

# Free Data Interfaces

Alex Bowyer, 22 Apr 2018

# ALEX BOWYER - ABOUT ME

 @alexbfree



Computer Science,  
Sheffield, UK '96-'00



Software Engineer  
Hursley Labs, UK  
Java, MDM, Voice  
2002 - 2009



WORDPRESS



CloudOps

**OPENTEXT**  
THE CONTENT EXPERTS

Montreal, Canada  
2009 - 2013

Open Lab



PhD Digital Civics (CDT)  
2016 - 2020

**ZOONIVERSE**  
REAL SCIENCE ONLINE

UNIVERSITY OF  
**OXFORD**

Web Science & User Behaviour  
2014 - 2016

## WHO AM I?

- Alex Bowyer
- Computer Scientist / User Experience Researcher
- PhD Researcher in Digital Civics



**DC**  
**Digital Civics**

**EPSRC**  
Engineering and Physical Sciences  
Research Council

 **Newcastle  
University**

Open Lab

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EPSRC Centre for Doctoral Training in Digital Civics

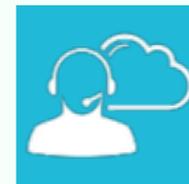


MRes:  
Understanding  
the Family  
Perspective  
on Family  
Civic Data

PhD: Empowering  
Citizens  
through  
Smarter Data Interfaces



# The Big Issue with Big Data



Centralization of Digital Services



Industrial Scale Data Collection



Big Data-based Decision Making



Disempowerment of Citizens

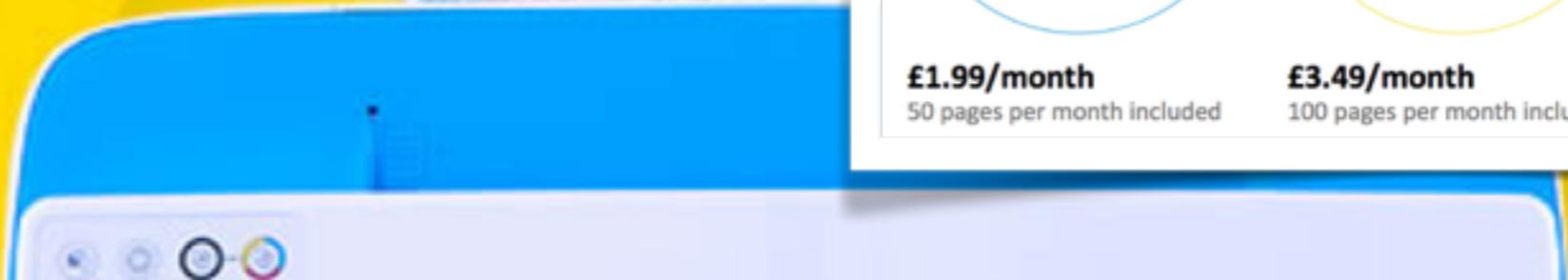
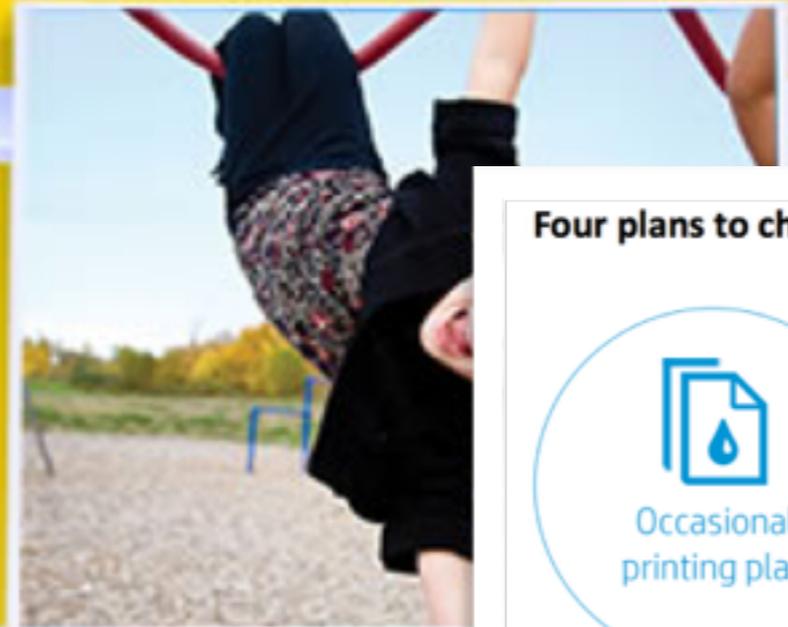
# + Internet businesses act against us



