



VisitItaly

Mobile and Pervasive Systems Project

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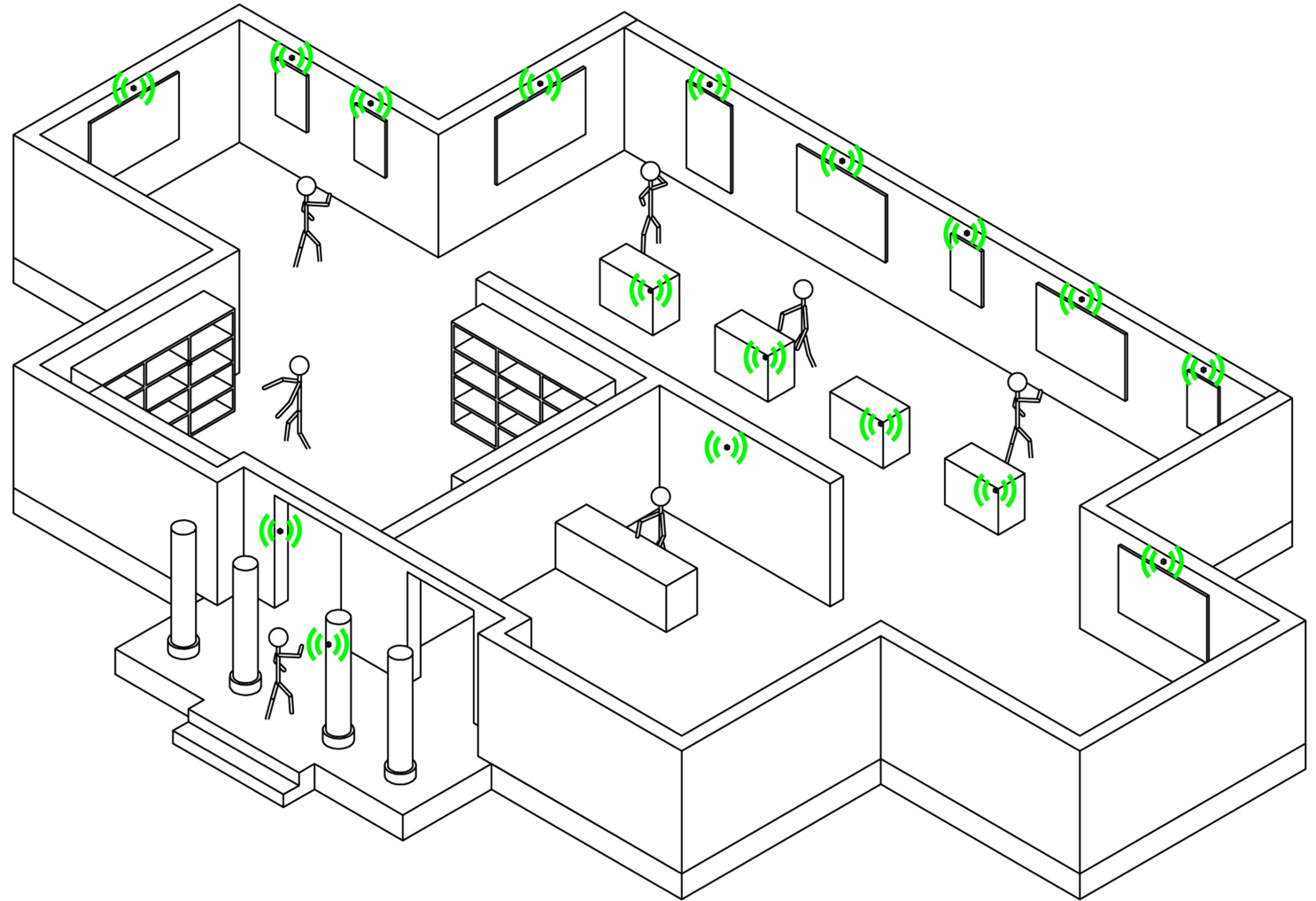
What Is It?



