

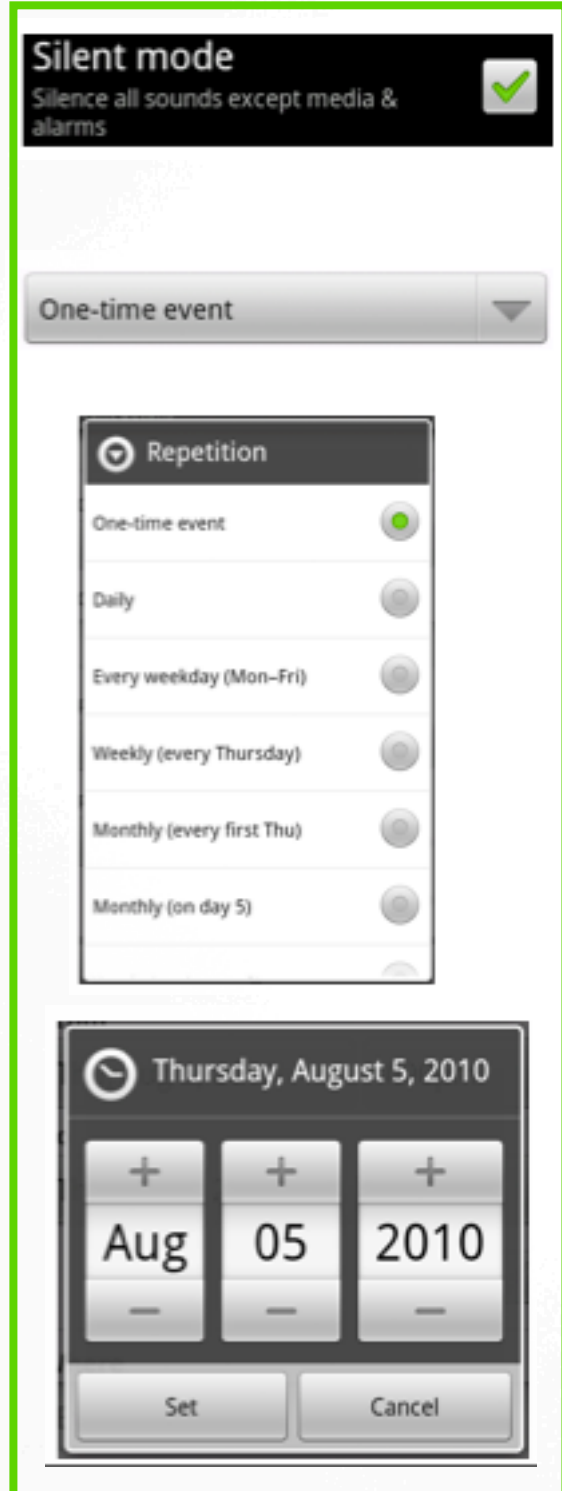
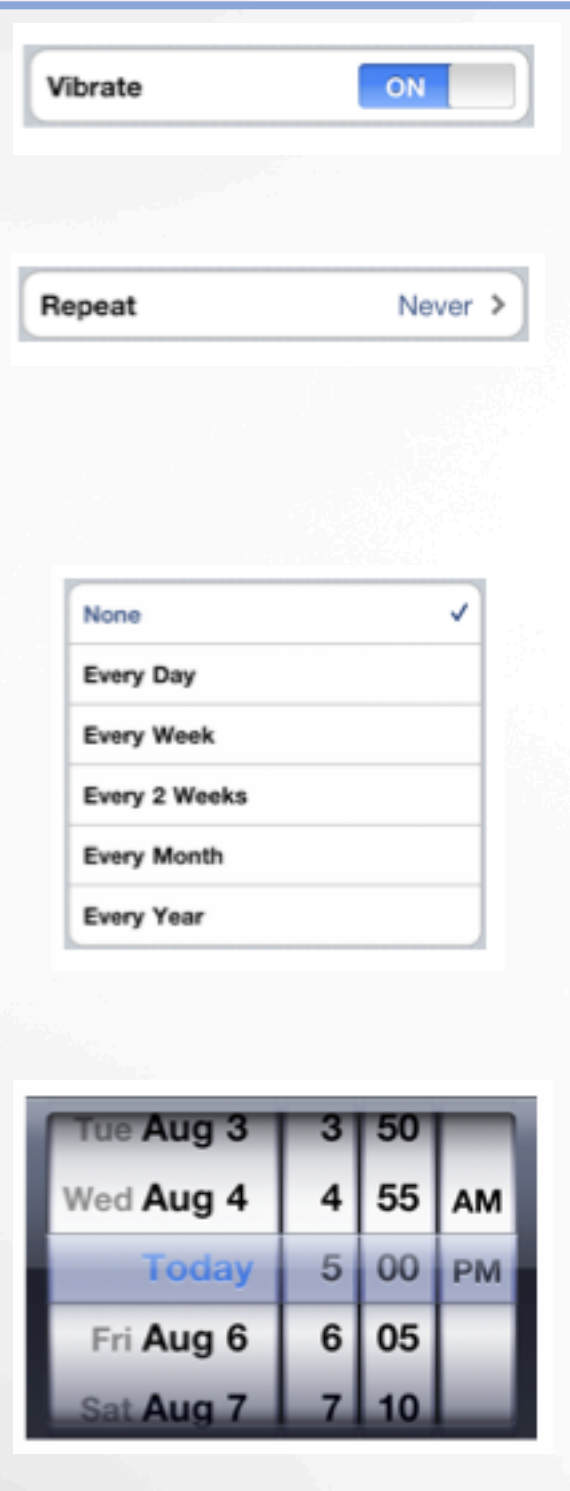
Prioritize!

- Danske Bank, in scope
 - Account overview
 - Transactions
 - Transfer money
 - Pay bills
- Danske Bank, out of scope
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Native UI Elements

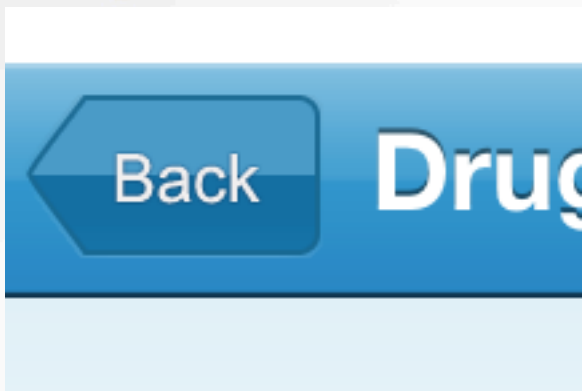


Gesture	Action
Tap	To press or select a control or item (analogous to a single mouse click)
Drag	To scroll or pan (that is, move side to side)
Flick	To scroll or pan quickly
Swipe	In a table-view row, to reveal the Delete button
Double tap	To zoom in and center a block of content or an image To zoom out (if already zoomed in)
Pinch open	To zoom in
Pinch close	To zoom out
Touch and hold	In editable text, to display a magnified view for cursor positioning
Shake	To initiate and undo or redo action.

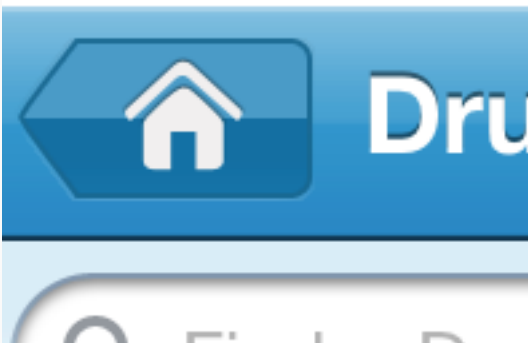
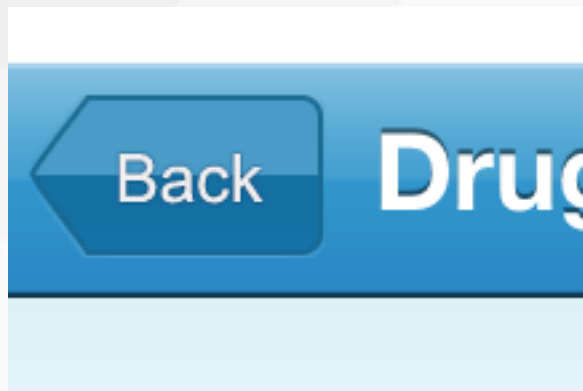
Gesture	Action
Tap	To press or select a control or item (analogous to a single mouse click)
Double tap	To zoom in and center a block of content or an image To zoom out (if already zoomed in)
Touch and hold	Bring up a local menu
???	

... And Use them Correctly!