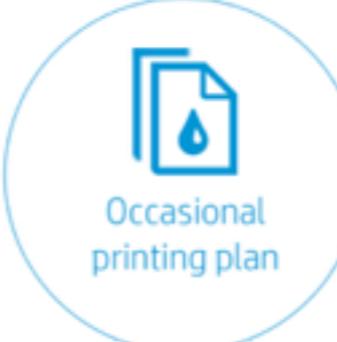


# Bring your memories to life with Instant Ink

Let your printer orders ink for you!



## Four plans to choose from.



Occasional  
printing plan

**£1.99/month**  
50 pages per month included



Moderate  
printing plan

**£3.49/month**  
100 pages per month included



Frequent  
printing plan

**£7.99/month**  
300 pages per month included





## FROM AN OPEN WEB TO CLOSED ECOSYSTEMS

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- The cost of “free”
- Ad models => Lock-In
- Service models => Lock-In
- Data portability => Bad for business
- Open standards => Bad for business
- Keeping users => “One-stop shops”

# DISEMPOWERING TREND #1: THE OVER-SIMPLIFICATION OF TECH

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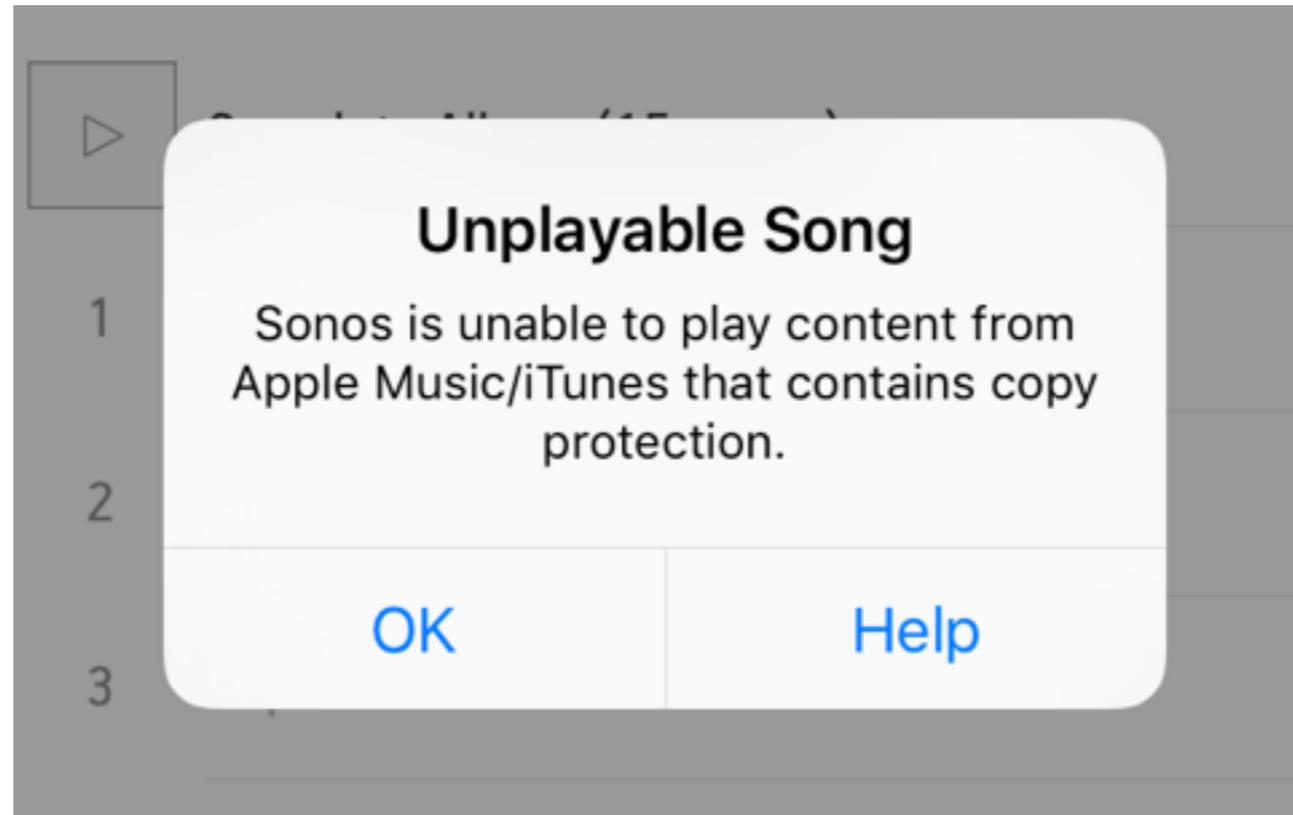


