

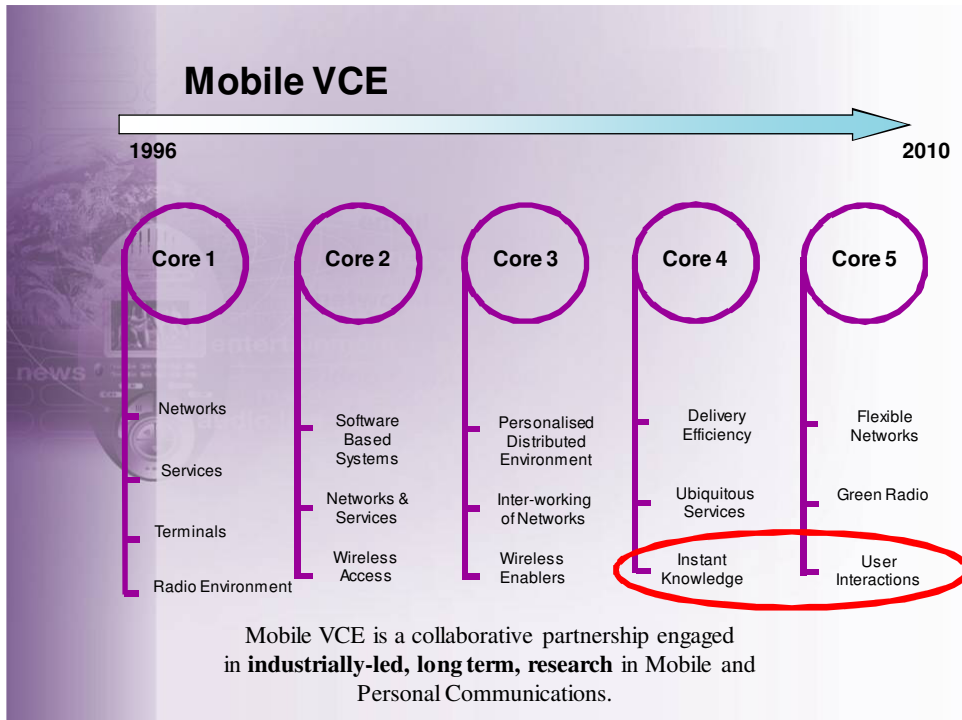


Future Services: Looking Beyond App Stores & OS Wars

13th January 2011

Jason Williams – Orange

User Interactions for Breakthrough Services





Web Site & App Intercommunication

Looking for APIs? Browse our API directory RSS

API Name	Description	Category	Last Updated
Open Voice	VoIP telephony services	Telephony	2008-04-29
Orange Click-to-Call	Click to call Internet voice services	Telephony	2008-10-03
Orange Contact Everyone	Mobile contacts service	Telephony	2008-07-26
Orange Device Capability Enabler	Mobile device checking services	Telephony	2008-10-03
Orange Location	Location Tracking Services	Telephony	2008-10-03
Orange Multimedia Conference	Teleconferencing services	Telephony	2008-10-03
Orange Personal Profile	Mobile customer profile information	Telephony	2008-10-03
Orange Voicemail	Voicemail messaging	Telephony	
Orange VoiceMashup	IVR, Interactive system	Telephony	
Panacea Mobile Bulk SMS	Bulk SMS messaging	Telephony	

Orange Personal Profile API

Summary | Mashups | How-To | Developers | Comments

From their site: The Personal Profile API gives your application real time access to Orange France customers' profile information, enabling you to retrieve data such as name, email, address, phone number, etc., with their permission. Part of the Personal APIs Alpha suite.

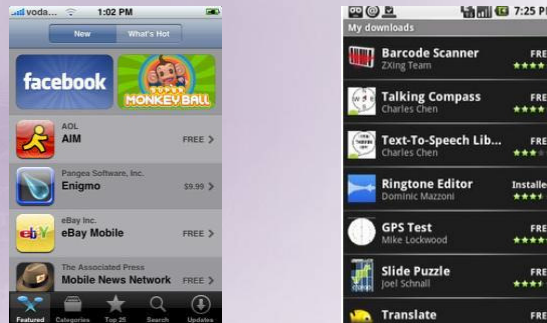
Track this API

Related telephony and enterprise resources on ProgrammableWeb

58 APIs in Telephony	250 Mashups are tagged mobile	14 code and how-to items for	26 PW clones in Telephony	39 Developers use Telephony APIs
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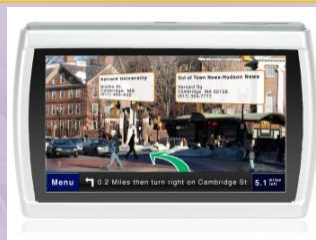
- Allows apps / websites to adopt functionality which would be otherwise impossible
- Range of shareable functionalities constantly growing

