Beep4me - Automating Ticket Validation for Fare Clearing and Service Planning
Giovanni Tuveri, PhD Student – Unica
Research interests

• Mode choice and voluntary travel behaviour change
  • IPET, project “Svoltiamo”

• Machine learning applied to mode choice in transportation
  • PhD research (supervisor Prof. Italo Meloni)

• Innovative technological applications in transportation
  • Project “SIMPLE”
Project SIMPLE

- StrumentI e Modelli Per La mobilità sostenibile
  - (Tools and models for sustainable mobility)

PoolBus
Demand Responsive Transport Services

Beep4Me
Automatic Ticket Validation
Beep4me prototype (1/3)

Current system

- Ticket purchase
  - Bus boarding
    - Start the app, enter ticket menu and select the ticket
    - Tap "Validate" button
    - Scan the bus's QR-code
  - Bus alighting

Proposed system

- Go into the app settings and enable automatic validation
- Activate Bluetooth and location services
- Bus boarding
  - App notification
    - Choose a ticket
    - Ticket selection
    - Successful validation
  - Buy a ticket
  - Ticket purchase
  - Bus alighting
Beep4me prototype (2/3)

Beep4Me

- Bluetooth
- GPS
- Motion sensors
- QR codes
- BLE beacons
  - region monitoring

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## Beep4me prototype (3/3)

<table>
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<th>N' of runs</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Objectives</td>
<td>Notification (validation)</td>
<td>Validation (server)</td>
<td>Notification (transfer)</td>
<td>Validation (server)</td>
<td>Notification (choose a ticket)</td>
<td>Validation (server)</td>
<td>Notification (validation)</td>
<td>Validation (server)</td>
</tr>
<tr>
<td>Results</td>
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</table>
Thank you!

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