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## THE IMPORTANCE OF "SEAMS"

# CONTROLLING USERS WITH OPINIONATED TECHNOLOGY

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<b>Data Trapped by</b>	<b>Example</b>	<b>Details</b>
Application	MyFitnessPal	Fitness diary export is a premium feature
Platform	iPhone Photos	Can only access via Apple-approved apps
File format	Adobe projects	Only openable in paid Adobe software
Connectivity / Network	'Super Mario Run' game	Requires Internet connectivity to load
Physicality	Files on home PC	Only accessible via specific machine
Service	Kindle books, Netflix movies, Spotify music	Deletable from device without user consent
Specific Device	Saved routes/maps/timetables	inaccessible if battery dies or phone breaks
Paywall	Telegraph news article	Unable to read without paying
Ad views	Facebook, Twitter feeds	Must view ads along with friends' posts
Data sacrifice	Library wi-fi	Must provide name, address, email to use

**Table 1:** Examples of the ways your data can become trapped.

# COMPANIES NOW BUILD FOR A HOMOGENOUS WORLD THAT DOESN'T EXIST

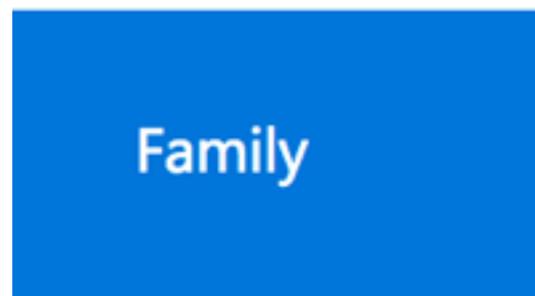
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amazonfamily