App Stores

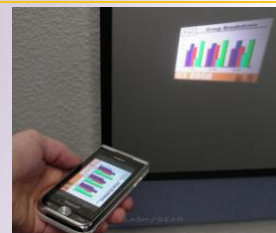


- Re-defines the "mobile phone"
- Creativity Crowdsourced
- Ecosystem of developers opens up
- Ability to buy and use vastly increases

New Mobile Interaction Methods



Augmented Reality



Pico Projectors



Accelerometer + Tilt Sensor

"The Cloud"



- **Key Aspects:**

- Data & Services stored outside of the device
- Available anywhere
- Accessible on any suitable Device

Interaction with the Environment



Public Transport Gates



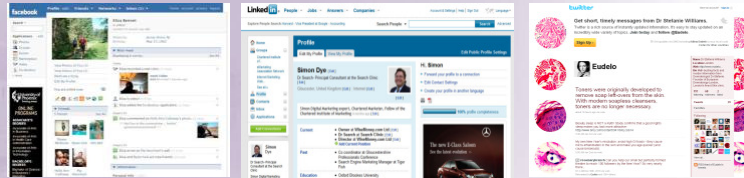
Digital Billboards



Automobiles

- **Information Exchange between Devices / Services in near location is increasingly common**
- **Will increasingly be tied to contextual information**

Social Networking



Facebook

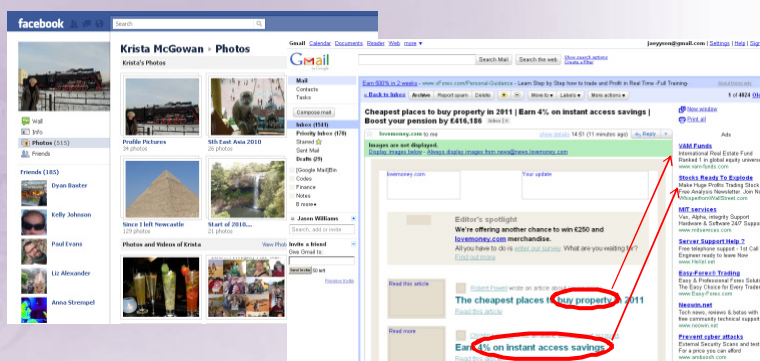
Linked In

Twitter

- Facebook has over 500 million active users
- Messaging, Sharing of Media, Real Time, Location becoming increasingly common
- Increasing used for government, education, medical and business applications

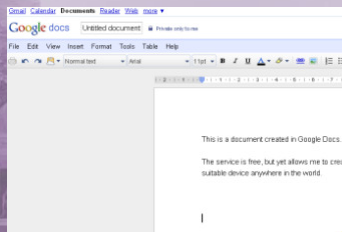
Follow us: 

Availability of Information

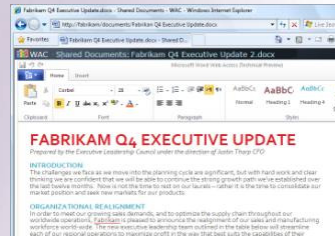


- Information is both passively and actively stored and kept
 - Gmail customers encouraged not to delete emails
- Communication and Relationships can increasingly be tracked with greater precision

User Expectations



Free Google Docs



Free Office 2010 Online

- **User expectations of what is possible are constantly changing**
 - Increasingly expect 'free' advanced services
 - Expect unlimited space..
 - Expect mobile phone functionality to be open-ended
 - Privacy Expectation is reduced

Speed of Social & Technological Change



App Store



Android

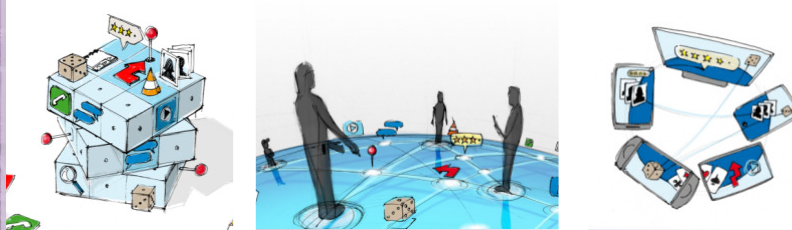


Facebook

- **Huge Shifts are occurring in shorter and shorter timeframes**
 - Facebook = 2004
 - App Store = 2008
 - Android = 2008



User Interactions For Breakthrough Services



- 19½ Man Year programme implemented over 3½ Years
- 2008 – 2012
- Research by 4 Universities guided by Industrial Consortium
- Looking 7-10 years into the future

Member Engagement (so far)