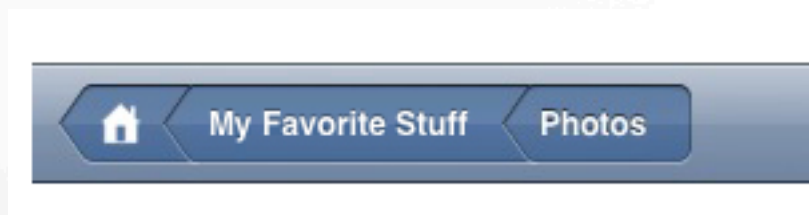
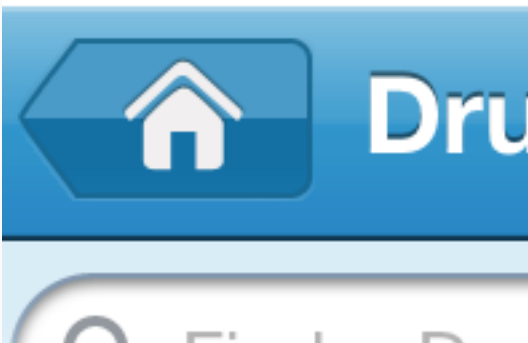
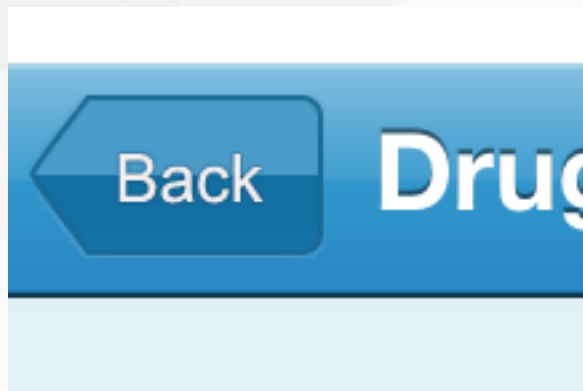
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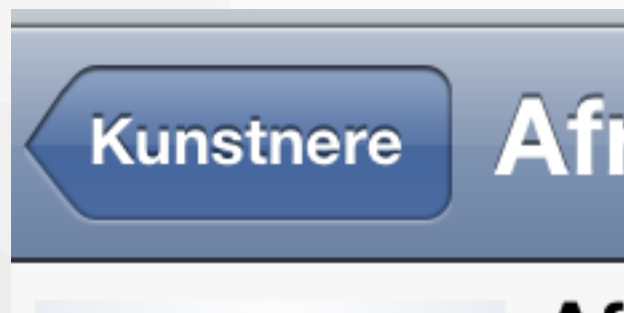
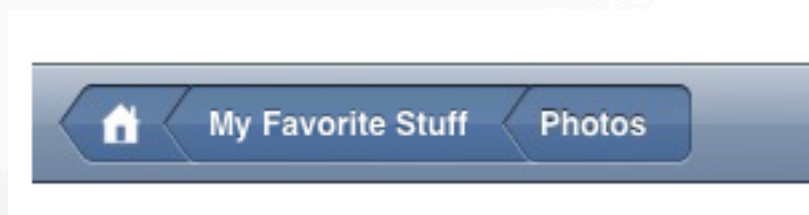
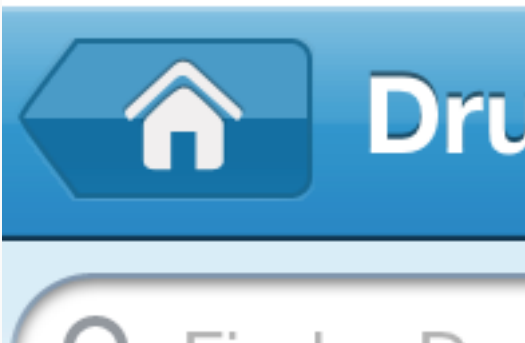
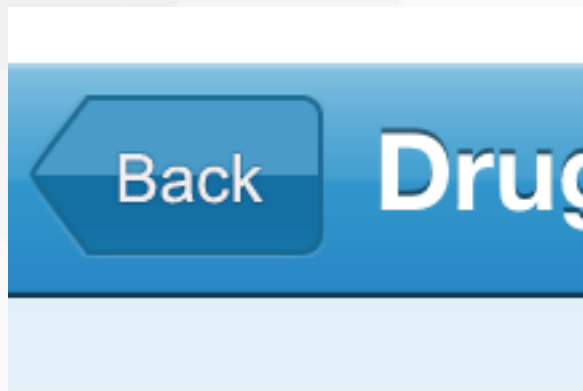
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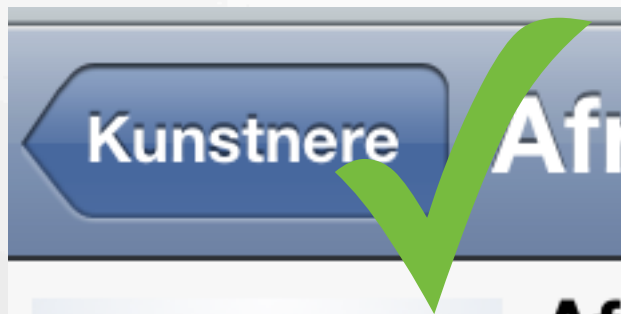
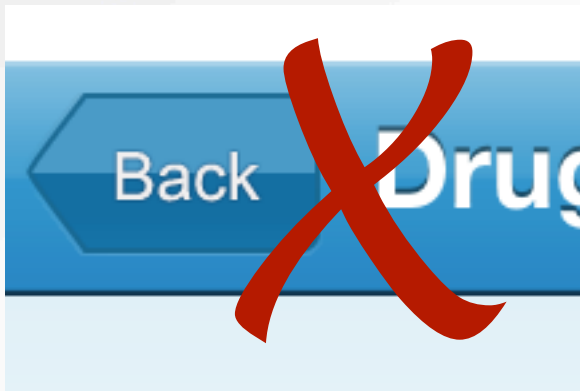
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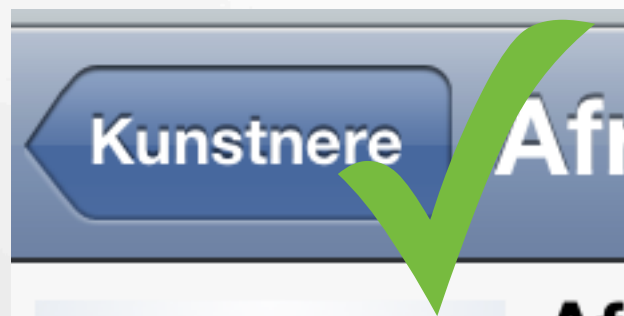
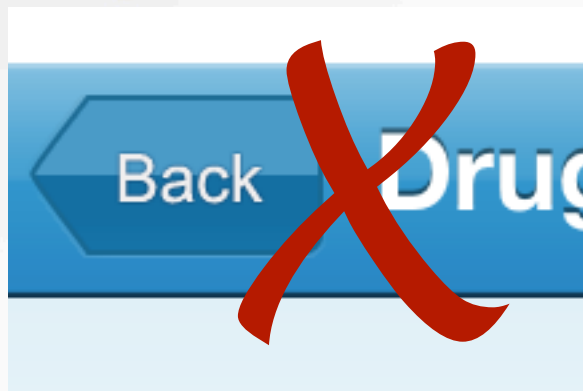
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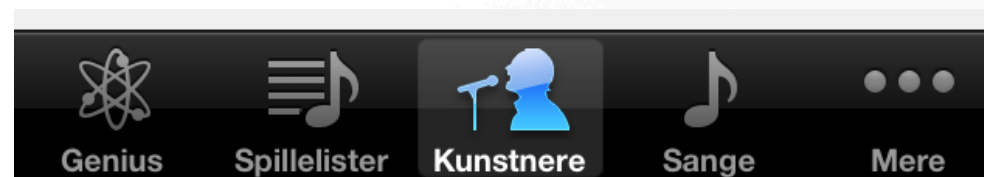
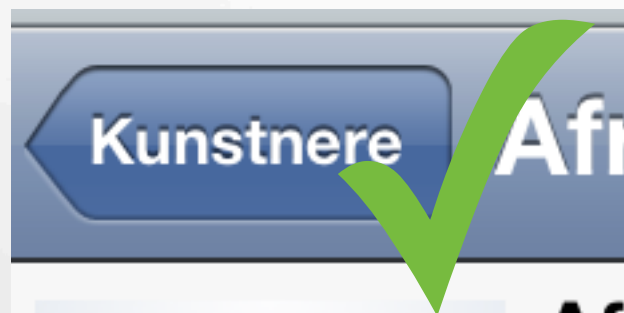
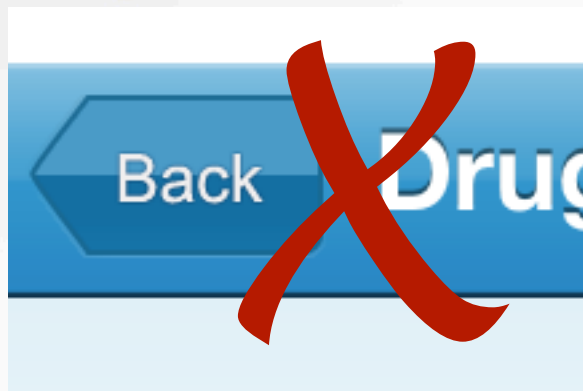
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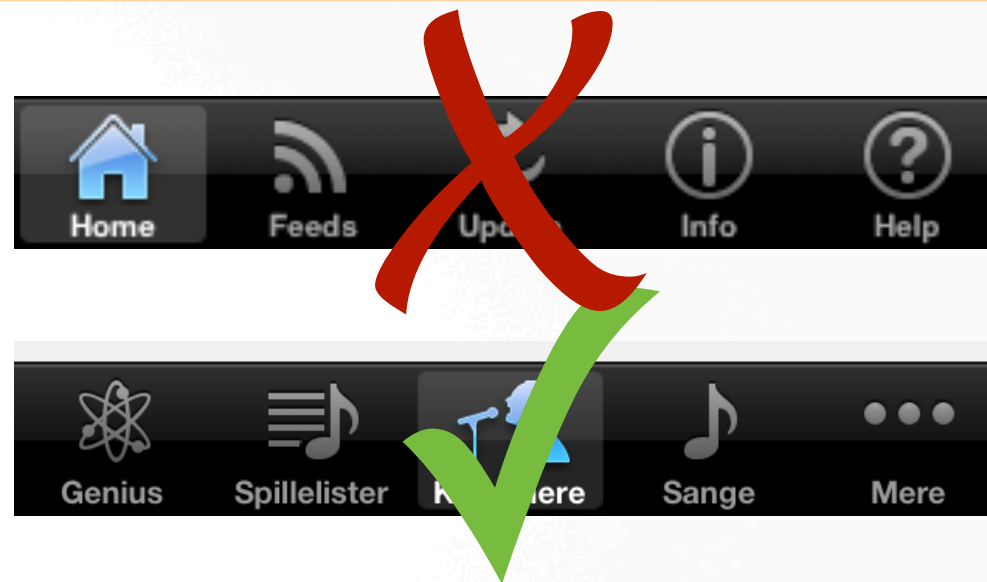
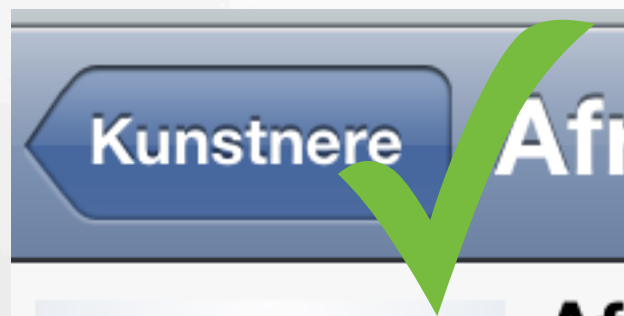
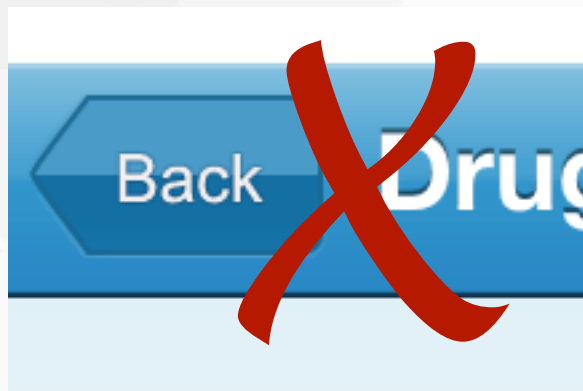