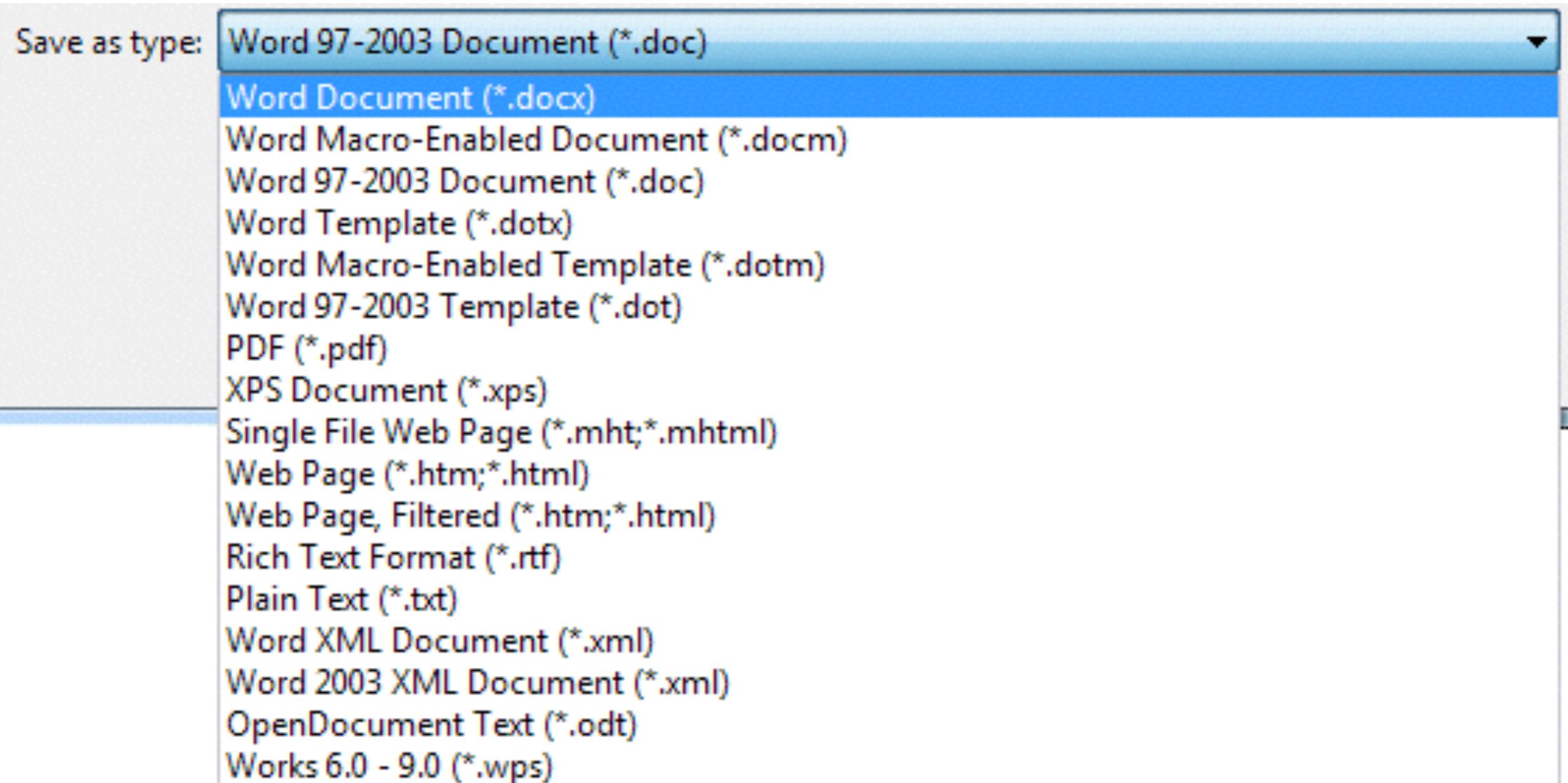


Microsoft



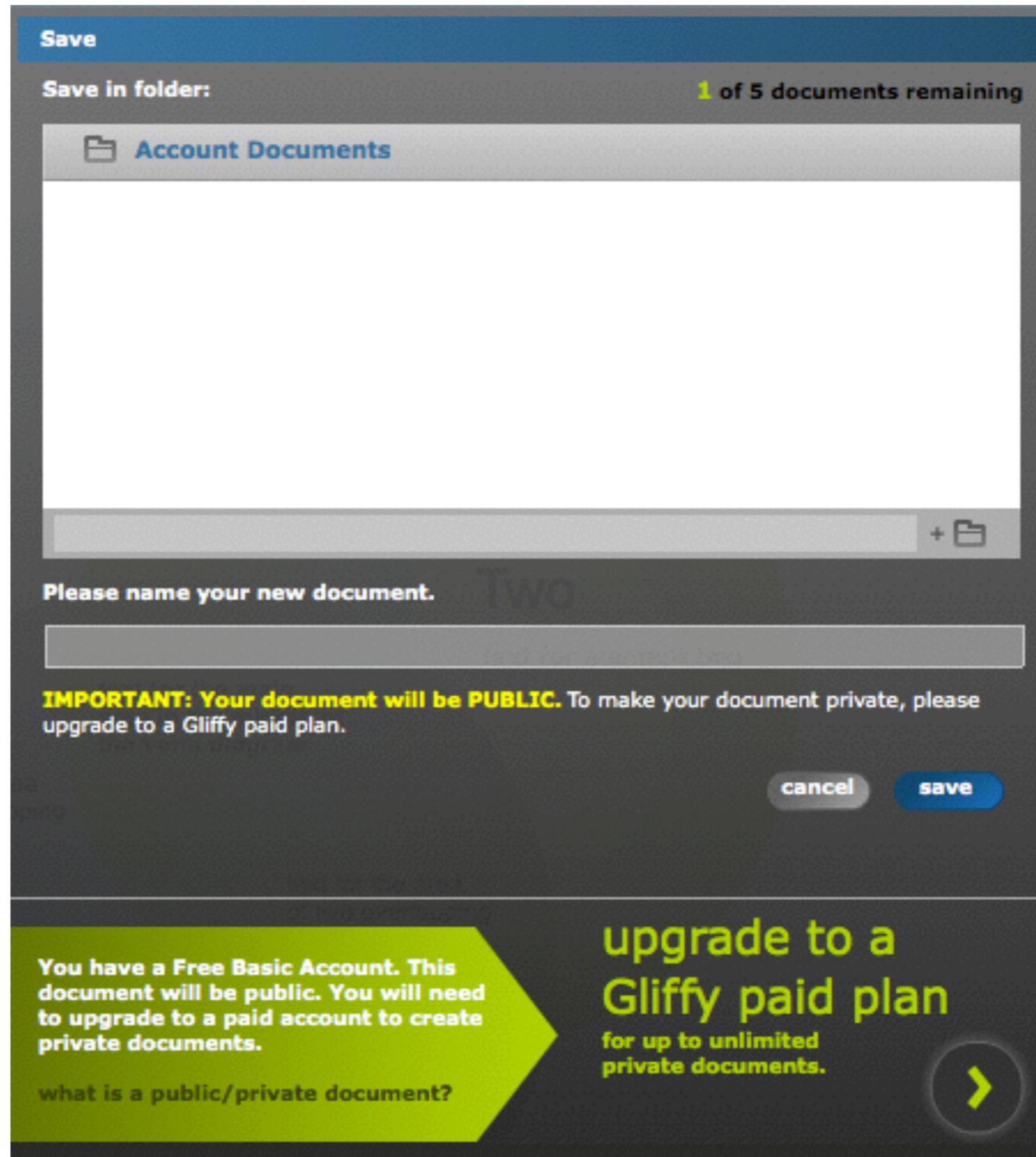
# DISEMPOWERING TREND #2: THE COMMERCIALISATION OF UX

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# DISEMPOWERING TREND #2: THE COMMERCIALISATION OF UX

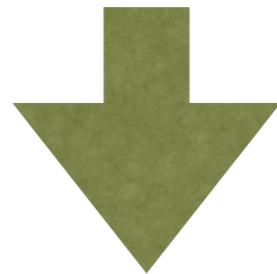
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# DISEMPOWERING TREND #2: THE COMMERCIALISATION OF UX

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What does **the user** want to do?