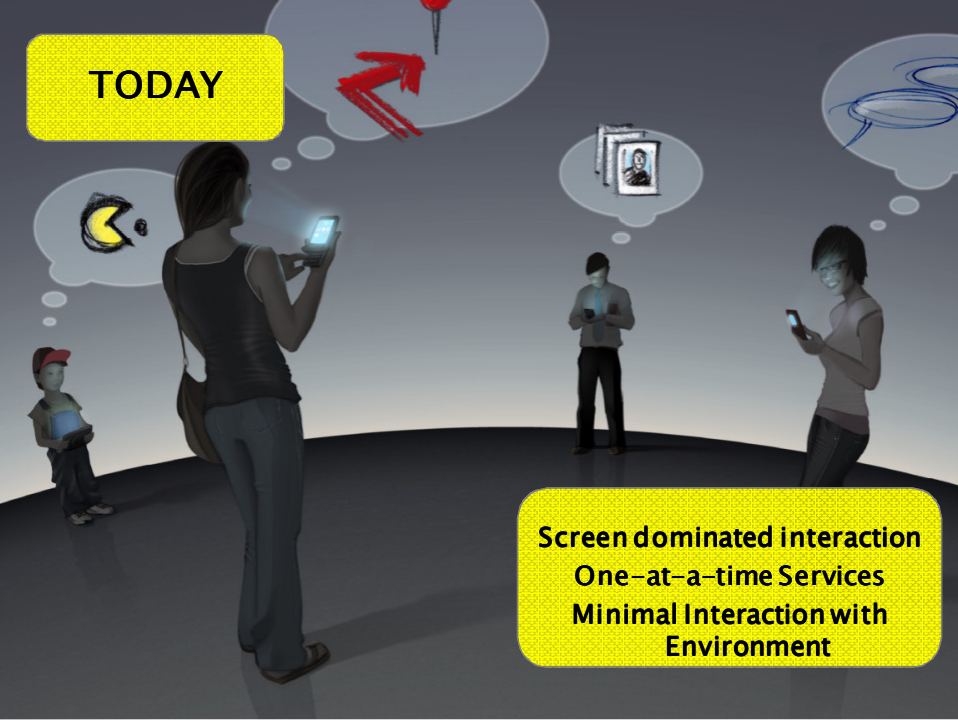
Industrial



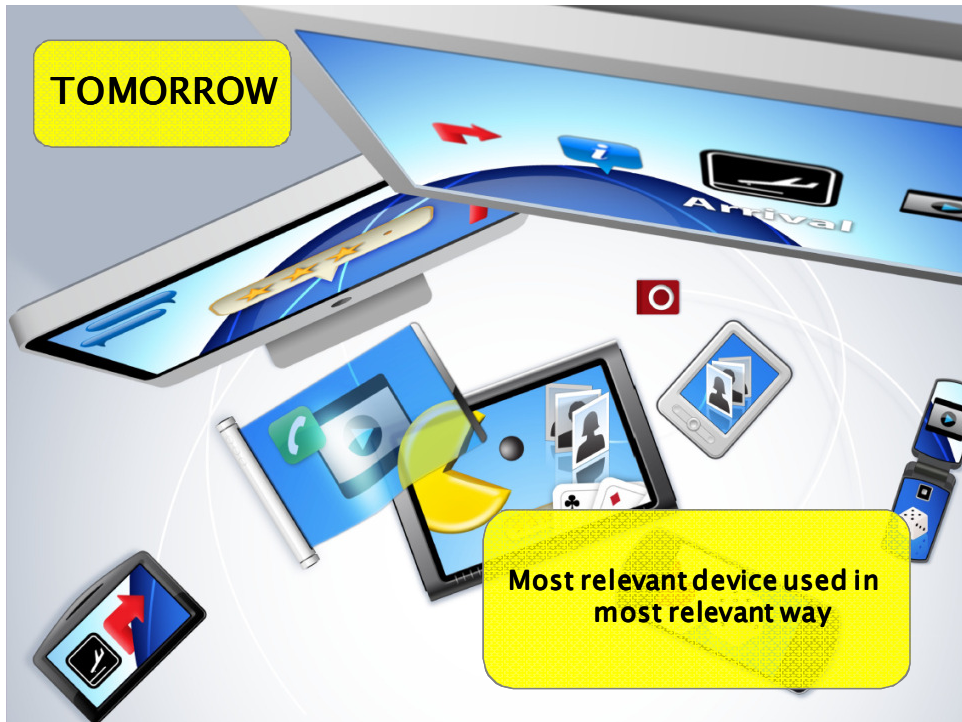
Academic

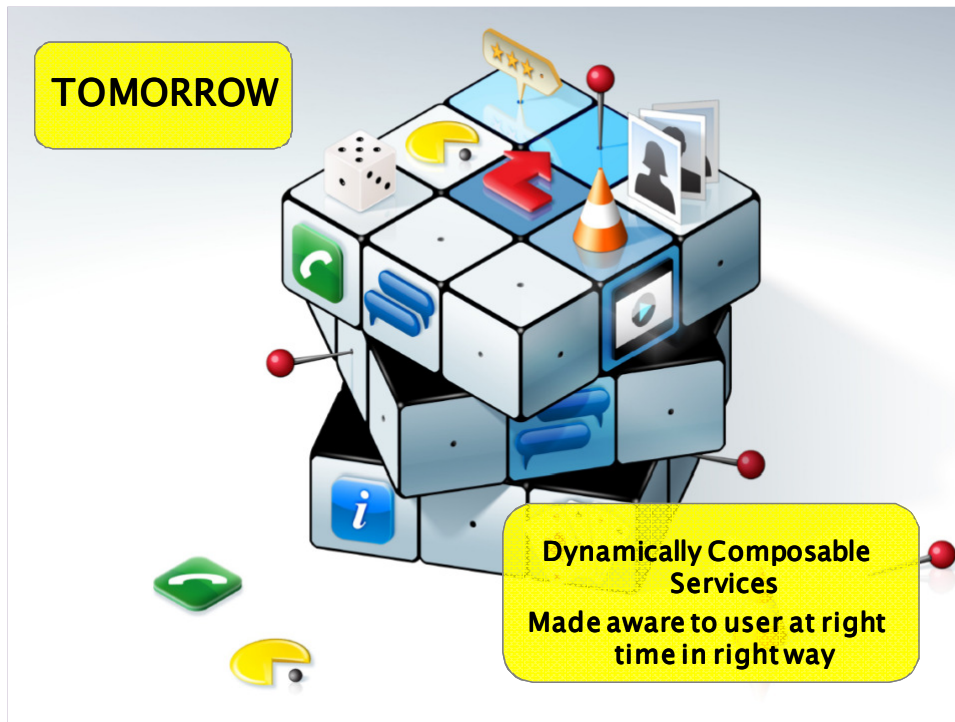


TODAY



Screen dominated interaction
One-at-a-time Services
Minimal Interaction with Environment





10 Year Forecast

VCPE

User Interactions
Work Area Home

Wiki Home
All Planning
Book of Assumptions

Other Wikis
Green Radio
Elastic Networks
Instant Knowledge

Wiki Help
Wiki Sandbox
Basic Editing
Documentation Index
PrintWiki FAQ

edit sidebar

BookOfAssumptions

Last updated on 7/7/09 following the UI TSG of 25/06/09

The Book of Assumptions is an iterated list of assumptions concerning overriding trends in the choices and may influence the shape of technologies that enable user interactions and modalities.

What is presented here is an initial list, it is designed to generate additional contributions from all the concerning the project.