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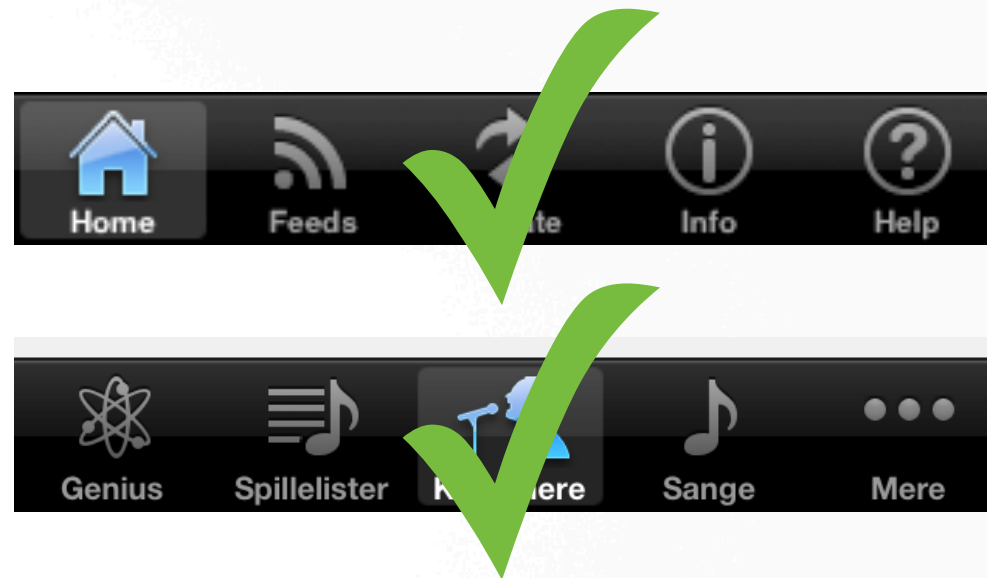
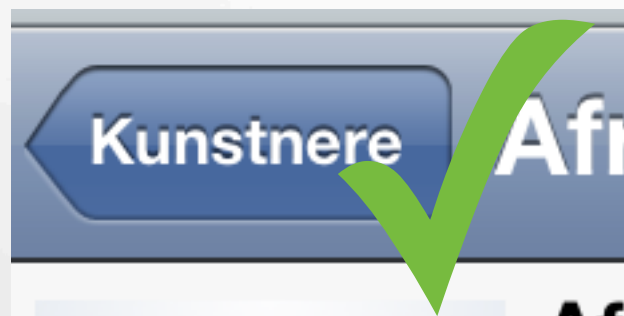
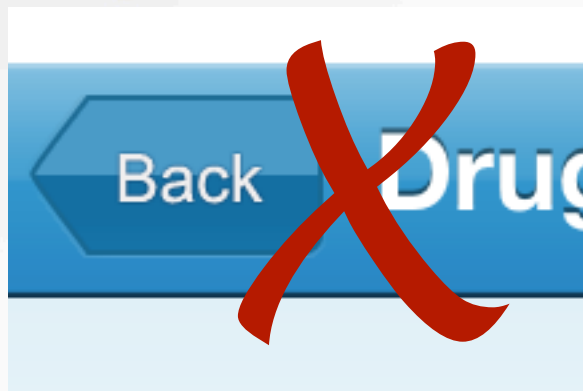
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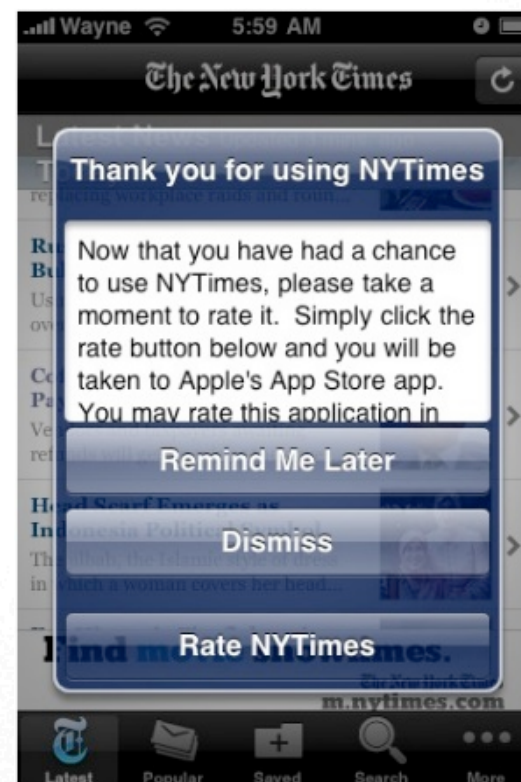
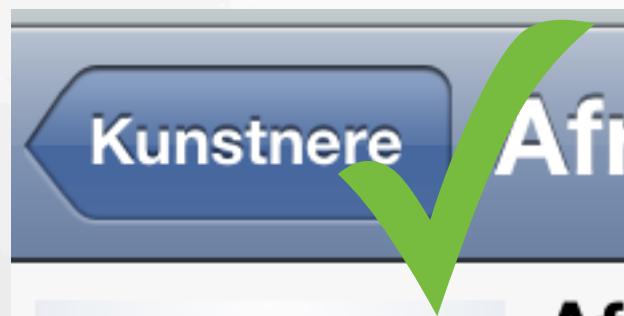
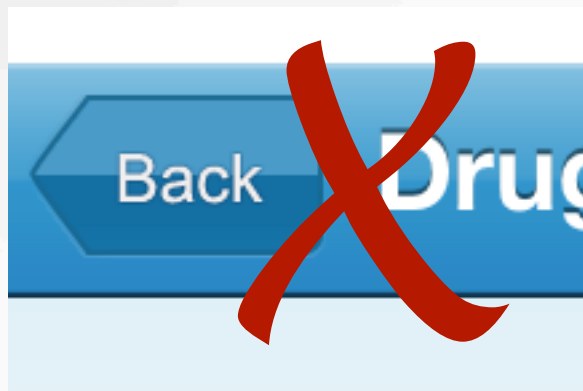
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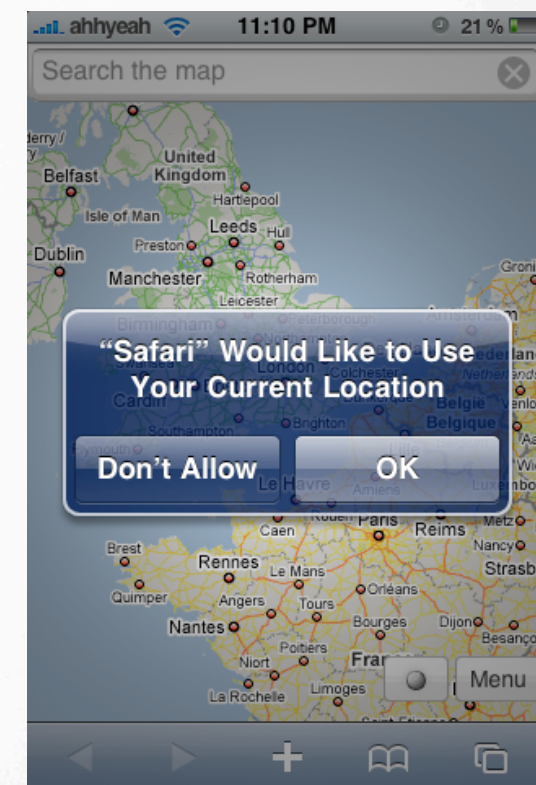
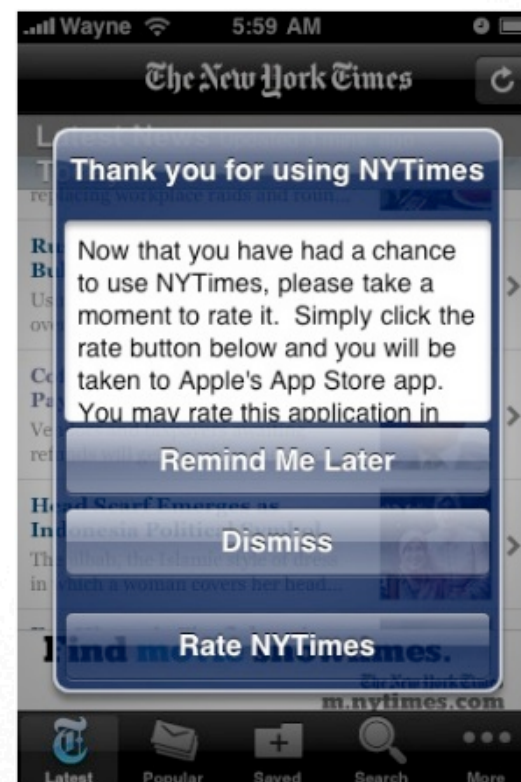
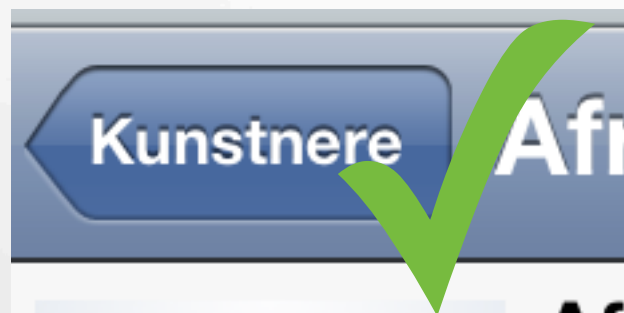
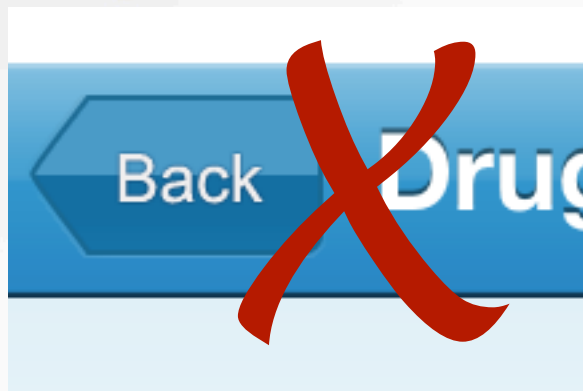
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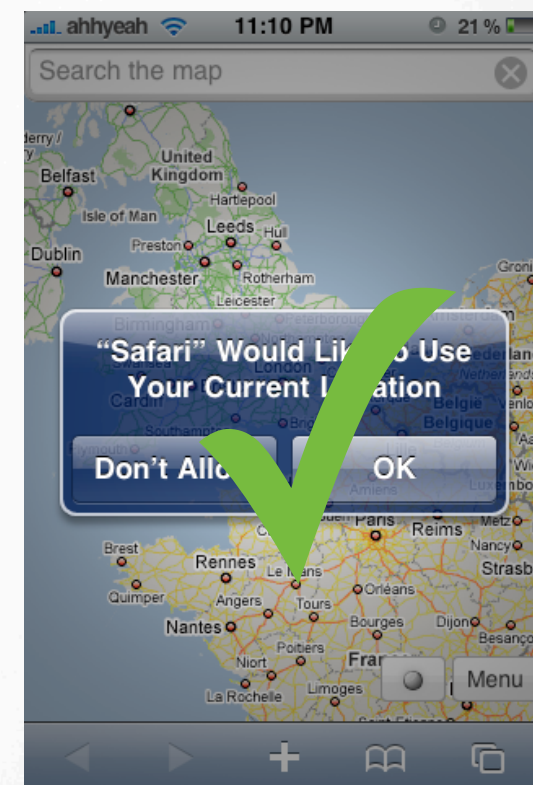
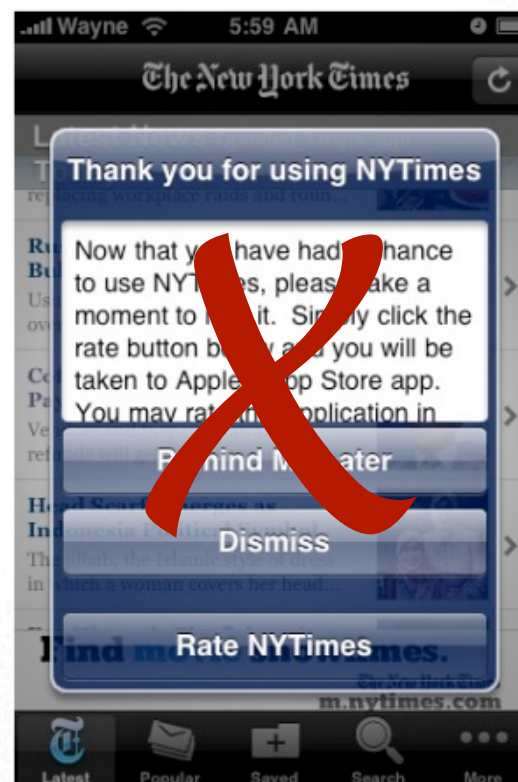
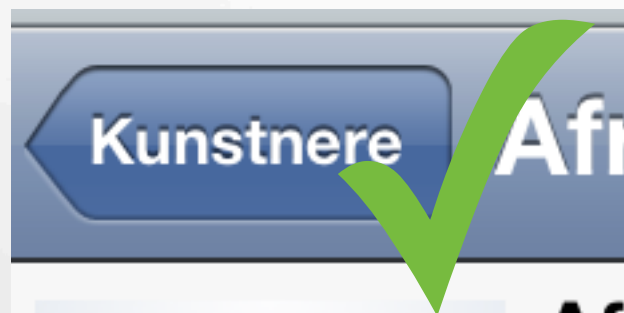
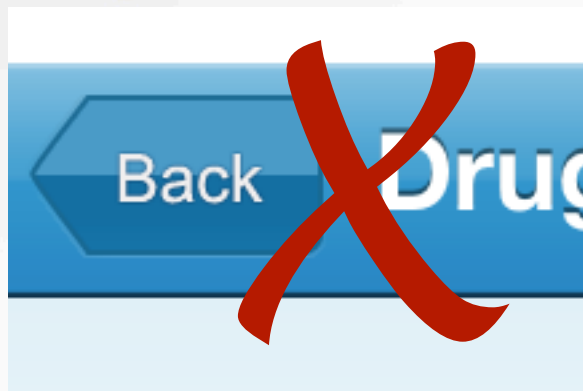
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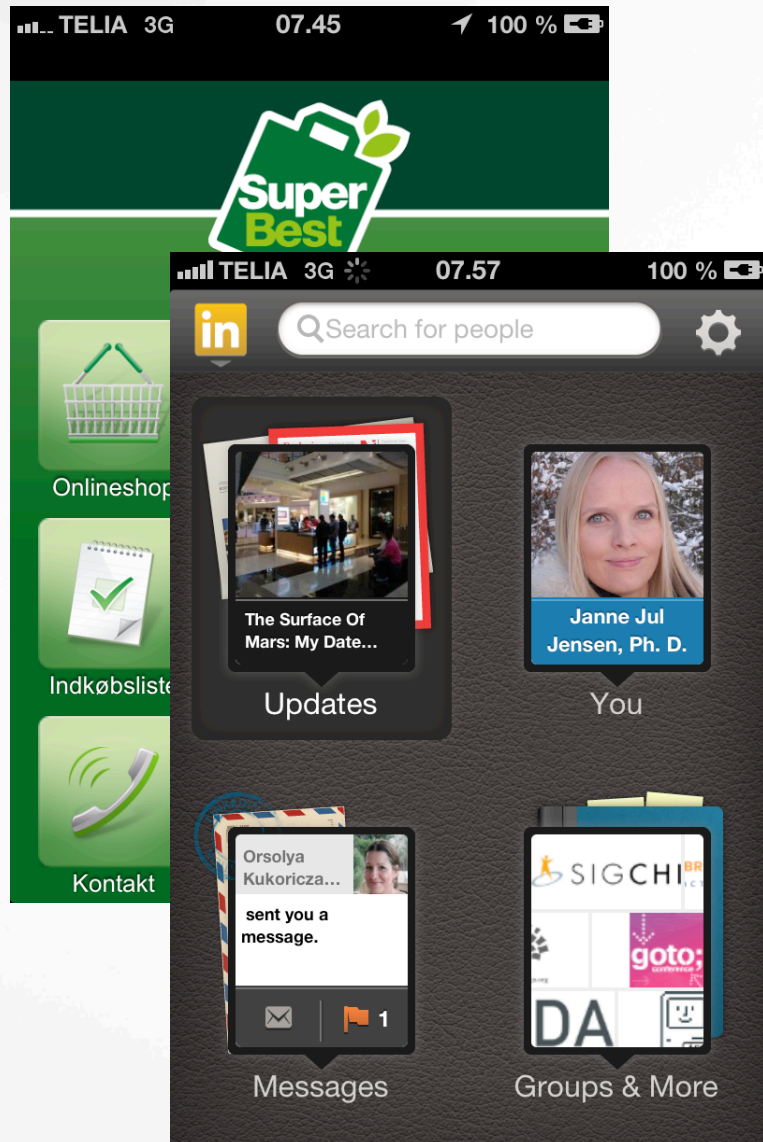
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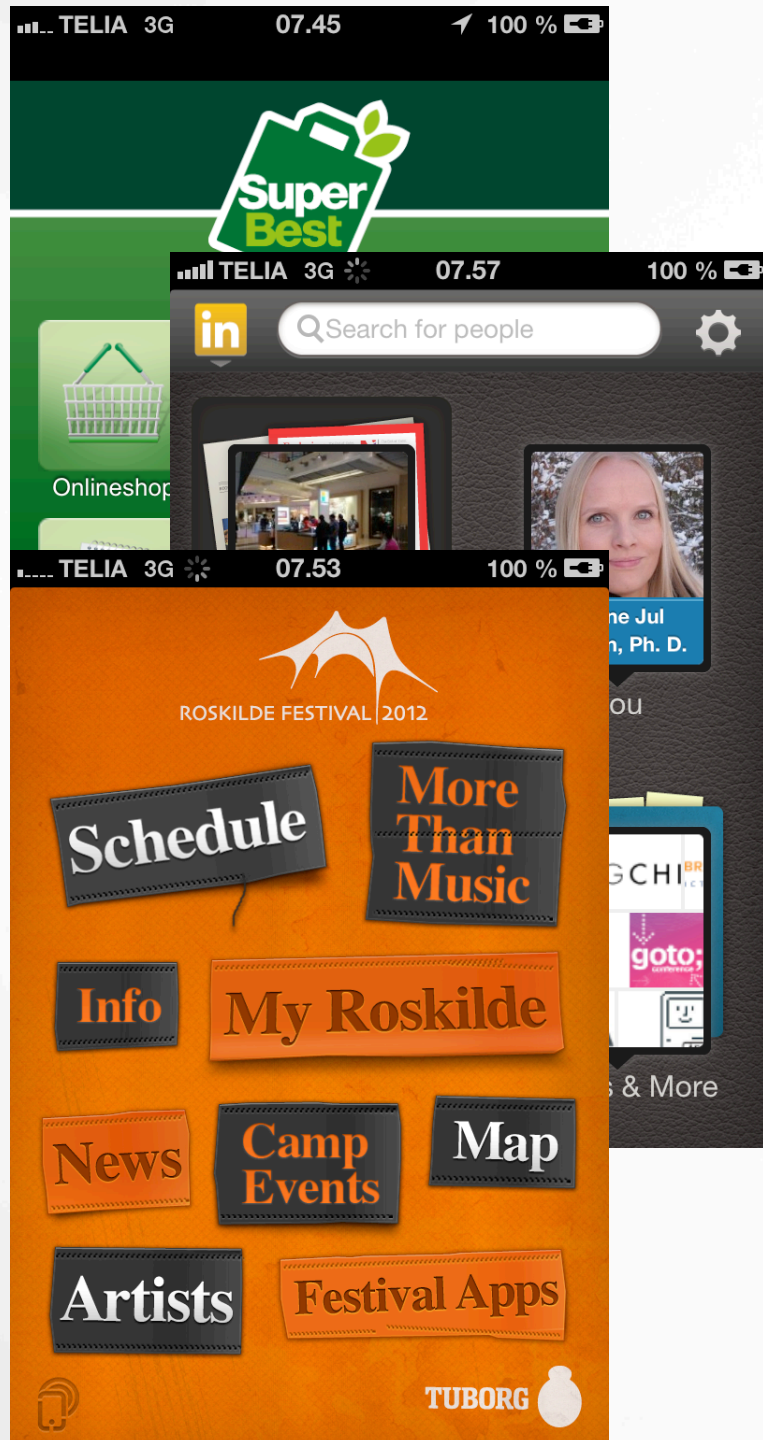
Menu Structures