What do **we** want the user to do?

# HOW CAN WE BUILD AN INTERFACE FOR YOUR **WHOLE** DIGITAL LIFE?

## Barriers

- locked down APIs / trapped data
- commercial motivation to lock users in, keep their data

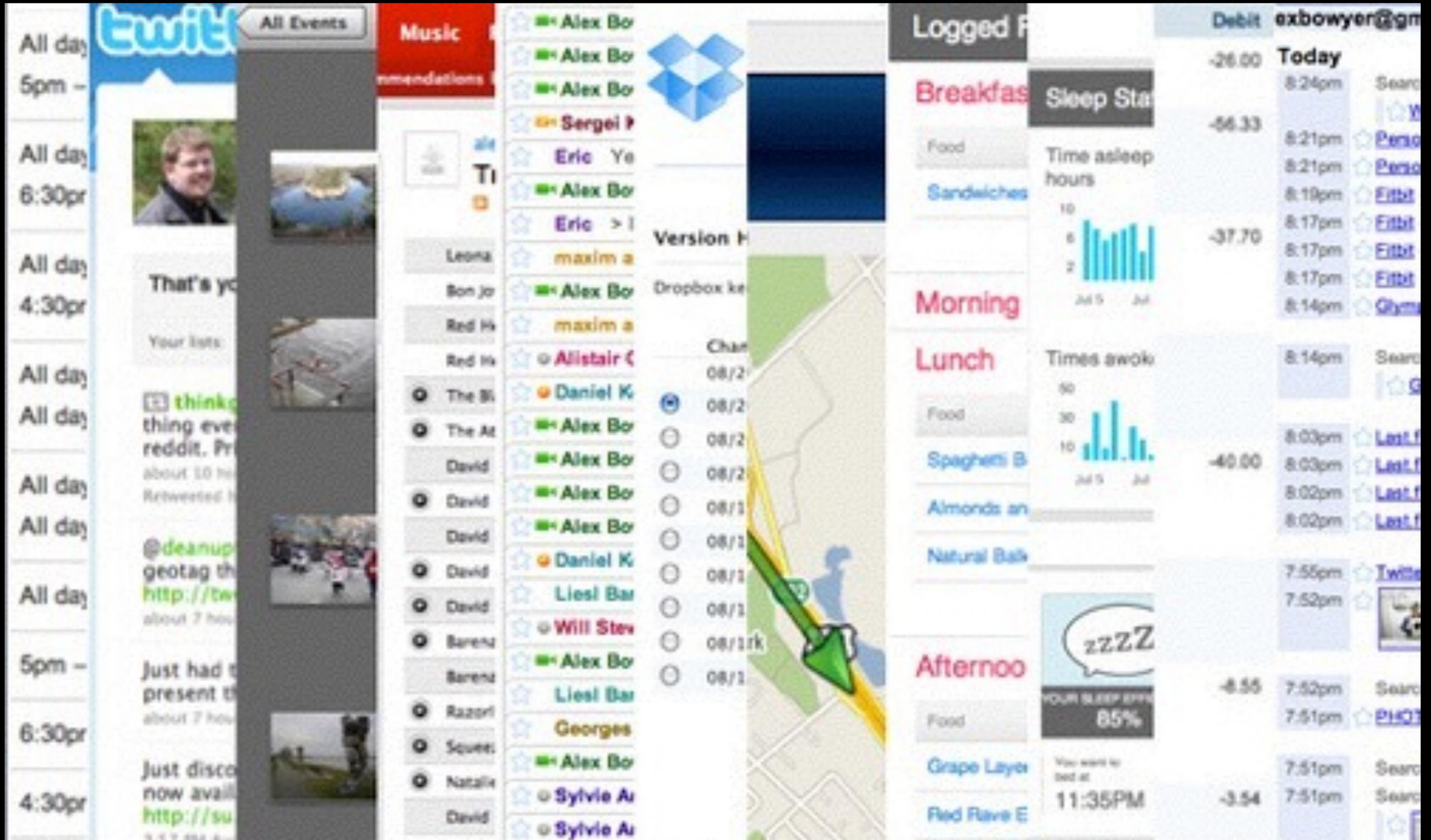
## Vision

- Weiser - “move technology to the background” / build for whole person (see also Abowd, Tristan Harris)
- Human - Data Interaction - agency, legibility, negotiability