Feedback, corrections, comments and suggestions from all parties are essential to develop the book please feedback corrections.

Social trends (to include behavioural and market trends)

- Alternative means of sharing value other than money may emerge. (Source: Lucia - Vodafone)
- Increasing digital isolation of "laggards" as technology becomes all pervasive in basic (private

Terminology & Definitions

- Seamlessness is not a universal but a relative term, as some technologies become seamless (source Simon (Nortel) during Silvia's presentation)

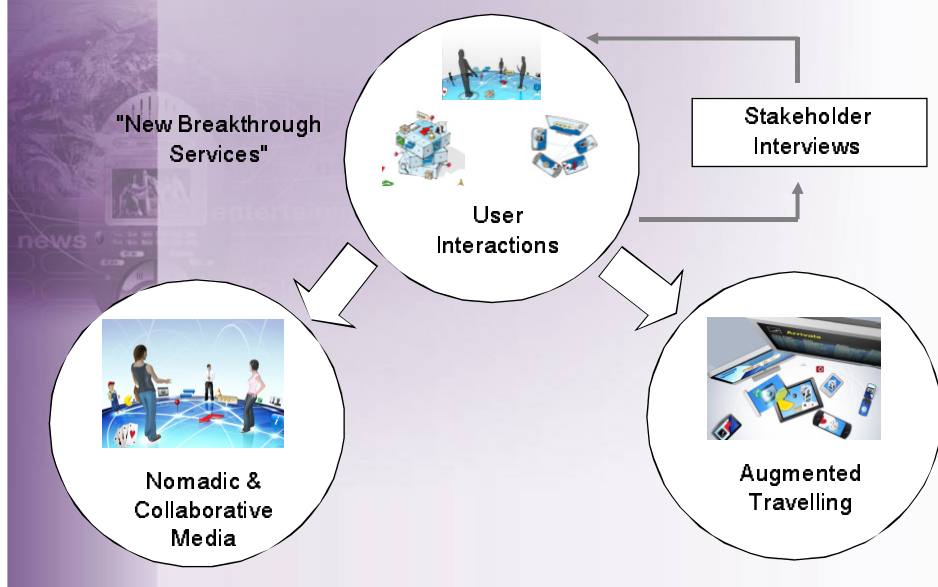
Service Assumptions

- Seamless service - service is delivered in the desired way at the desired time and this transp
- "It just is" needs to be tempered "by people just aren't" -- more definition required of UI (Source
- Service convergence: There is responsiveness in relationships affecting the user and users if uploaded from mobile phone transferred to Googlemaps. (Source: LSE)