- Context aware application for mobile devices
- Based on iBeacon technology
- Provides informations about cultural heritage in Italy
- Provides indoor/outdoor user localization
- Allows to monitor the number of views for each exhibit
- This is NOT an ad hoc application for a single museum

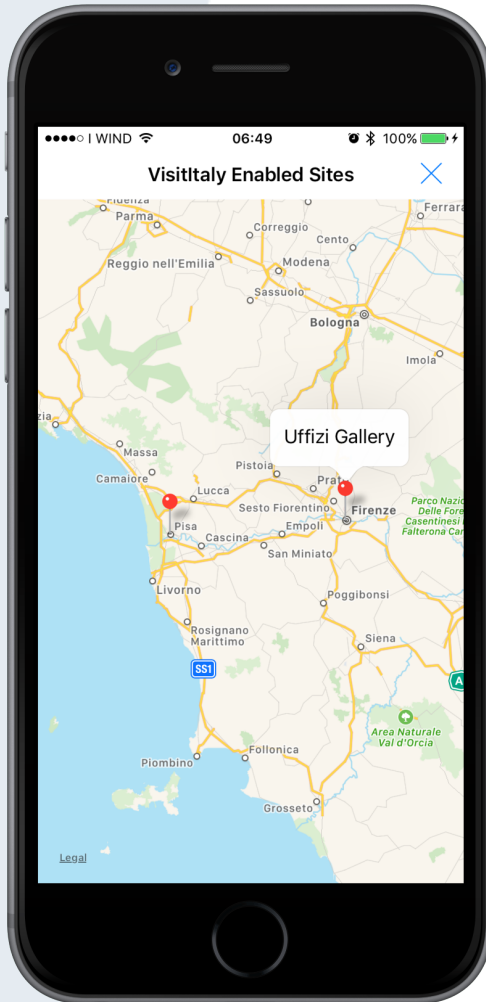


Typical Use Case





Features: Enabled Sites



User can check through a map which sites are enabled to work with VisitItaly.

Informations about sites are downloaded from a remote server each time.

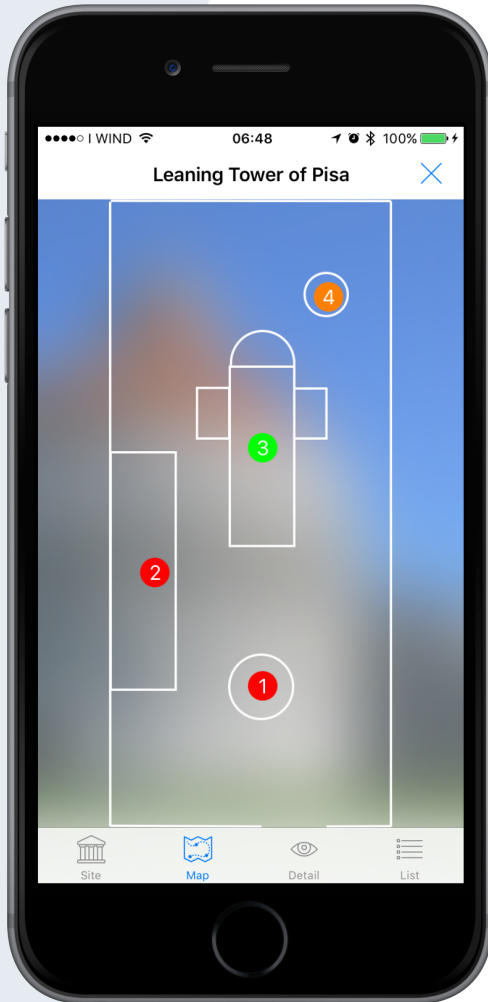


Features: Site Informations



Provides general informations about the site in which the user is located.

Features: Indoor/Outdoor map



Exhibits are identified by numbered and colored points.

- Orange blinking point: user current position
- Red points: exhibit not visited yet
- Green points: exhibit already visited

App keeps track of visited exhibits.