# FREE DATA INTERFACES

- Recognise the complexity
  - Build for it
  - Surface data restrictions / trappedness
    - to raise awareness & accountability
- Use representations of data that is inaccessible, to complete the picture
  - “by reference” / pointers
  - GTD / productivity

# TIME AS A UNIFYING PROPERTY



Calendar

Twitter

Photos

Music played

Email threads

File edits

GPS trace

Food log

Sleep tracker

\$ transactions

Web history

The streams of my digital life



a personal data timeline



# INTERFACE TO A HUMAN CONCEPT, NOT TO WHERE THE DATA IS

Sights we visited Restaurants Hotels Activities

- Vigelandsparken Sculpture Park ^
- Holmenkollen
- Akershus Fortress
- National Gallery, Oslo
- TusenFryd ThemPark, Oslo
- Fram Museum & Ship
- Velmunden Fjords
- Femundsmarka v

view photos

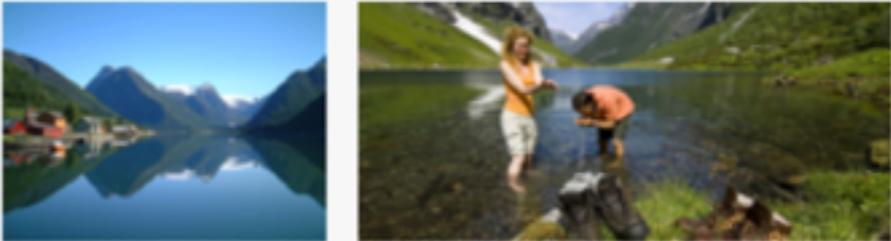
web history

notes...

look up online

Blog entries Photos by date Photos by place

June 25



June 22



## NORWAY VACATION 2012

Emails Ticket PDFs Itinerary

<input type="checkbox"/>	Expedia (8)	Trip Confirmation & Itinerary
<input type="checkbox"/>	Helga (16)	Which day are you getting here?
<input type="checkbox"/>	Hertz	Oslo - Economy Car Reservation - 4 days
<input type="checkbox"/>	Geoff Bingham	When you get back...
<input type="checkbox"/>	LandetEscap	Din forespørsel om overnatting

Transaction record To do list Purchases

- Write to Helga to thank her for having us
- Send Oslo tips to Geoff
- Pay credit card balance
- Follow up with car rental company re overpay
- Book train trip to Flam