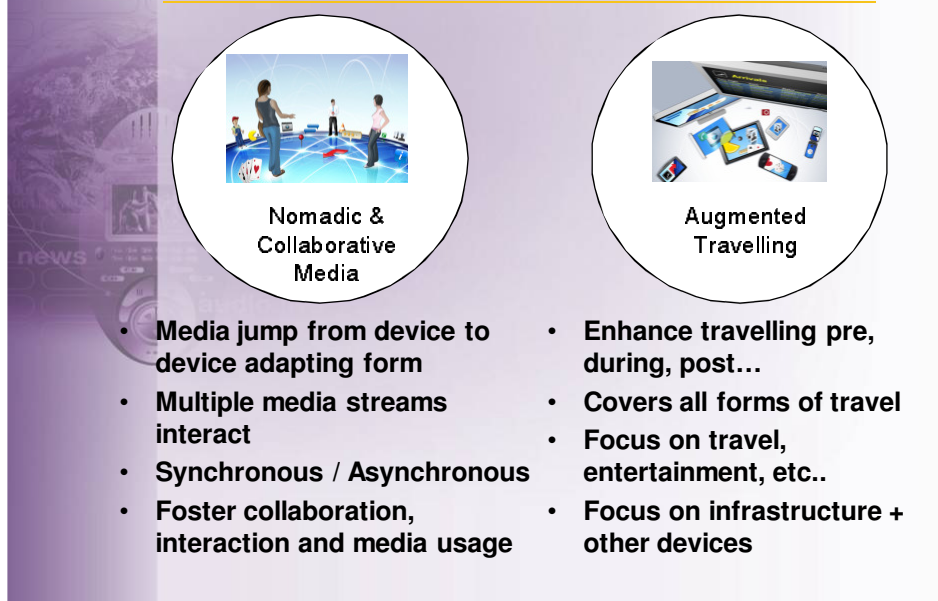
General assumptions to guide our research
Based on consultation with Industrial Members

Orange Labs - France
Telecom Group

Service Areas of Focus



Service Areas of Focus



Personas & Scenarios



Barbara



Sara



'Personas' developed: A day in the life described for each

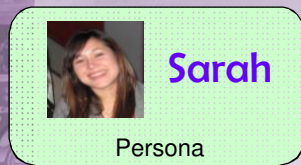
One persona 'technophobic', one 'technofriendly'

Focus groups held to check assumptions

Orange Labs - France
Telecom Group

Personas & Scenarios

'Day-in-the-life' Scenario



Persona

1 Sarah, Kel and the Big Fight

One morning Kel is taking a long train journey to visit his girlfriend Sarah in Bristol. On the way he phones his mate Adam for a chat. Adam asks Kel whether he's going to join him and their mates to watch the big fight that afternoon. It's the WBO heavyweight championship, which is due to be streamed live at 2pm in the UK. Kel wants to join remotely and asks Adam to send him details so that he can tune in with the rest of the boys. [\[Glasgow Ref NMC.1\]](#)

A little while later Kel receives a message from Adam, giving him details of the big fight, as well as a link to the highlights of last years championship. Seeing that the train is an "island of high bandwidth", Kel eagerly pays [\[LSE Ref NMC.2\]](#) to watch the highlights, which he selects [\[Bath Ref NMC.3\]](#) to view on the [\[LSE Ref NMC.4\]](#) screen on the seatback in front of him.

The guy sitting behind Kel happens to see the fight and asks him whether he can watch too. Kel allows the video to be shared [\[Bath Ref NMC.5\]](#) and once the other passenger has paid [\[LSE Ref NMC.5\]](#) he gets to see it on his seatback display too.

The two of them spontaneously start to trade comments [\[Glasgow Ref NMC.6\]](#) on the match using their mobile devices as the highlights progress.

Kel elects to pay a premium [\[LSE Ref NMC.7\]](#) to get additional camera angles projected [\[Bath Ref NMC.8, Bristol Ref NMC.9\]](#) below the seatback display and to feel haptic feedback [\[Bristol Ref NMC.10\]](#) on the back of his phone from the blows of the boxers.

Just before 2pm his booking automatically joins him with the group watching the big fight. Again he elects to have the image of the match displayed on the seatback display in front of him [\[Bath Ref NMC.11\]](#). On the display of his mobile he can see the other members of the self styled "Fight Club" join in to watch the fight, some of them he knows, but others are strangers, mostly friend of friends.