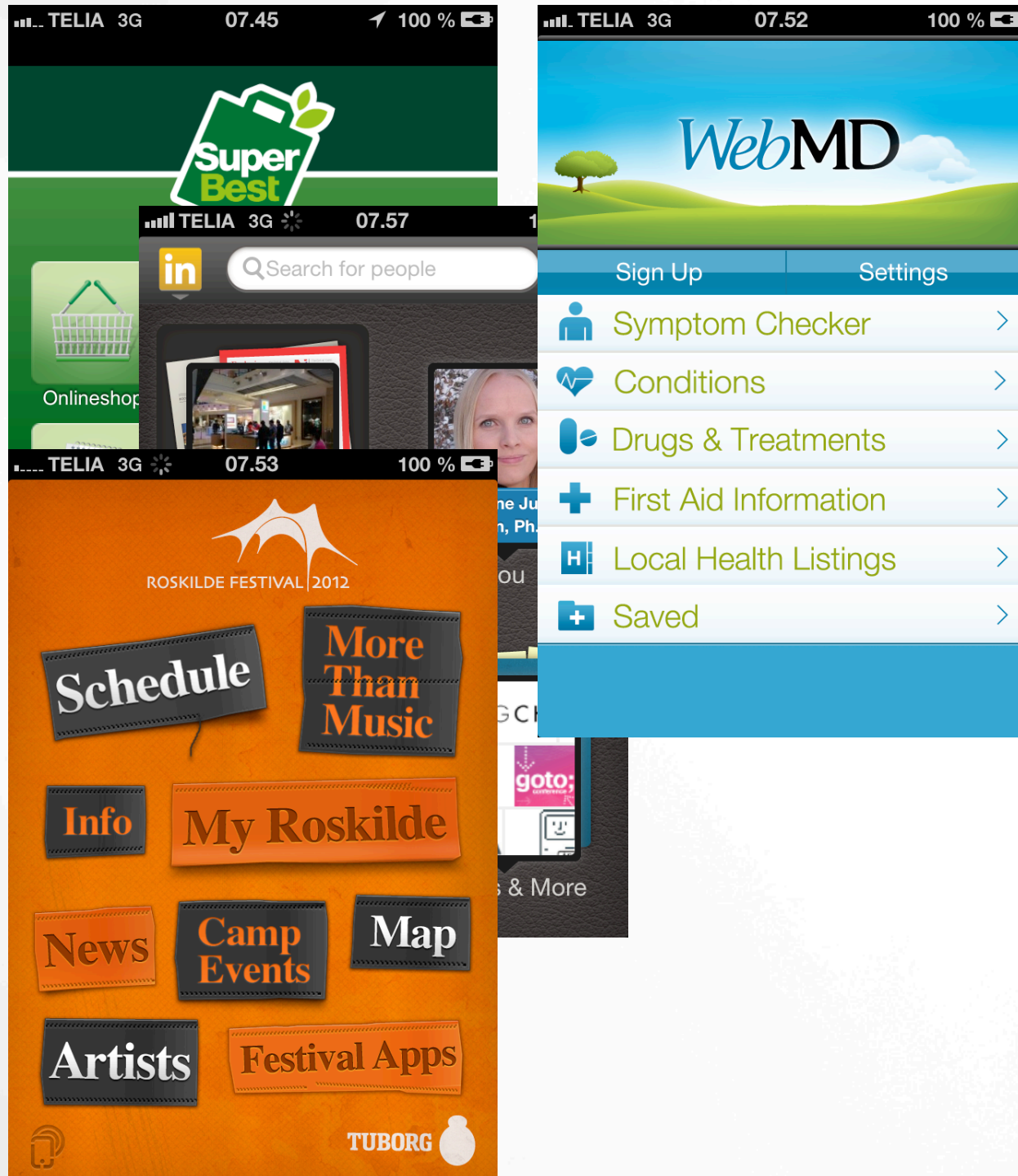
Menu Structures



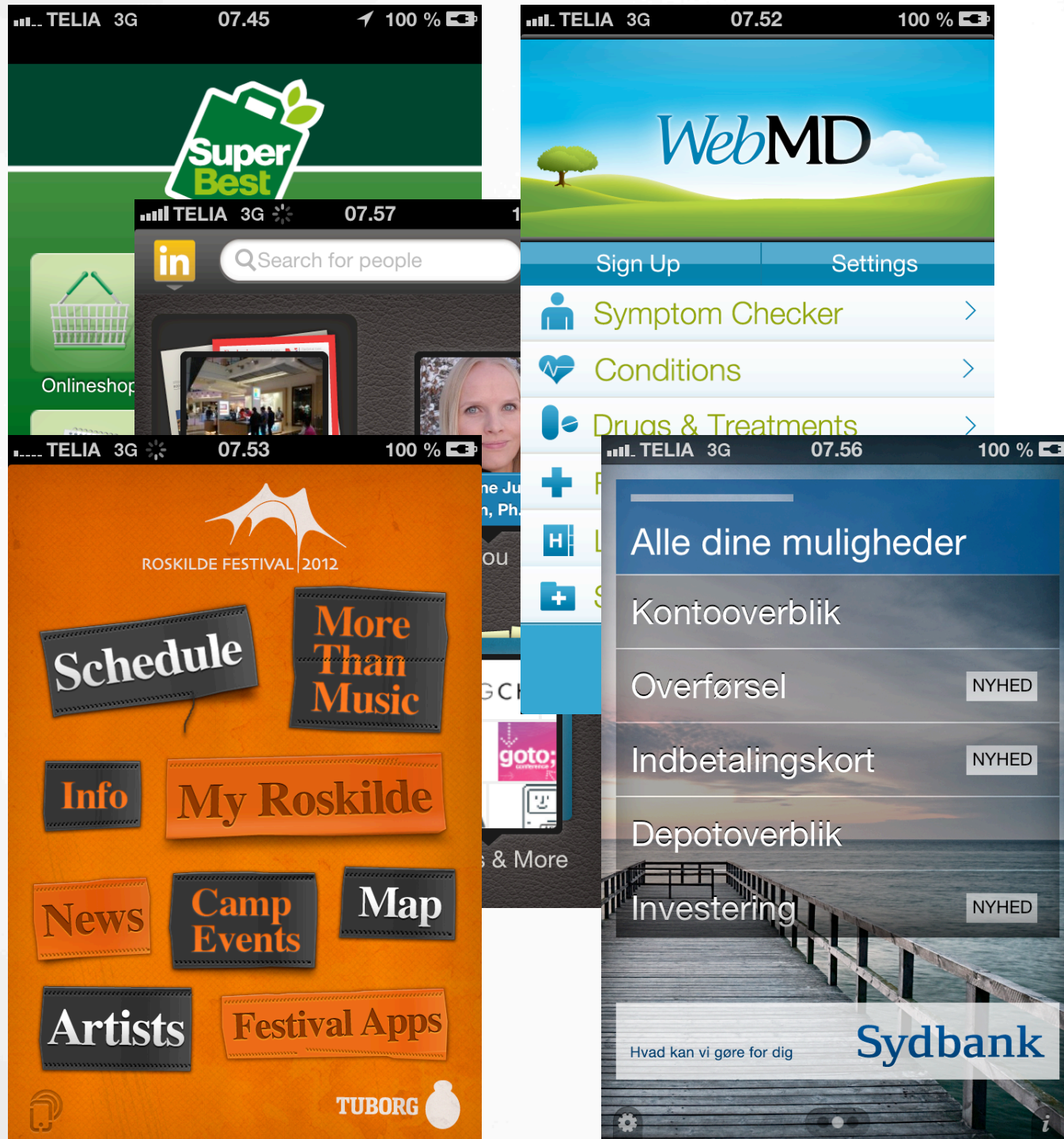
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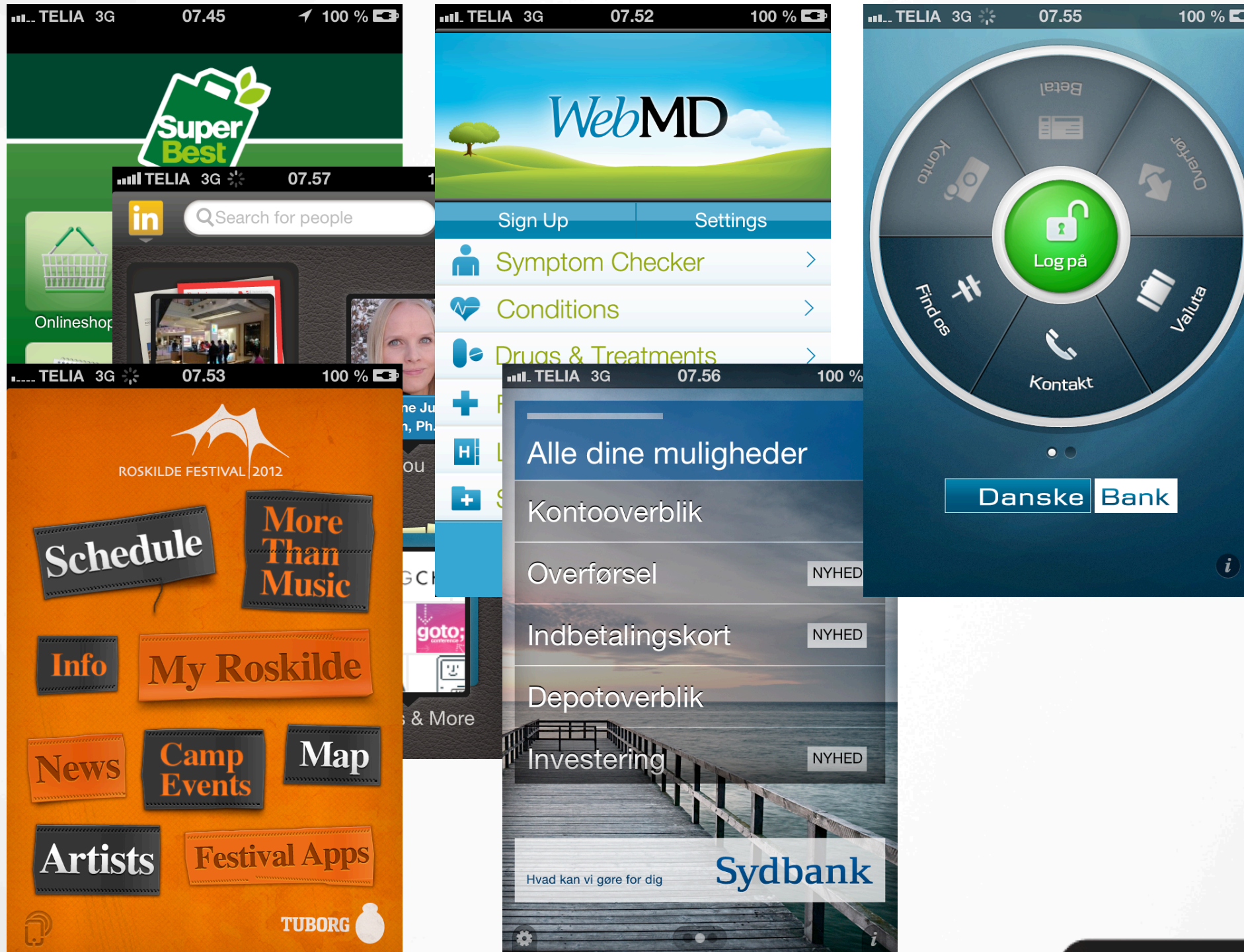
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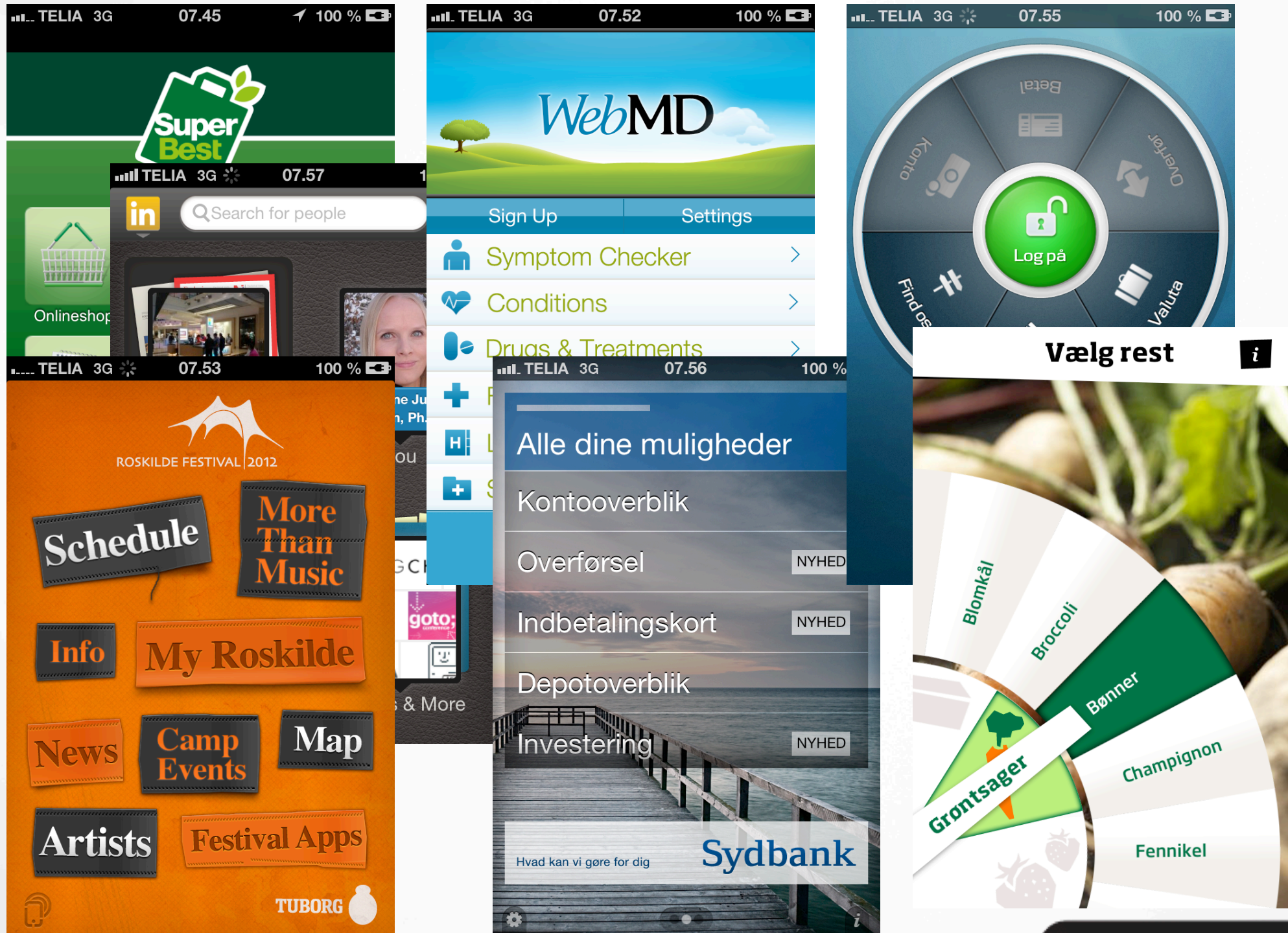
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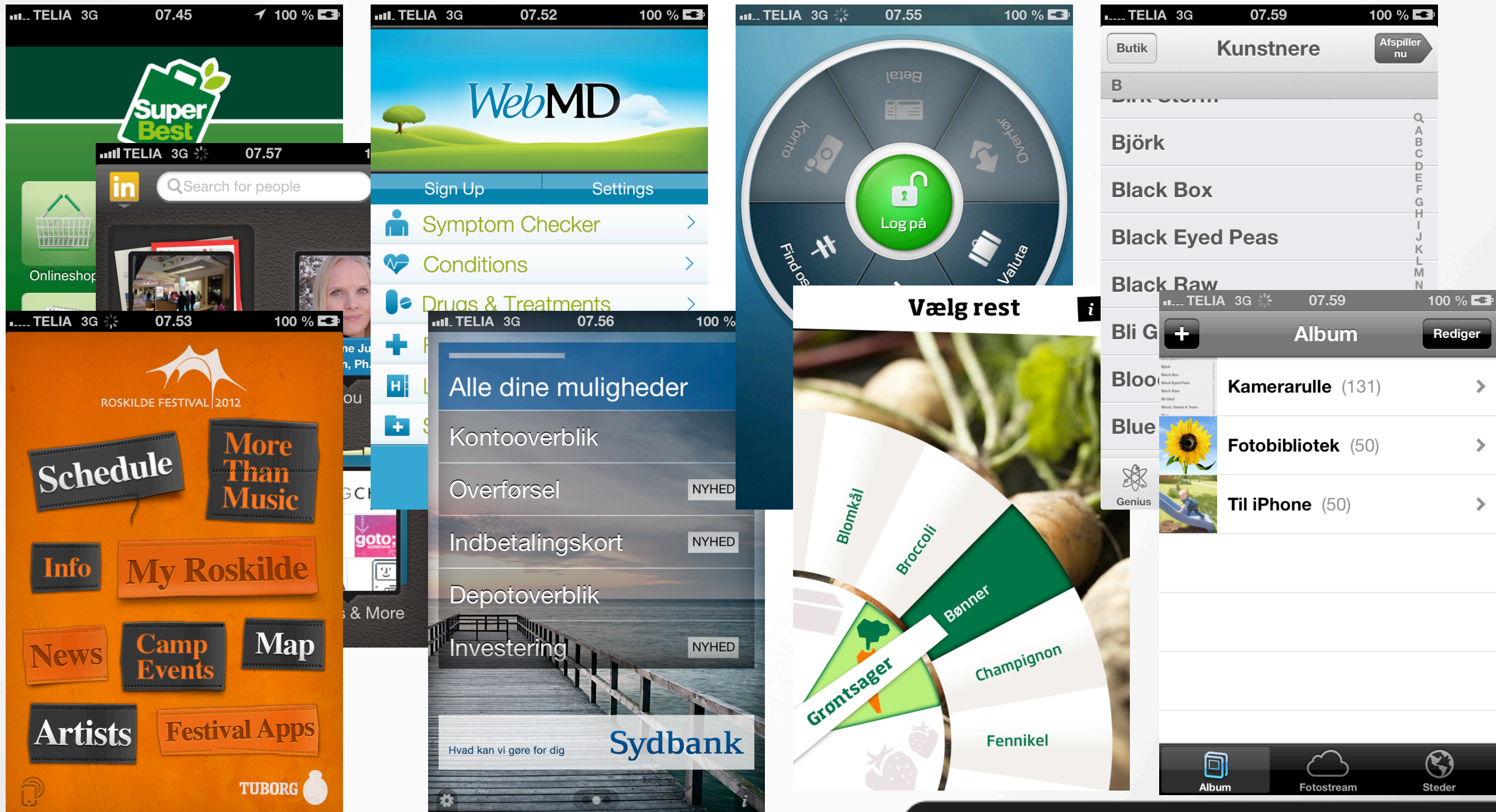