# INTERFACE TO A HUMAN CONCEPT, NOT TO WHERE THE DATA IS

## Locational Record for [John Smith](#)

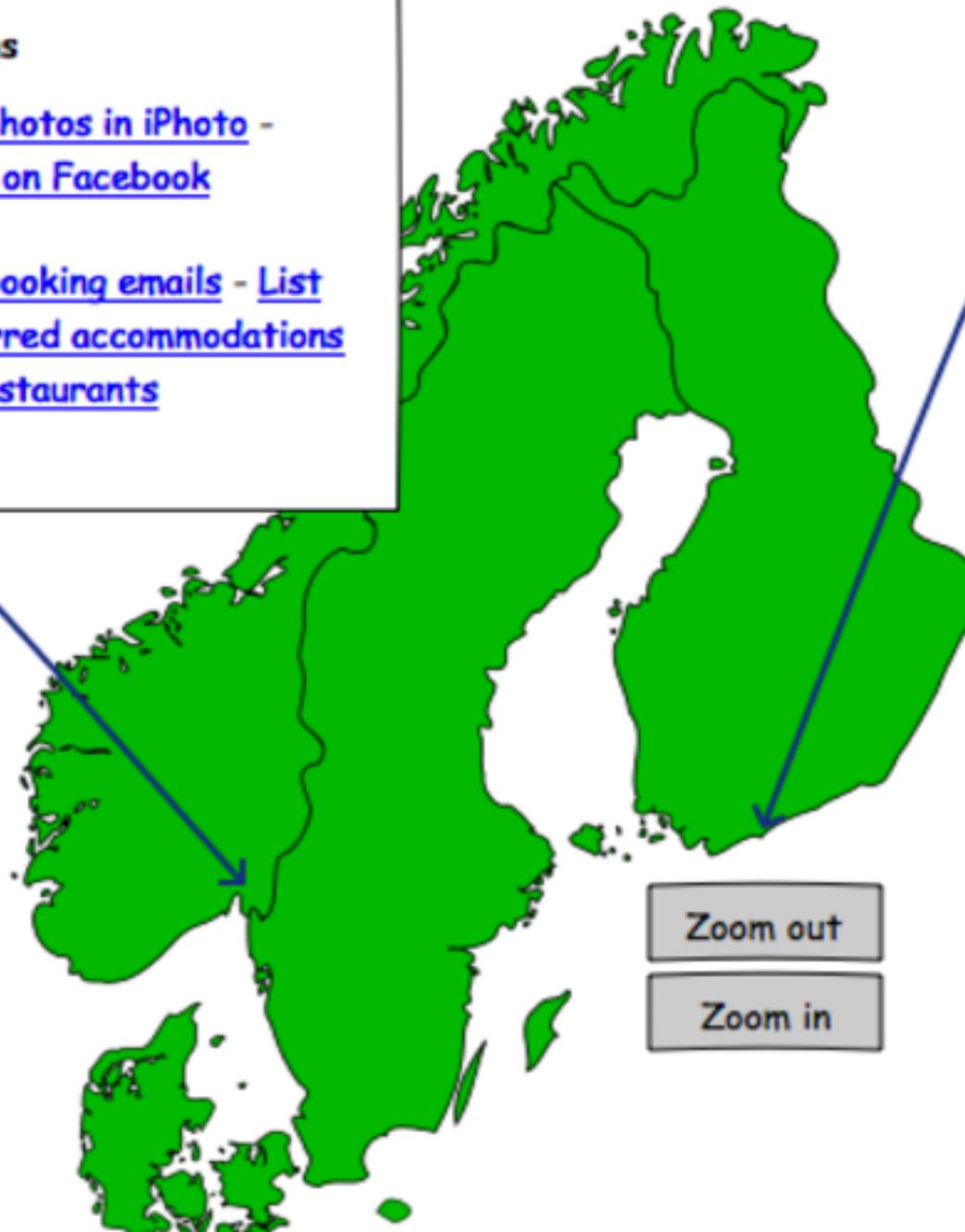
Showing all activity between  and

### [Oslo, Norway](#)

Date	Activity	Actions
July 12-21	You took <a href="#">1281 photos</a>	<a href="#">View photos in iPhoto</a> - <a href="#">Share on Facebook</a>
July 12-21	You were on <a href="#">Norway Vacation</a> with your family	<a href="#">View booking emails</a> - <a href="#">List preferred accommodations and restaurants</a>

### [Helsinki, Finland](#)

Date	Activity	Actions
Jun 25-28	You took <a href="#">543 photos</a>	<a href="#">View photos in iPhoto</a> - <a href="#">Share on Facebook</a>
Jun 25-28	You attended event <a href="#">NordCamp</a> with hashtag <a href="#">#nordcamp12</a>	<a href="#">View attendees</a> - <a href="#">Show related emails</a>



# THE FUTURE: HUMAN-CENTRIC APPS?