They talk and send chat to each other building up a huge sense of expectation generated before the fight starts. He accepts the payment to watch the streamed match and various betting games pertaining to the match are advertised [\[LSE Ref NMC.12\]](#). The group decides to place bets in terms of which of the boxers will fall and in which round [\[Glasgow Ref NMC.13\]](#).

The train arrives in Bristol, and Kel speeds his way to Sarah's as quickly as he can so he doesn't miss out on the action. During this time Kel uses his mobile device to keeps in touch with the fight through audio and haptic feedback from the punches [\[Bristol Ref NMC.14\]](#).

When he arrives at Sarah's he's desperate to get on and watch the fight. He pleads

To be demonstrated...

Expert Workshops

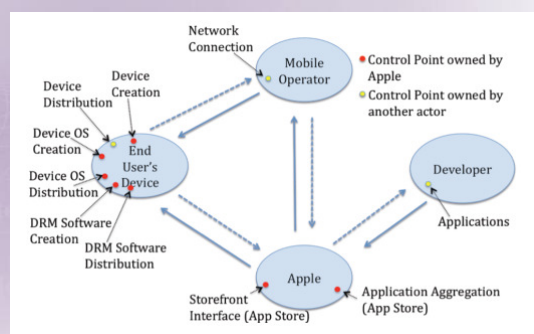
Nomadic & Collaborative Media
October 2010 @ BBC



Augmented Travelling
December 2010 @ Thales

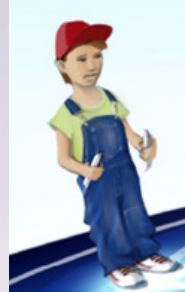


Business Models



- Theory of Control Points being developed
- Will Help Identify new Business Opportunities for varying types of organisations

Interacting with Device Ecologies



- **What Interaction Modalities will best let us interact with multiple**
 - **Devices**
 - **Users**
 - **Services**

Areas of Research



Pressure



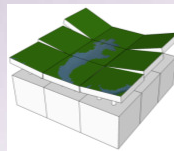
Projection



Augmented Reality



Temperature



Actuatable Displays



Ultrasonic Haptics

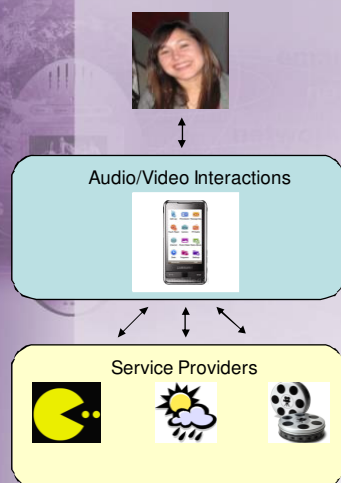
Service Composability & Awareness



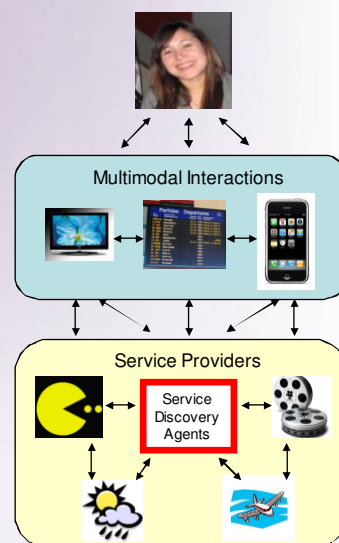
- Functionalities dynamically composed to create ad-hoc services
- Allow relevant options to be available to customer or hidden where necessary
- Services, Devices and Users all interact