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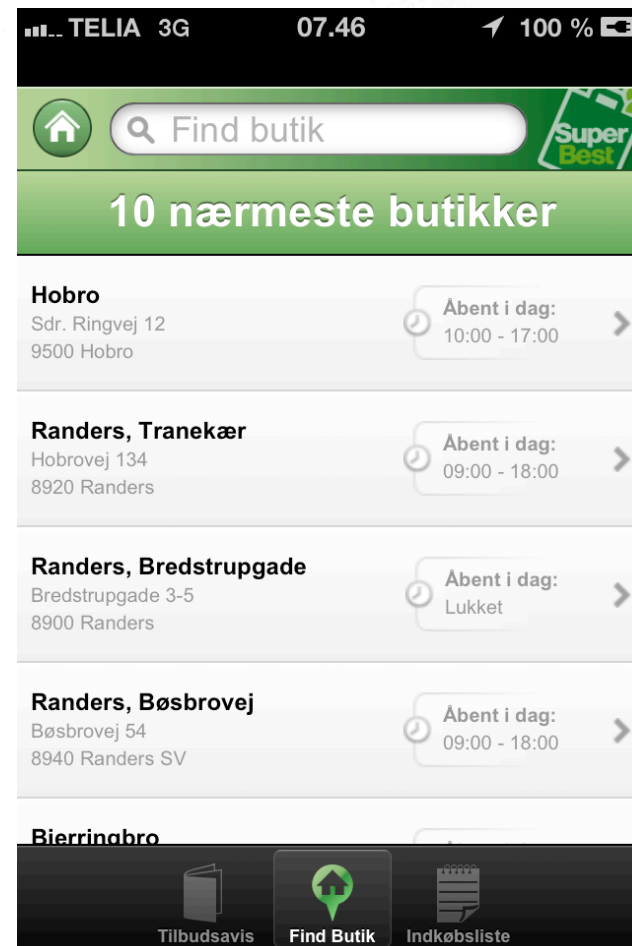
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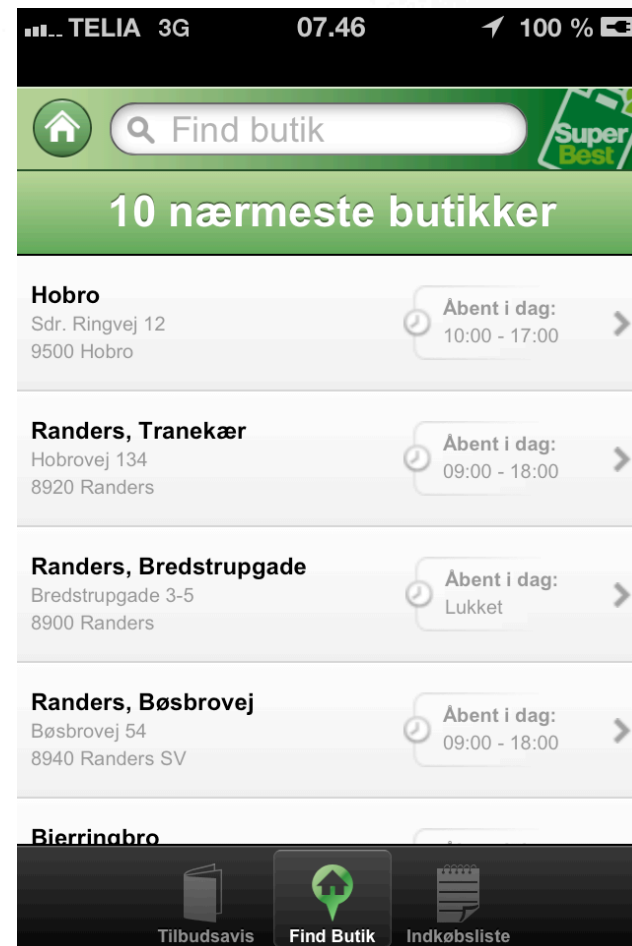
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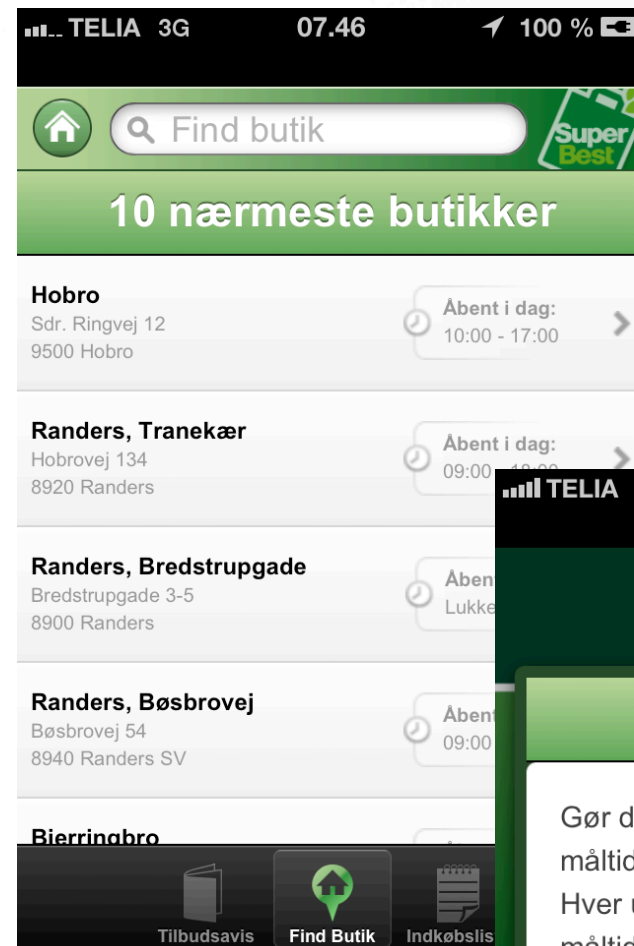
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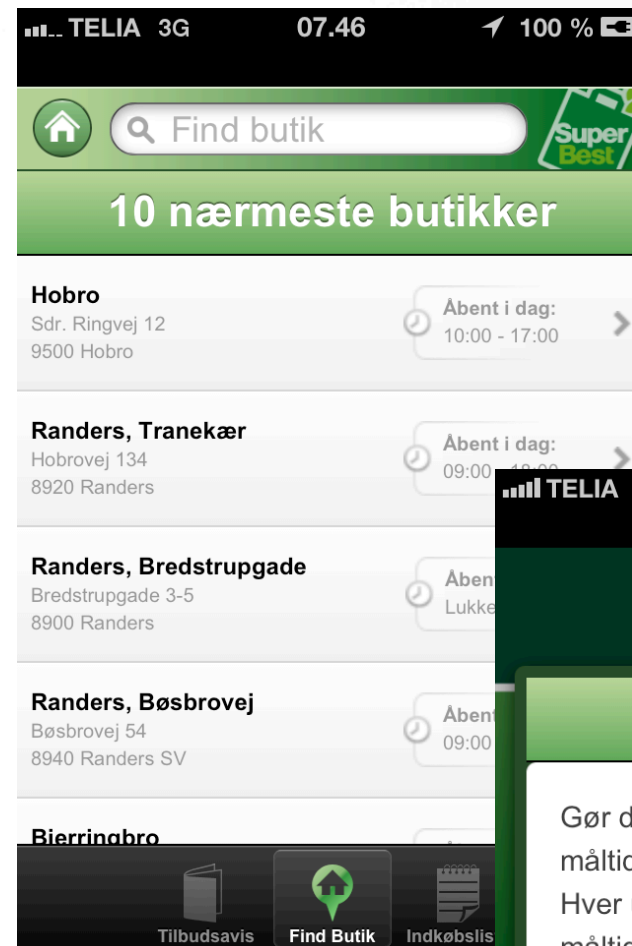
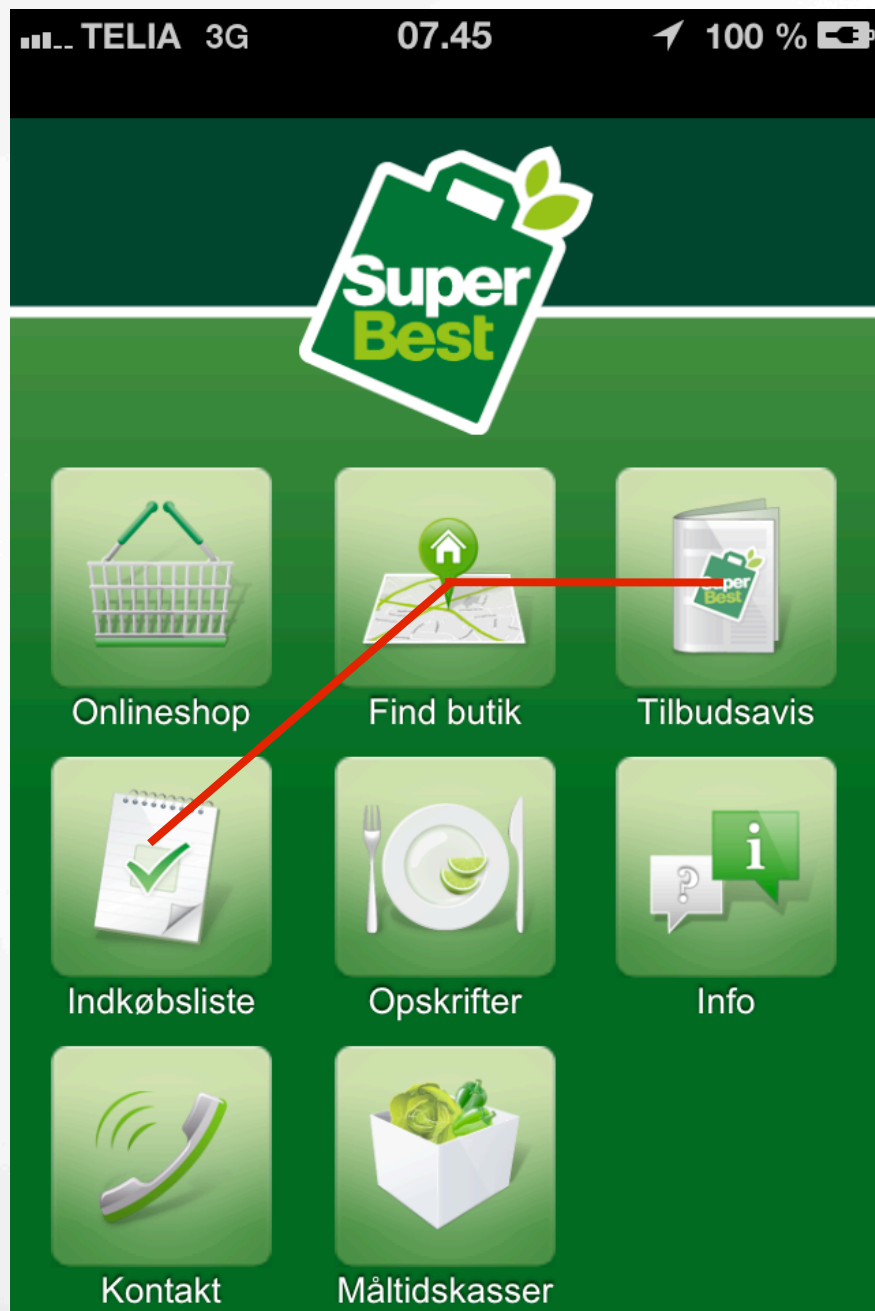