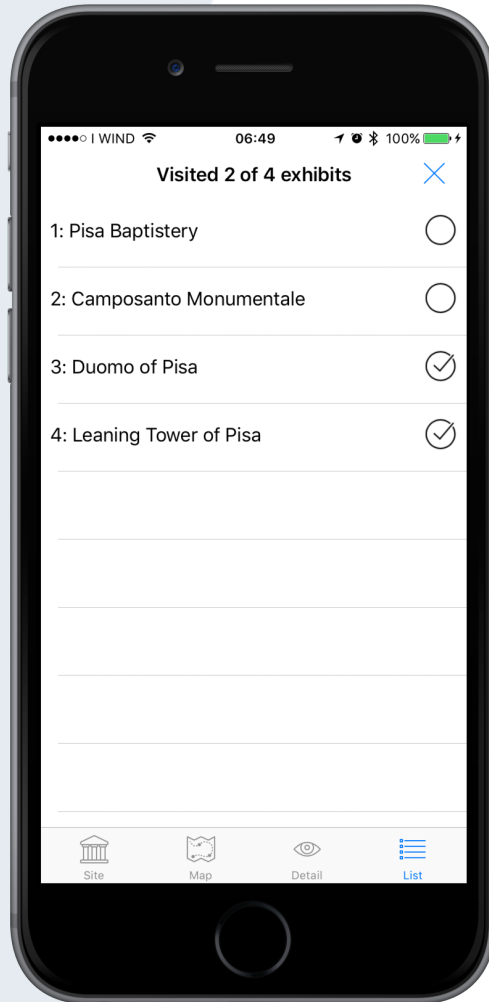
Features: Exhibit Informations



Shows an image and a description about the single exhibit the user is watching.



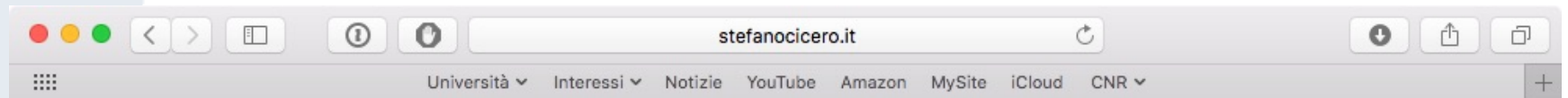
Features: Exhibits Checklist



Shows which exhibits are already visited by the user and which not, in a convenient way



Features: Exhibits Views



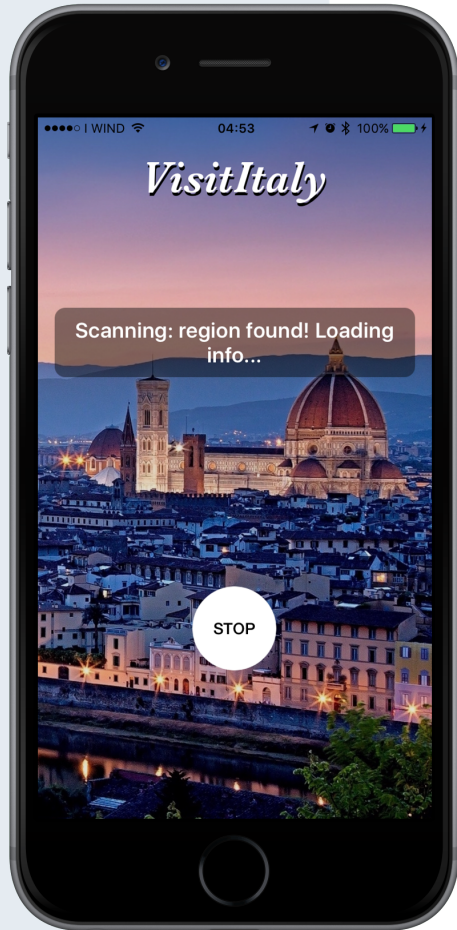
VisitItaly Dashboard

Piazza dei Miracoli

Name	Views
Leaning Tower of Pisa	13
Pisa Baptistery	4
Camposanto Monumentale	0
Duomo of Pisa	8