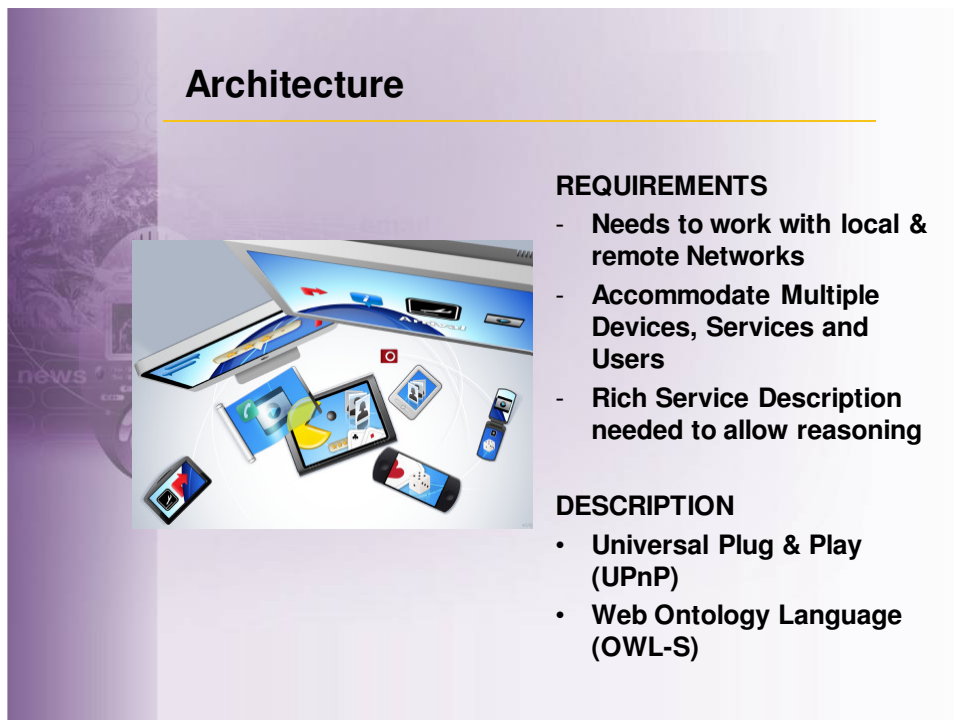
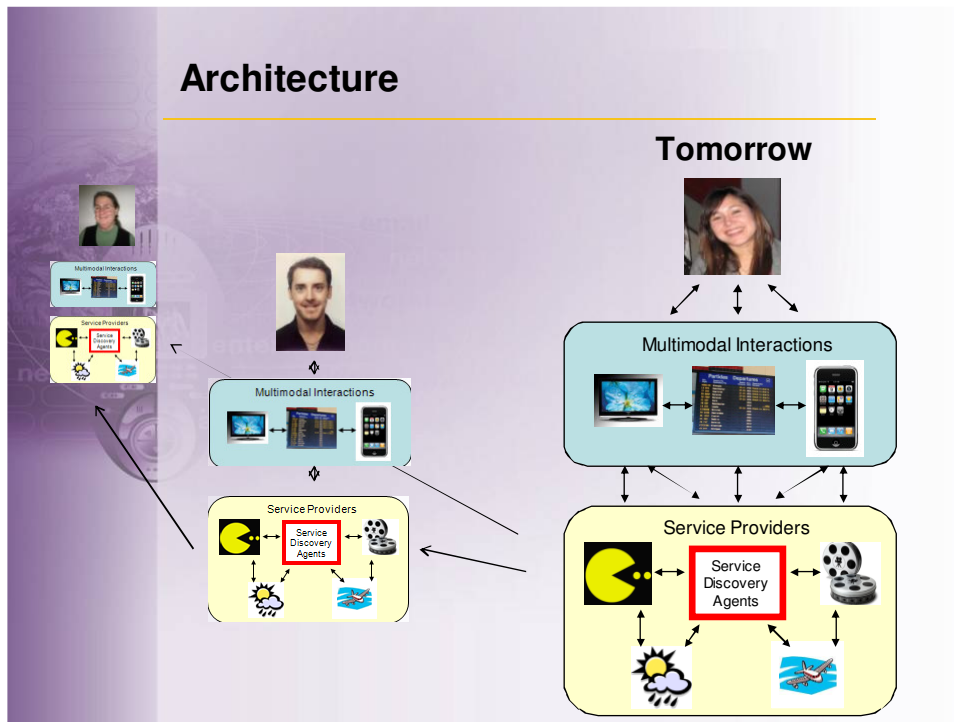
Architecture

Yesterday



Tomorrow





Principles, Toolkit & Service Prototype



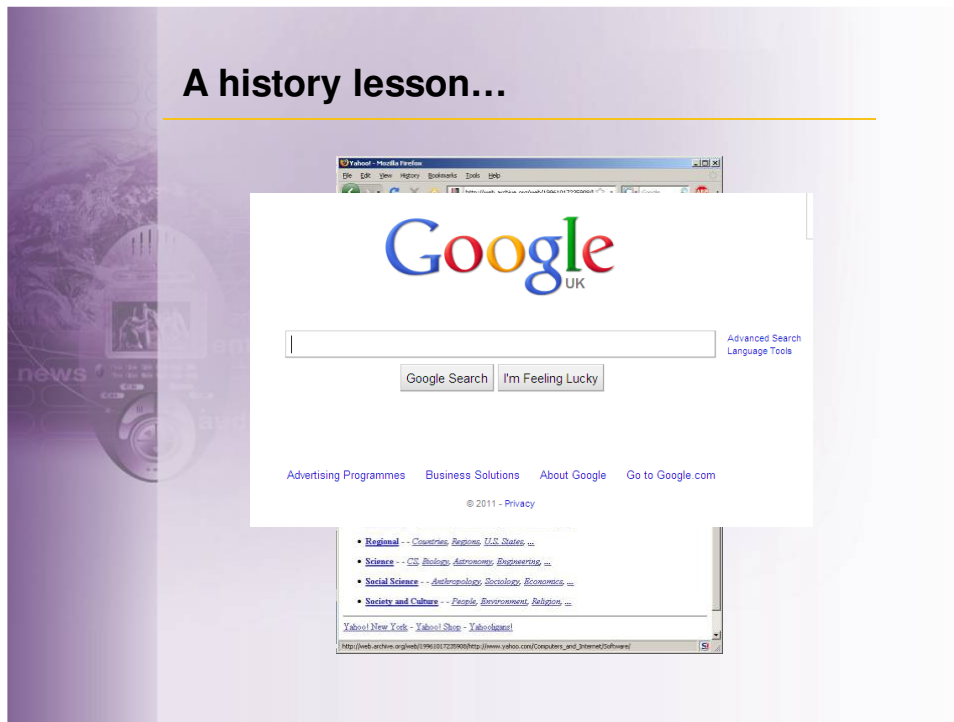
- Guidelines future developers can use to make best use of modalities developed
- 'Tools' that will allow future developers to easily use the technology developed
- Single Prototype to demonstrate all elements of the project