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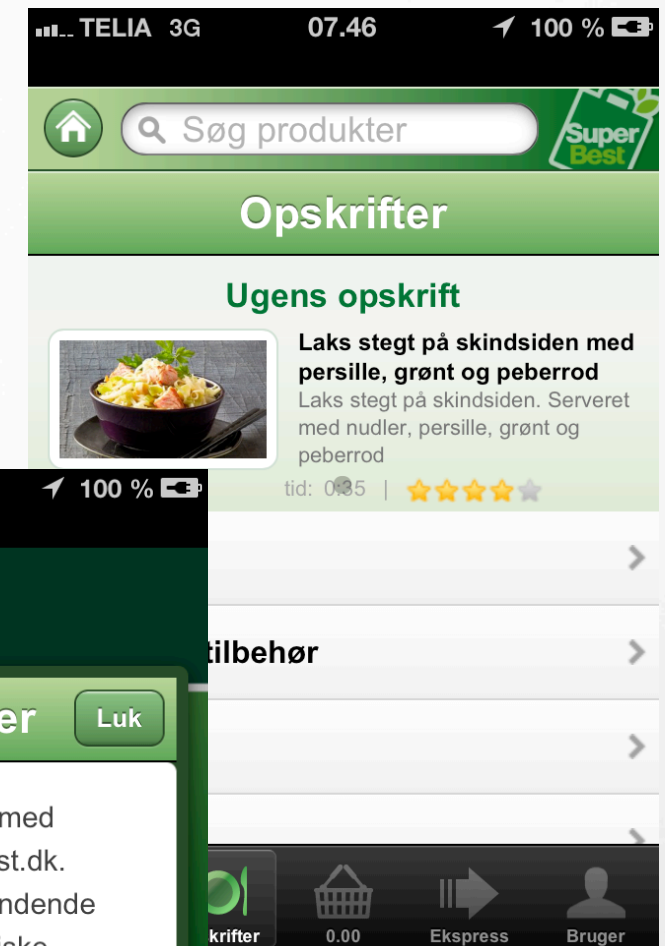
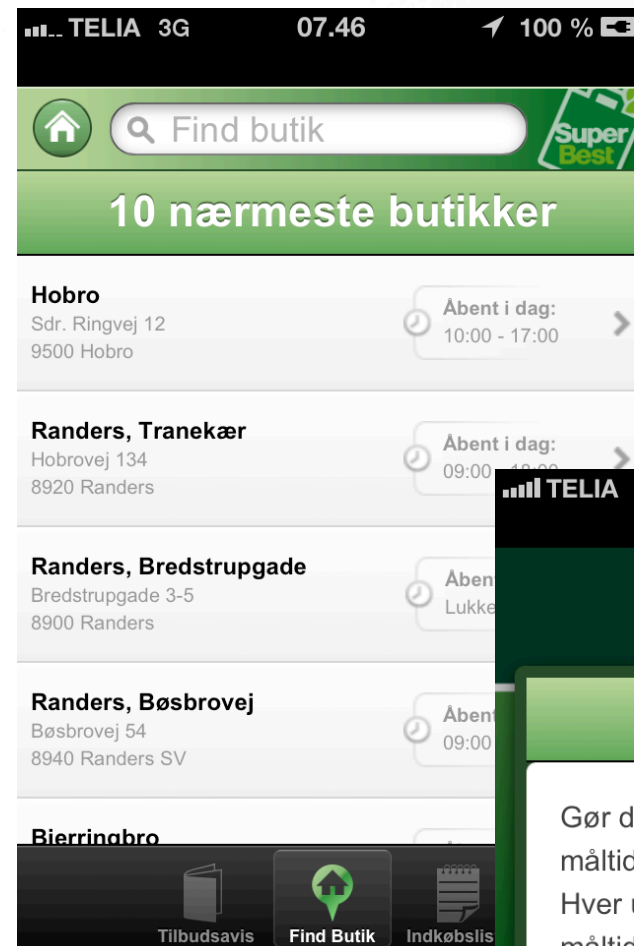
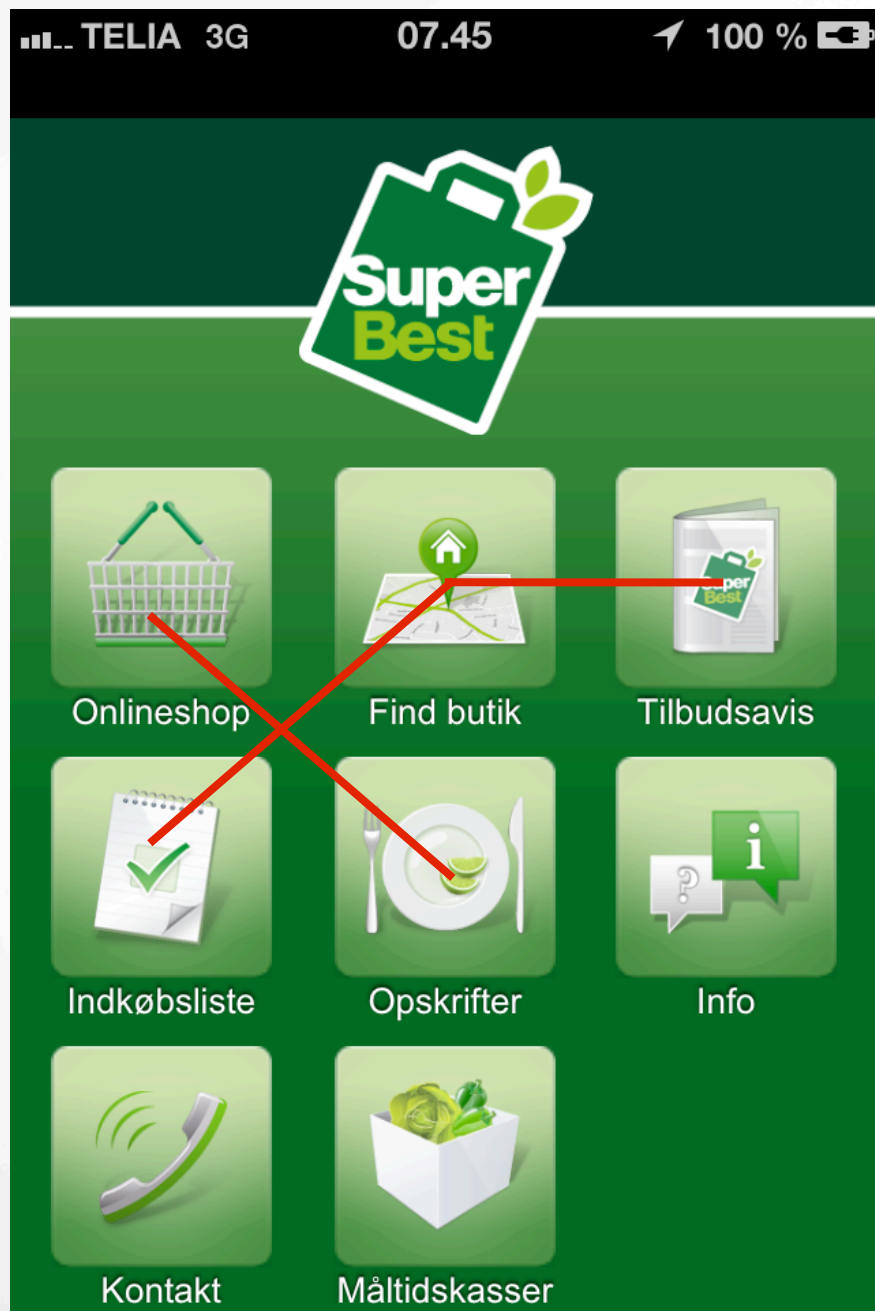
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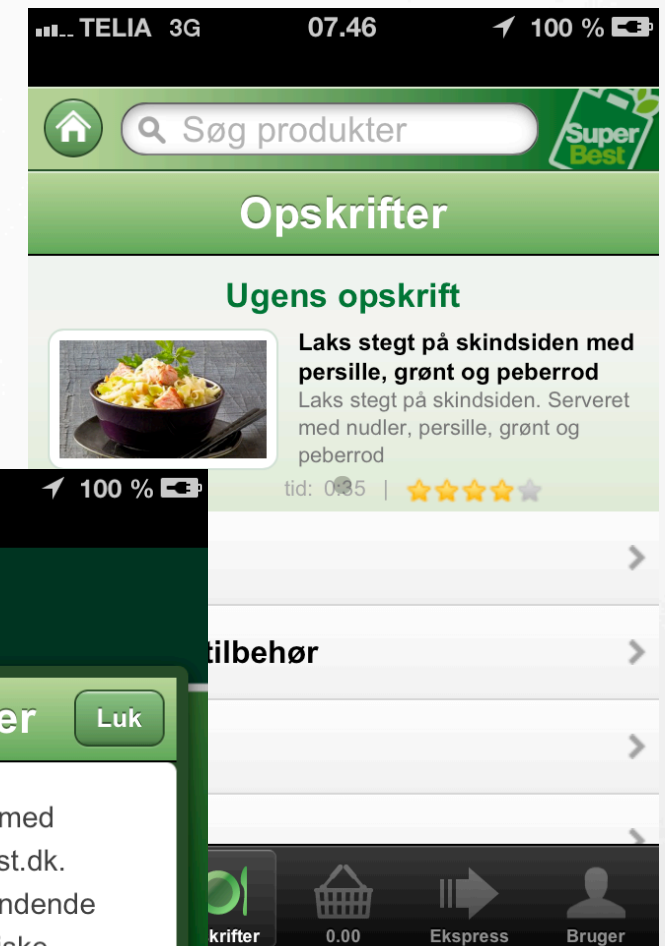
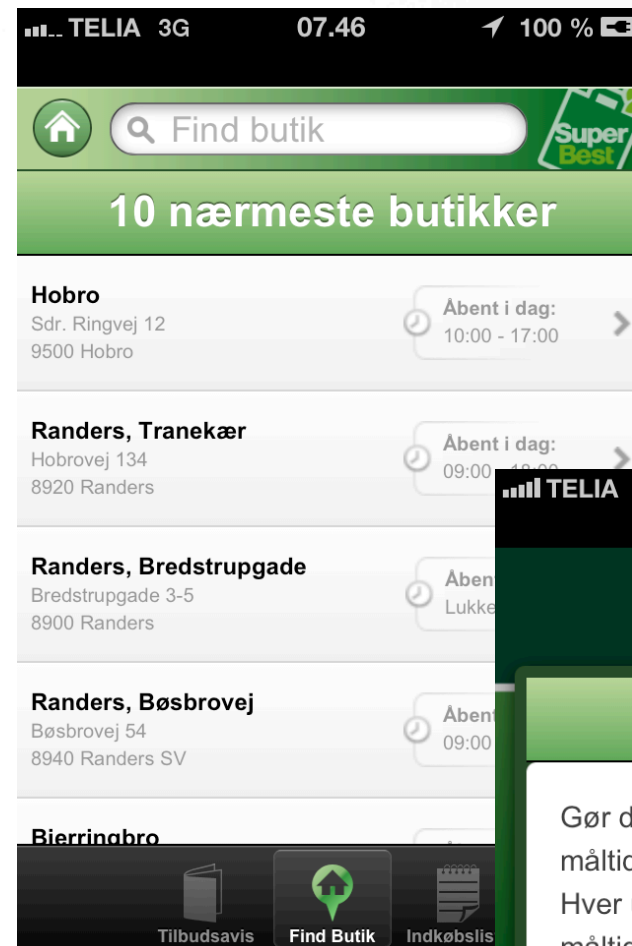
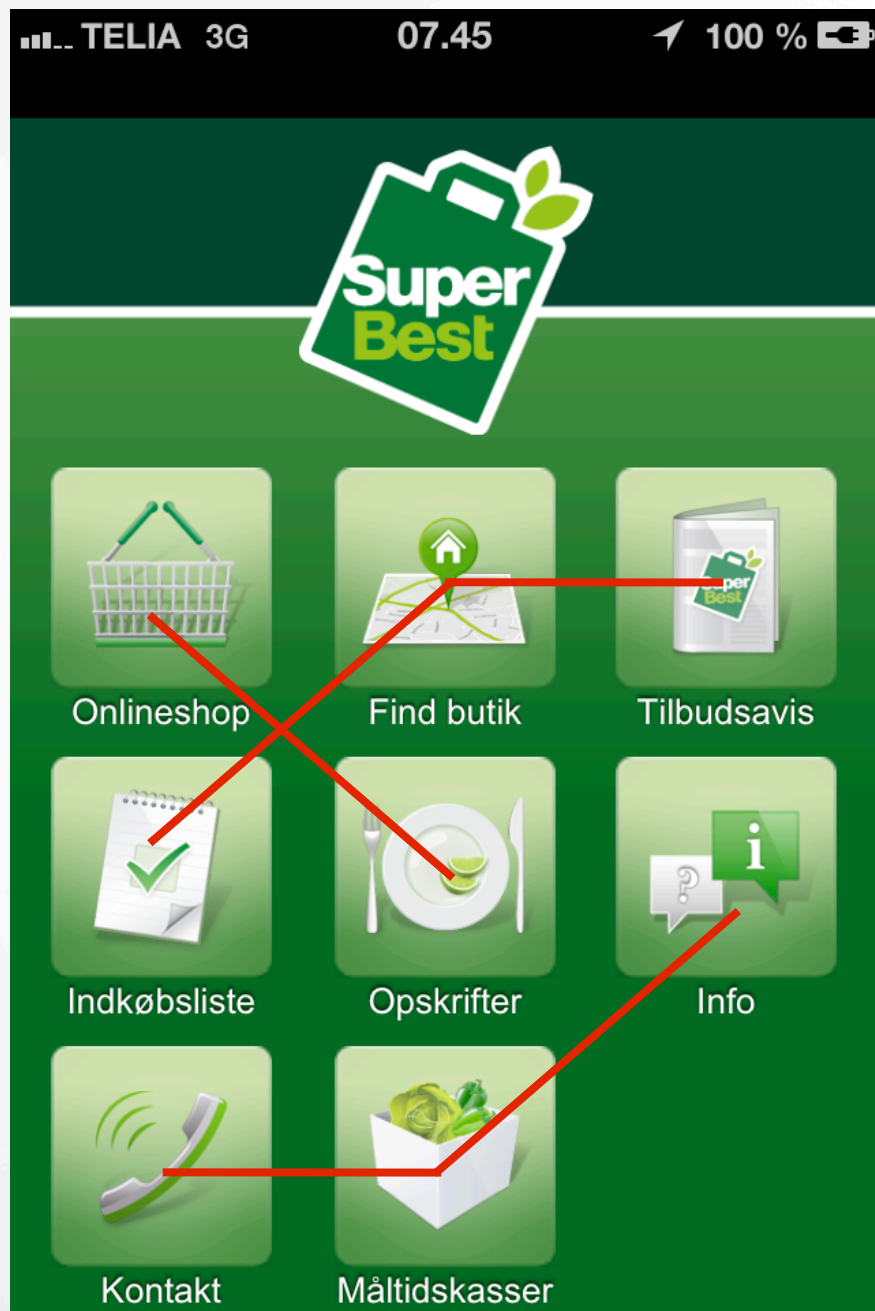
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... And How not to do it!