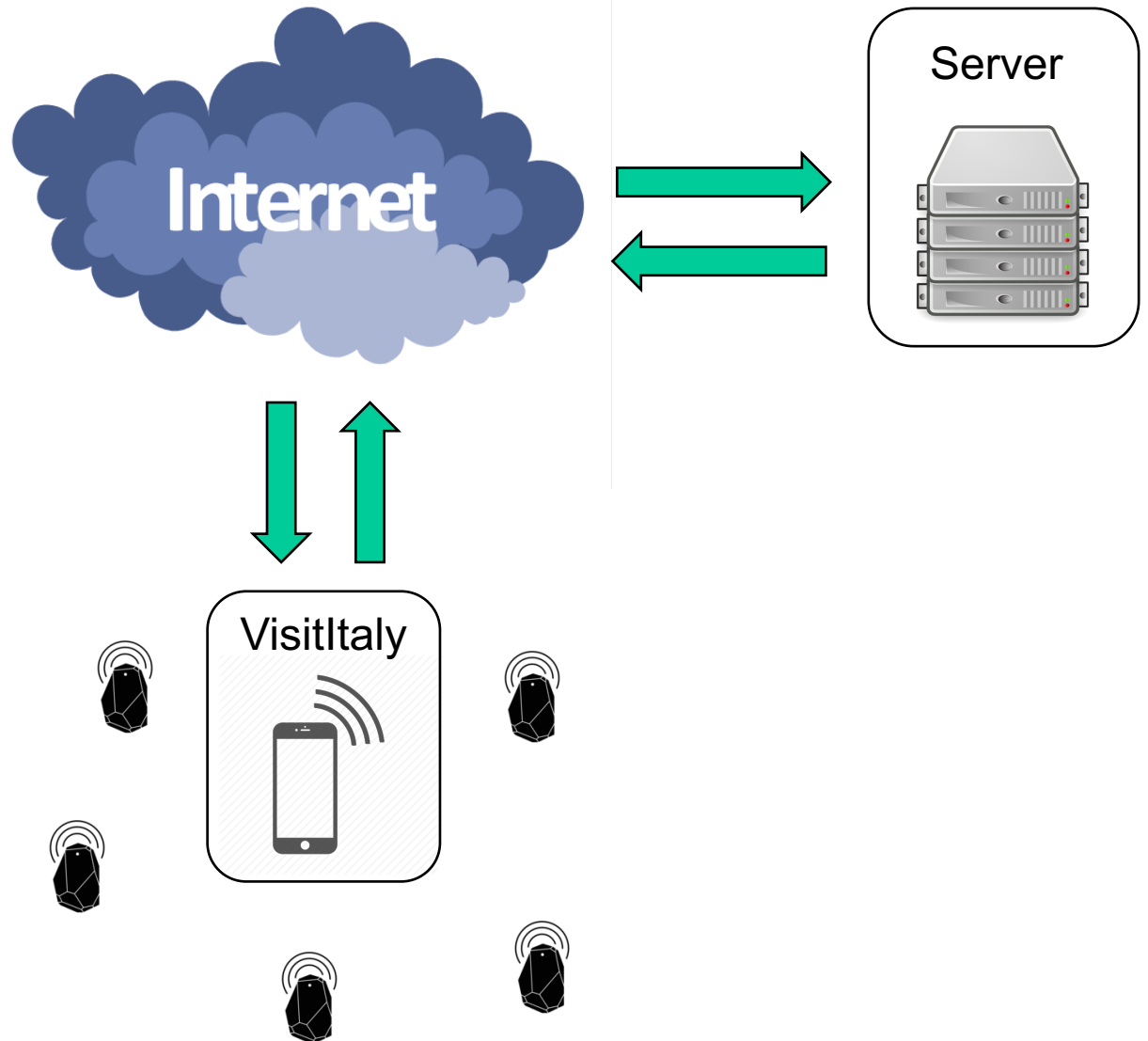


How It Works



- Beacons are grouped by subsites which are grouped by sites
- Each beacon identifies an exhibit which has associated data (images, text ...)
- All data is stored on a remote server and downloaded on demand
- Once the nearest beacon is found the app will search for the associated data locally or remotely
- Information displayed to the user will be updated each time the nearest beacon changes (continuous background scanning)
- Each time a new nearest beacon is found a signal is sent to the server in order to increase the view counter of that beacon

Architecture





Technologies

- Server
 - OS: Ubuntu Linux
 - Apache Web Server, MySQL, PHP, JSON, HTML, CSS (Bootstrap)
- Beacon
 - Kontakt.io beacons
- Client
 - Xcode, Swift 3, iOS 10 (CoreLocation, MapKit), Kontakt SDK



Thank you