Instant Knowledge



A history lesson...

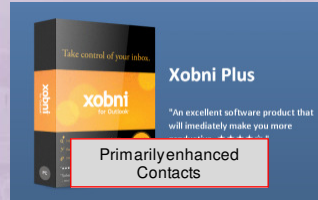


The problem

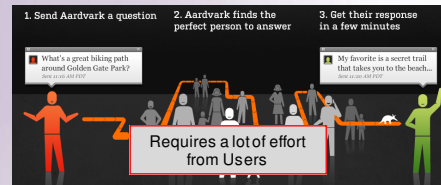
The image shows a screenshot of a group intranet directory page. The page is titled 'Group intranet' and 'Group directory'. It features a navigation bar with tabs for 'general information', 'function / expertise', 'addresses', 'organization chart', and 'team'. The main content area displays the profile for 'Mr. Jason Williams'. Below the profile, there is a table with 9 results, showing names and their corresponding assignments.

name	assignment
Pullen Dominic	FT/OLNC/RD/LAB/UK
Blyth Steven	FT/OLNC/RD/LAB/UK/DDES
Lam Long	FT/OLNC/RD/LAB/UK/DDES
Nazilli Beste	FT/OLNC/RD/LAB/UK/DDES
Qureshi Mobeen	FT/OLNC/RD/LAB/UK/DDES
Reynolds Rajinder	FT/OLNC/RD/LAB/UK/DDES
Tucker Richard	FT/OLNC/RD/LAB/UK/DDES
Williams Jason	FT/OLNC/RD/LAB/UK
Wood Alana	FT/OLNC/RD/LAB/UK/DDES

Current Solutions



Xobni



Aardvark



Friendlee

Instant Knowledge: Secure Autonomous Business Collaboration

Leveraging the tacit knowledge available in the enterprise

Why?

Value in the personnel
Identify people, not data
Save time, boost output

Key Components

- **Machine Learning – Recording user activity and dynamically building skills profile**
- **Relationship Mapping – Accounting for Frequency and Types of relationship**



- **Security – Users can specify their privacy levels and what is / is not accessed. Enterprise security levels also accounted for**

Instant Knowledge System



Solution Running on Nokia 810 Email Client

Instant Knowledge System

The screenshot displays the Instant Knowledge System interface. The main window shows a profile for Julian Salinas with a line graph and a table of relationships. A chat window on the right shows a conversation about mediated communications. A third window shows a search interface for contacts.

Julian Salinas Relationships Table:

Contact	History	Mediated	Copresent
Jared Dean	5	60	29
Garrett Valdez	11	35	248
Dylan Holt	1	20	496
Caleb Wheeler	1	17	439
Emma Turner	1	2	16
Brenda Gates	1	1	2

Chat Log:

- Julian Salinas: Bonjour proximity, and other non-mediated communications (such as email lists)
- Garrett Valdez: Oh hi garrett
- Julian Salinas: What is up?
- Garrett Valdez: I see mediated increases when I send messages too

Search Results:

- Contacts: which is based on bluetooth and Bonjour proximity, and other non-mediated communications (such as email lists)
- Local: You: Oh hi garrett
- Search: You: What is up?
- Logged in successfully: You: I see mediated increases when I send messages too
- Garrett V online: You:
- Garrett V says...
- Garrett V says...
- Garrett V says...
- Garrett V says...
- Garrett V says...
- Logged in as julian.salinas@pigeon.local.

Summary

- MVCE facilitates sharing technology and knowledge pool from each
- Programmes are flexible
- Projects deal with some of the most pertinent and difficult issues facing industry today
- Each benefits from Industrial Participation. The more the merrier...

Thank you !