Use the Platform

- Video
- Gyroscope
- GPS
- Camera
- Microphone/speaker

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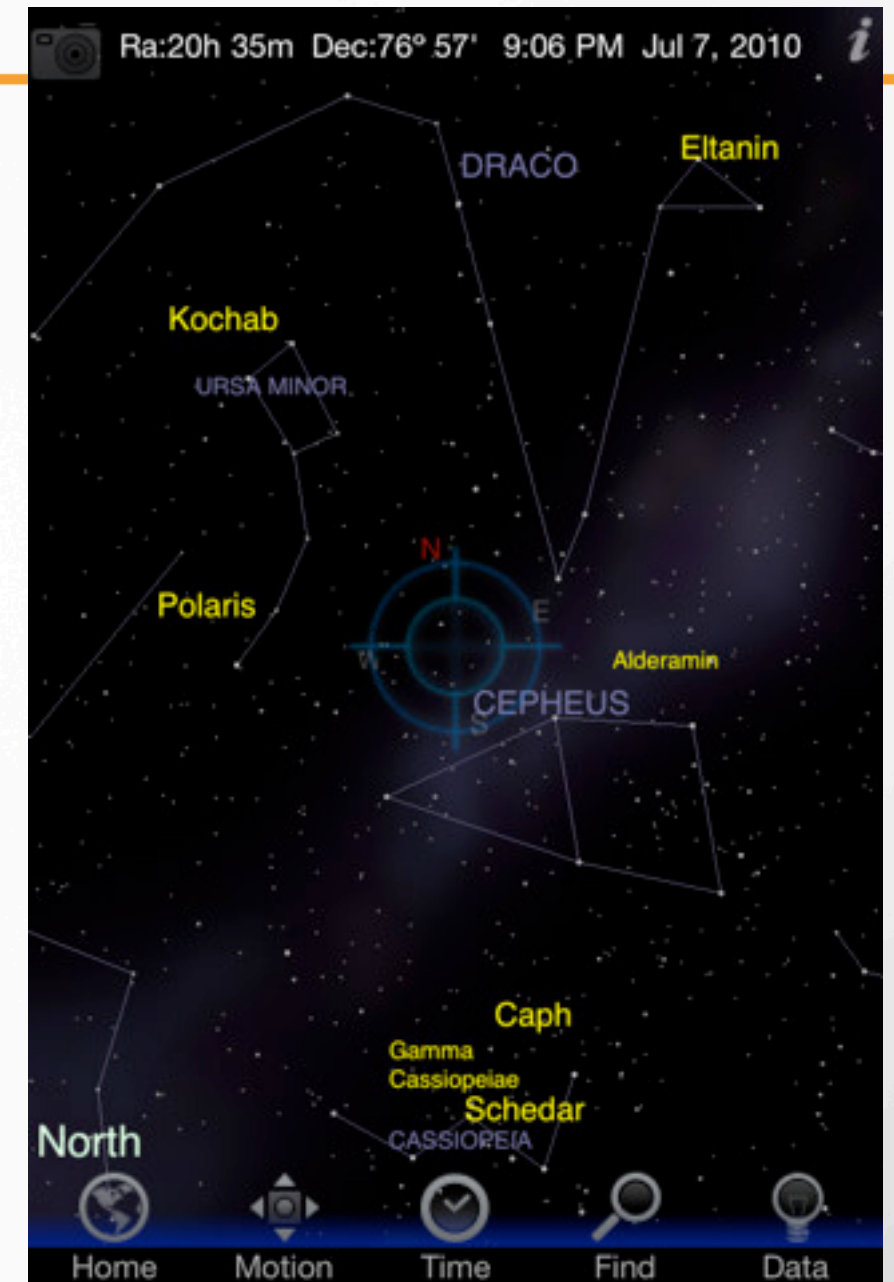
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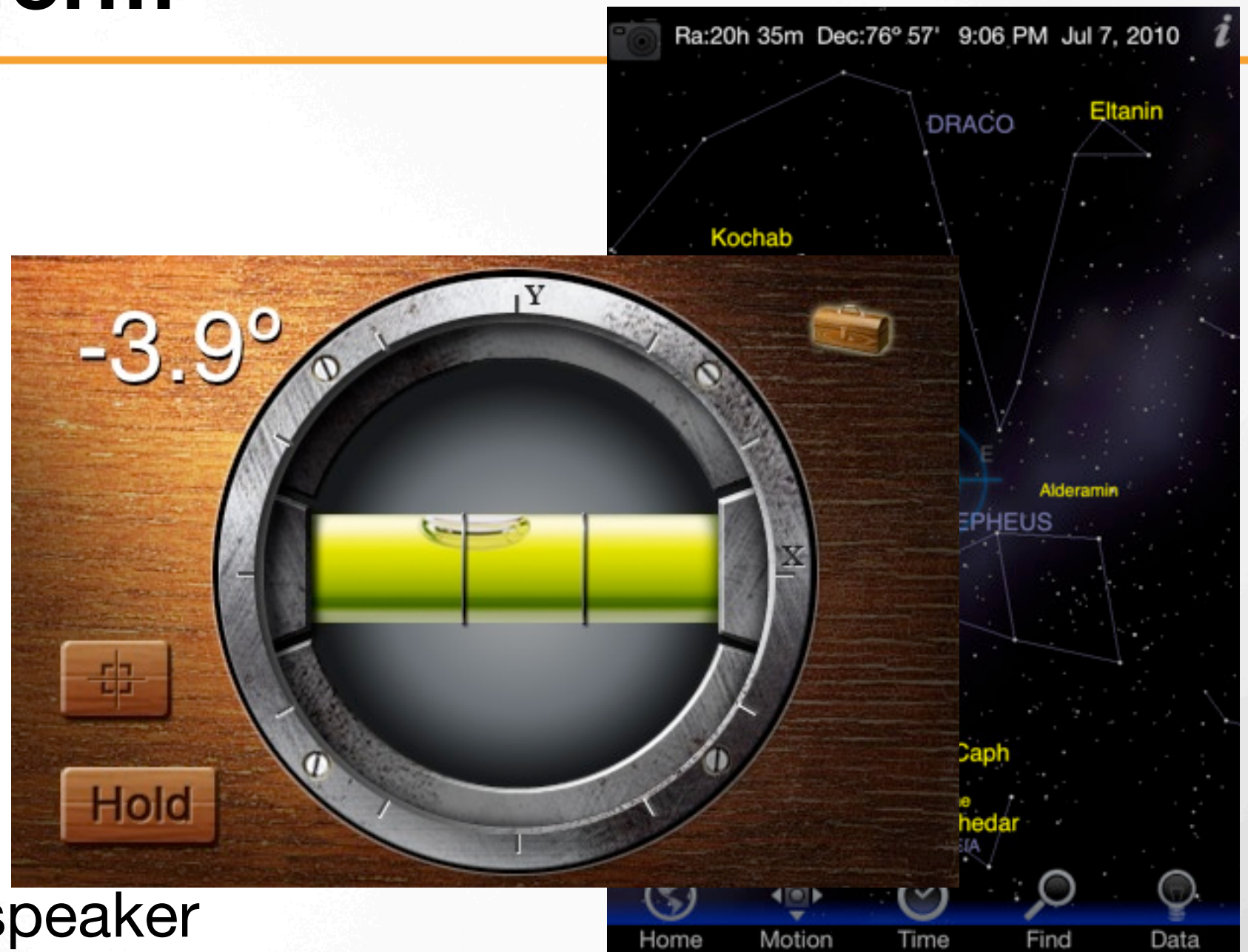
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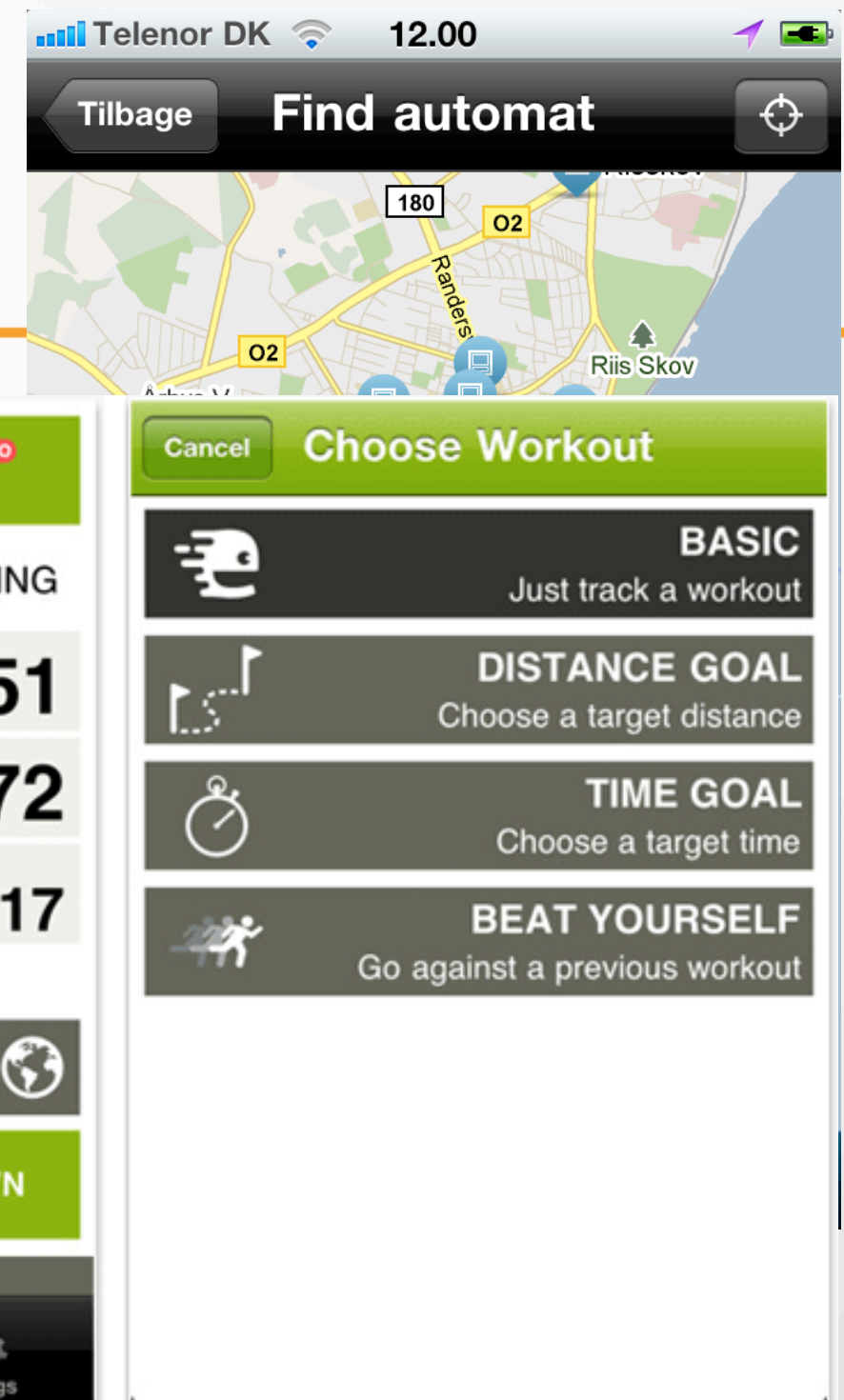
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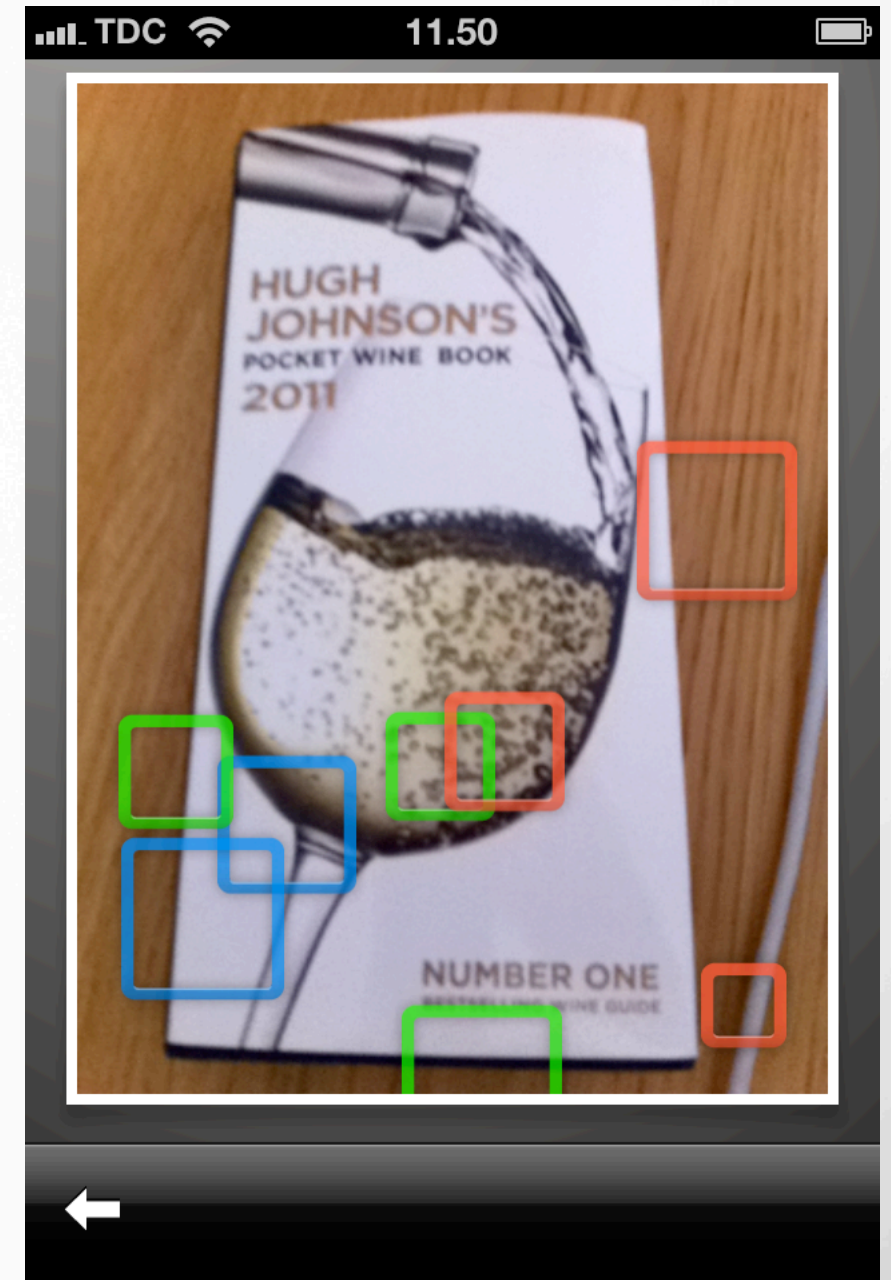
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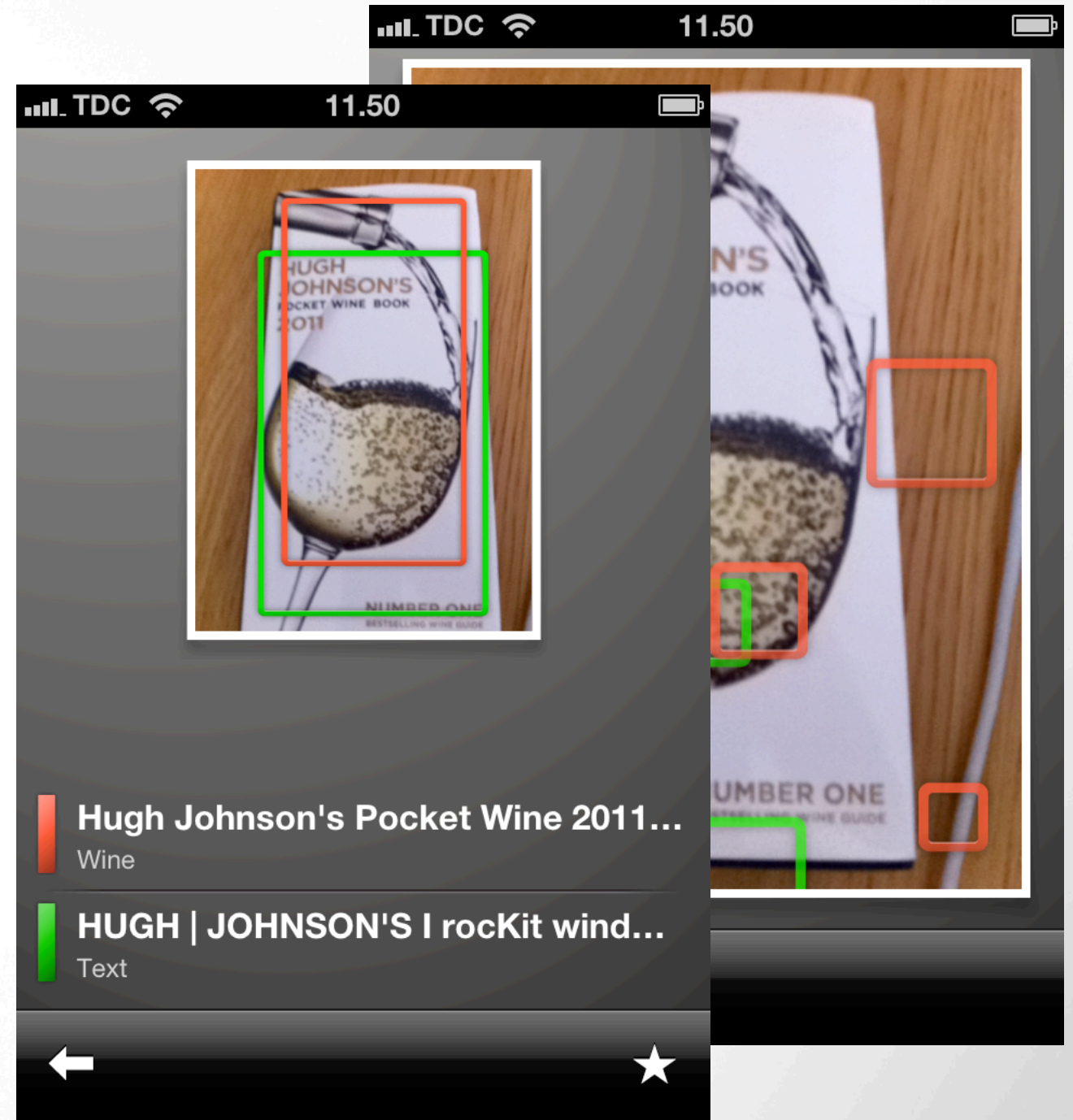
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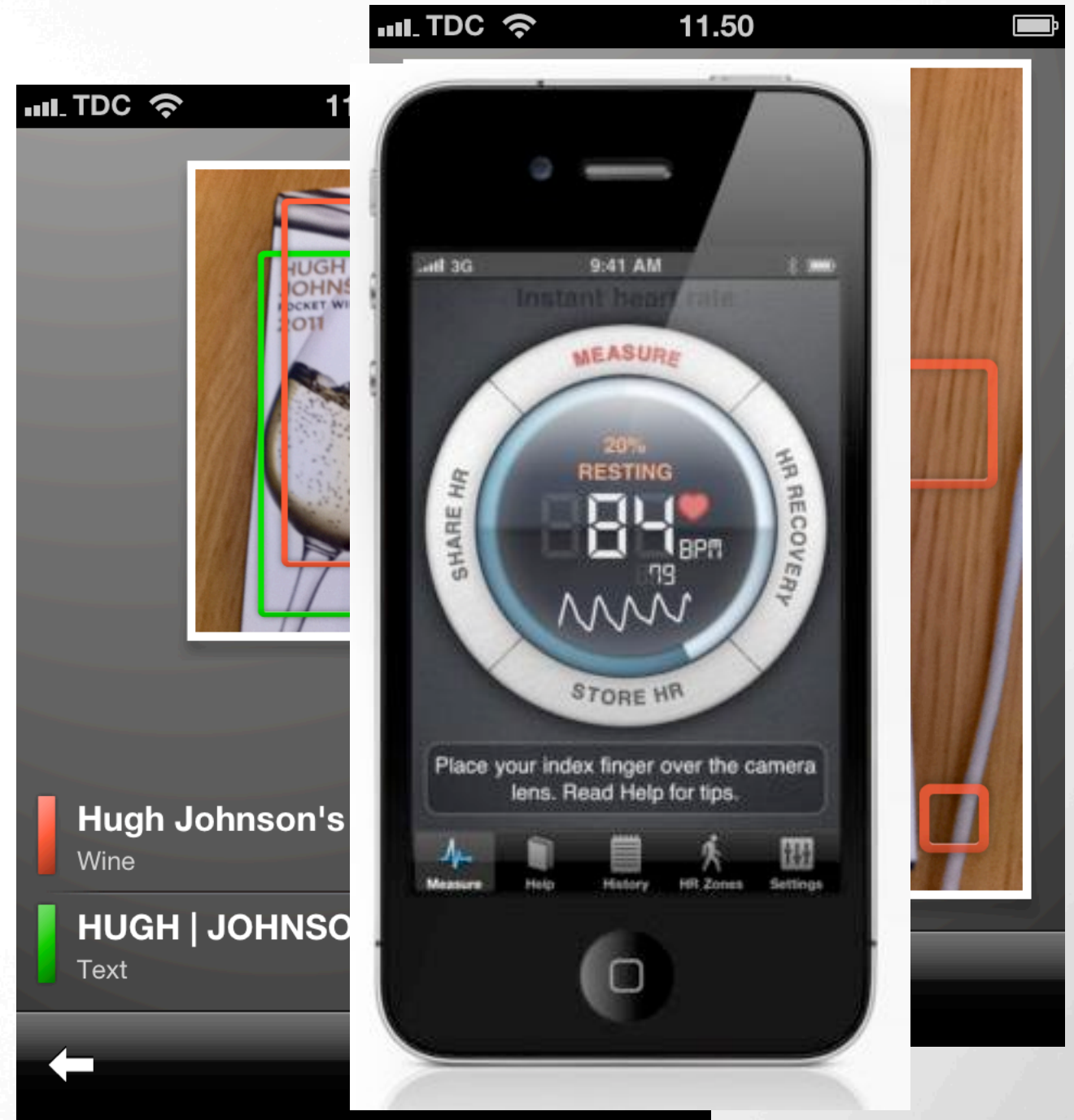
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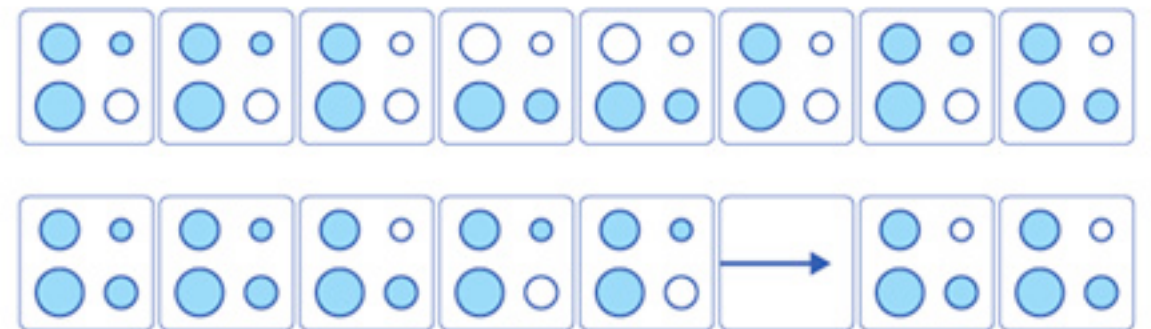


Use the Platform

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Ode To Joy



