TIM and Mobile applications

Massimo VALLA, Christian SCANU
Strategy & Innovation – Open Innovation – Joint Open Lab S-Cube
Summary

Company Overview: TIM

- About Us
- Joint Open Lab (JOL)
- JOL S-Cube

TIM Mobile Applications

- TIM Mobile Apps
- One example: 3cixty
- Enabling technologies

Project work proposals

- Project proposals
- What we can provide
Telecom Italia - TIM is the main Italian Telecomunication & ICT group and one of the most important player in the Brazilian market

Leader in the Italian ICT market, the group is active in the following sectors: fixed and mobile telecommunications, internet, digital content, Business systems and solutions, research & development

Strategic markets: Italy and Brazil

Data updated to Dec 2014
JOINTOPENLAB

Industry
- Investments
- Market orientation

University
- Multi-disciplinary Research
- Skills
- «Brains»

Accelerate Innovation Creation
- Co-Development
- Tutorship
- Market Oriented Research

60 TIM researchers
~90 PhDs 2012-2015
~50 thesis / internships
MISSION

The S-CUBE Lab uses innovative technologies and a multidisciplinary approach to design prototypes and service concepts for next future Smart Spaces. Thanks to Internet of Things, Interaction Design, Wearable Devices, Augmented Reality, Social Proximity and Cloud platforms we build innovative solutions for public and private spaces: home and office, retail, smart city and connected car. We aim at developing new businesses, counting on Politecnico di Milano experience and innovative companies and start-ups.

http://jol.telecomitalia.com/jolscube

A Smart Space is:

“A physical world that is richly and invisibly interwoven with the sensors, actuators, displays and computational elements embedded seamlessly in the everyday objects of our lives, connected through a network”

Mark Weiser, Xerox Parc, 1988
JOL S-Cube: our lab
JOL S-Cube activities: 4 main application areas

**Topics:** Ambient Intelligence, Internet of Things, Social Proximity Communication, Wearable technologies, Human-Computer Interaction, Augmented Reality

**SmartSpace INTERACTION**
- Interaction designing in smart spaces
- Technologies: wearable devices, augmented reality, beacons, smart screens interaction

**SmartSpace@HOME/OFFICE**
- Interaction and services in everyday private/semi-private spaces
- Technologies: IoT, smart home gateway, augmented reality, social web of things, beacons, wearables

**SmartSpace@RETAIL**
- Smart Space technologies for future retail
- Technologies: beacons, smart screens interaction, smart lights, proximity technologies, augmented reality

**SmartSpace@CITY**
- Personalized guides for city visitors and large events (e.g. Expo2015)
- Application and services for connected/smart cars
- Technologies: recommendation, city sensing, Big Data, smart matching
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TIM Mobile Apps

Examples of mobile applications offered by TIM on Android
ExplorMI 360 Mobile App
Nearby Events and Places

Heatmap
Wish List

EVENTS

EXPO
The Treasure of Italy
Oct 04, 2015
VIA BELGIOIOSO CRISTINA.

EXPO
Week of Russian Cultu...
Sep 25, 2015
VIA BELGIOIOSO CRISTINA.

EXPO
National day of Mexico
Sep 16, 2015
VIA BELGIOIOSO CRISTINA.

Next to it is the Nearby notification:

Set vicino a Tree of Life.
Nearby from a Wish List item

<table>
<thead>
<tr>
<th>Hotel Name</th>
<th>Address</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hotel Delizia</td>
<td>VIA ARCHIMEDE, 88</td>
<td>196m</td>
</tr>
<tr>
<td>Royal Hotel</td>
<td>VIA C. GOLDONI 54</td>
<td>232m</td>
</tr>
<tr>
<td>Hotel Dateo</td>
<td>STRADA PROVINCIALE EX STRAD</td>
<td>234m</td>
</tr>
<tr>
<td>Hotel De Albertis</td>
<td>VIA SEBASTIANO DE ALBERTIS...</td>
<td>263m</td>
</tr>
<tr>
<td>Eco Art Hotel De Albertis</td>
<td>VIA DE ALBERTIS, 7</td>
<td>269m</td>
</tr>
<tr>
<td>Pensionato Universitario Bertoni</td>
<td>VIA CICOGNARA LEOPOLDO, 17</td>
<td>277m</td>
</tr>
</tbody>
</table>
Tours Feature

1) Select what you are interested in:
- Sustainable World
- Music and Show
- Bio and Nature
- Coffee and Cocoa
- Meat and Fish
- Fruit and Legumes
- Art and Craft
- Family
- Smart Life
- Beer and Wine

2) Select your time availability:
- Entire Day
- Night
- Half Day

Thematic tours selected for you:

- **Expo Bio**
  - Sustainability and organic food: key themes of Expo
  - 4 h and 40m

- **Expo Digital**
  - A selection of high-tech Pavilions
  - 5 h and 20m

- **Expo Drink**
  - Drink with this tour trough Pavilions
  - 5 h and 20m

- **Expo Art**

- **EXPO Pavilion**
  - EXPO Pavilion Brazil
  - EXPO Pavilion EU
  - Biodiversity Park
  - Slow Food
  - EXPO Pavilion Austria
Enabling Technologies
Proximity Technologies

Enabler for proximity marketing & advertising, location-based content delivery, mobile payment, etc.
Wireless transmitter’s (BLE Beacons) coverage radius varies according to signal strength. Measured in Feet.

Wireless transmitter’s (NFC Tags) coverage radius is very small. Measured in centimeters.

Supported Smartphones: iOS, Android, Windows Phone 8 and Blackberry.

Supported Operating Systems: iOS7 (via iBeacon), Android 4.3 and greater.

BLE Beacons based on technology dating back to 2006.

Supported Smartphones: Android, Windows Phone 8 and Blackberry.

Supported Operating Systems: Android 4.0 and greater, Windows Phone 8 and Blackberry X.

Based upon RFID technology dating back to the 1940's.
Augmented Reality

Enabler for product recognition & interaction, enhanced info delivery, augmented marketing, etc.
(Multi-) Touch Screens

Enabler for interactive digital signage, virtual product catalogues, content sharing, etc.
Wearable devices & Gesture interaction

Enabler for more natural ways to access (personalized) information, contents, etc.
Smart home objects and gateways

Enablers for integration with smart home sensors and objects
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### Design and Implementation of Mobile Applications

#### Project proposals (1/2)

<table>
<thead>
<tr>
<th>Area</th>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smart Retail</td>
<td><strong>CouponPuzzle</strong>: shared coupons game</td>
<td></td>
</tr>
<tr>
<td>Smart Retail</td>
<td><strong>ShareBuy</strong>: share your shopping experience</td>
<td></td>
</tr>
<tr>
<td>Smart Retail</td>
<td><strong>ShopPins</strong>: share trendy products</td>
<td></td>
</tr>
<tr>
<td>Smart Retail</td>
<td><strong>MyScreen</strong>: personal device to screen interaction</td>
<td></td>
</tr>
<tr>
<td>Smart Retail</td>
<td><strong>ObjectIt</strong>: objects recognition through camera</td>
<td></td>
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<tr>
<td>Smart Home/Office</td>
<td><strong>BLocate</strong>: indoor localization with beacons</td>
<td></td>
</tr>
<tr>
<td>Smart Home/Office</td>
<td><strong>SCUBEVoice</strong>: control objects with your voice</td>
<td></td>
</tr>
</tbody>
</table>
### Design and Implementation of Mobile Applications

**Project proposals (2/2)**

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<th>Area</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smart City</td>
<td><strong>RailWatch</strong>: real-time train track &amp; number on your smartwatch</td>
</tr>
<tr>
<td>Smart City</td>
<td><strong>Hear&amp;Go</strong>: find what it's happening around you</td>
</tr>
<tr>
<td>Smart City / Car</td>
<td><strong>ShareCarPlaylist</strong>: discover other cars’ music playlists</td>
</tr>
<tr>
<td>Smart City</td>
<td><strong>MobSmart</strong>: your mobility in the city becomes smart</td>
</tr>
<tr>
<td>Smart Home/Office/Car</td>
<td><strong>SmartSpaceFollowYou</strong>: set rules for your personal spaces</td>
</tr>
<tr>
<td>Smart Home</td>
<td><strong>HomeSet</strong>: Smart Home Configuration</td>
</tr>
<tr>
<td>Smart Home</td>
<td><strong>SmartHomeAR</strong>: interact with smart home objects using Augmented Reality</td>
</tr>
</tbody>
</table>
Design and Implementation of Mobile Applications

Project proposals: what we provide/ask

What we can **provide:**
- Personal and smart home devices to test your app (in our lab)
- Smart home objects, Smartwatches, touch screens, recent Android smartphones/tablets
- Technical support on our libs/APIs you will use or integrate with
- Expertise on Android, advice, tutorship
  - But you will have to be of course independent on your app code!
- **Infrastructure**
  - APIs, Cloud servers, source code repository
- Know each other -> future opportunities (e.g. MS thesis)
- (if you agree) Demonstrate your app at TIM events/demos and to our Executives

What we **ask:**
- Your app/cloud source code will be shared with us (for example using our or open source repo)
Thanks!

http://jol.telecomitalia.com/jolscube

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