<http://ocarina.smule.com>

One Website → Many Apps!

One Website → Many Apps!

- Jyske Bank

One Website → Many Apps!



Jyske Bank



Jyske Mobilbank
Finance
Updated 26 April 2011
FREE



Jyske Bank Valutaregner
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One Website → Many Apps!

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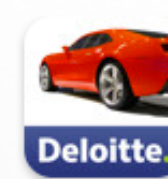


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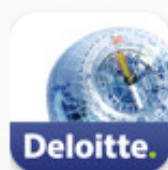
Deloitte.
Business
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Firmabil?
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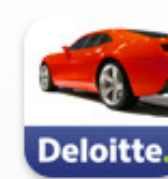


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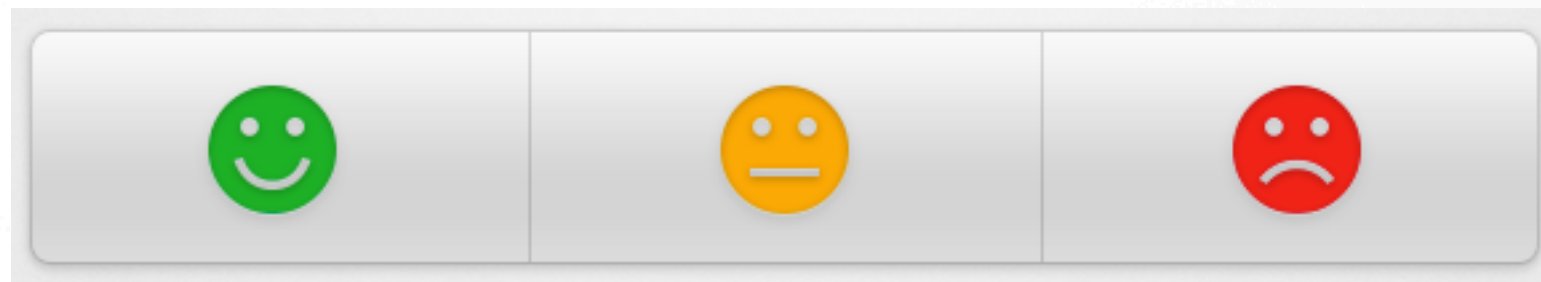


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