

WALK21: 9th International Conference on Walking and Liveable Cities

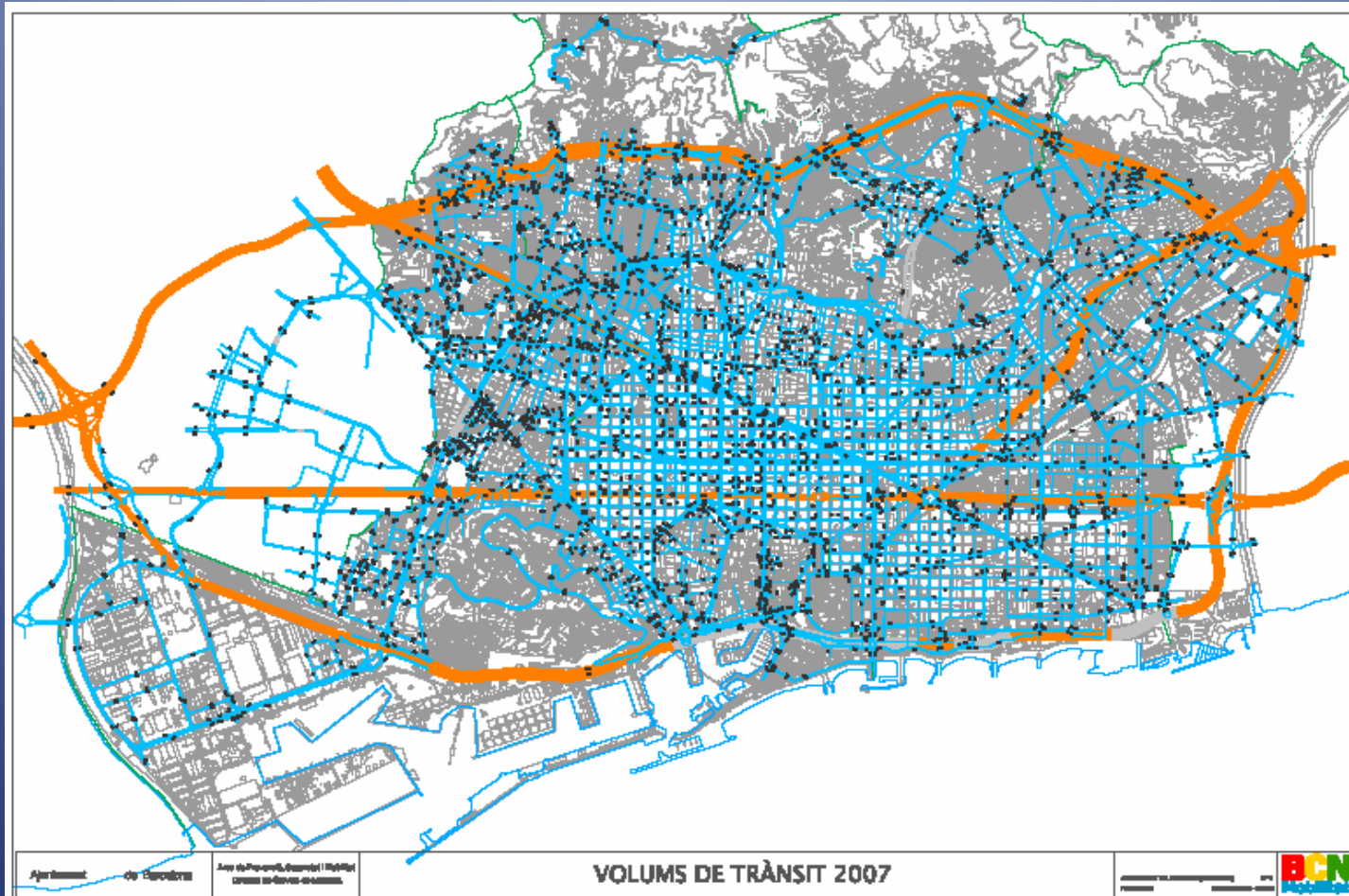
Counting Pedestrians

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Barcelona, 7 October 2008

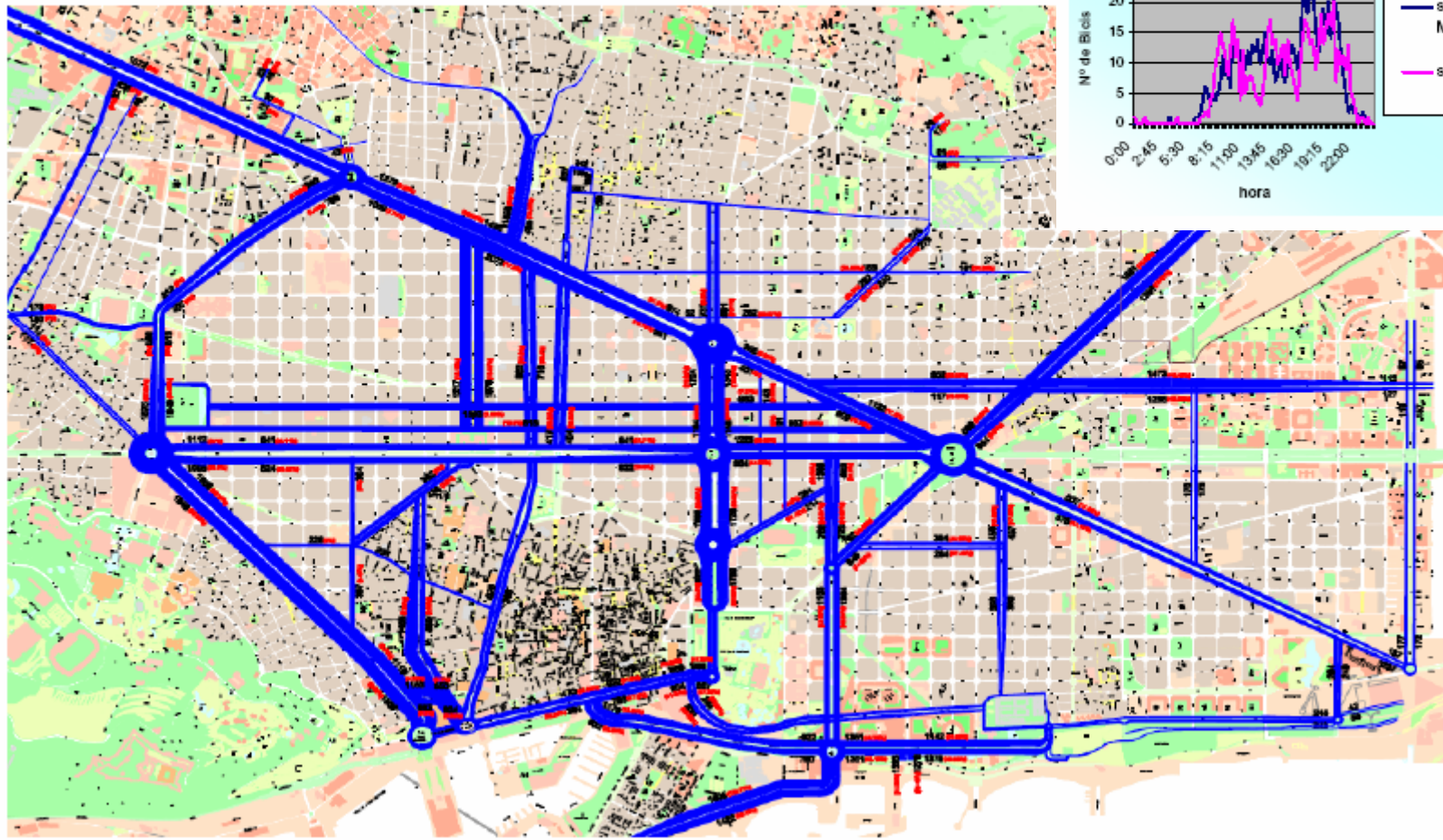


Vehicles



Bicycles

ARANYA DE LA BICICLETA 2007



Pedestrians



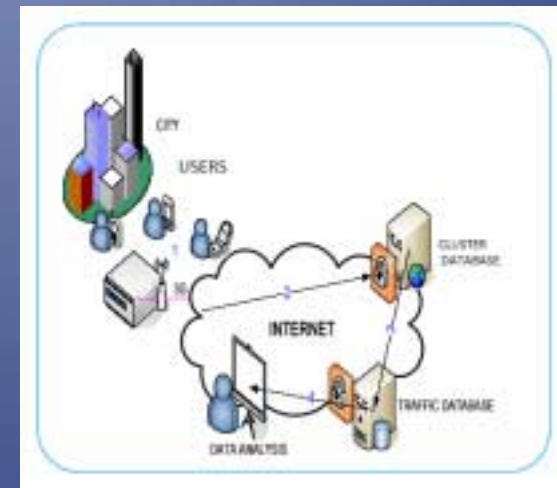
Pedestrians

- Around 50% of internal trips in Barcelona are made on foot and our mobility policies have the aim to increase this number.
- Monitoring the flow of people around the city would provide important information to urban planners, traffic engineers, transport authorities...
- Necessity of introducing the concept of “pedestrian level of service” in mobility and urban planning.
- We need not only to count pedestrians but also to get information about where people are travelling to and from (origin-destination statistics)



How can technology help us?

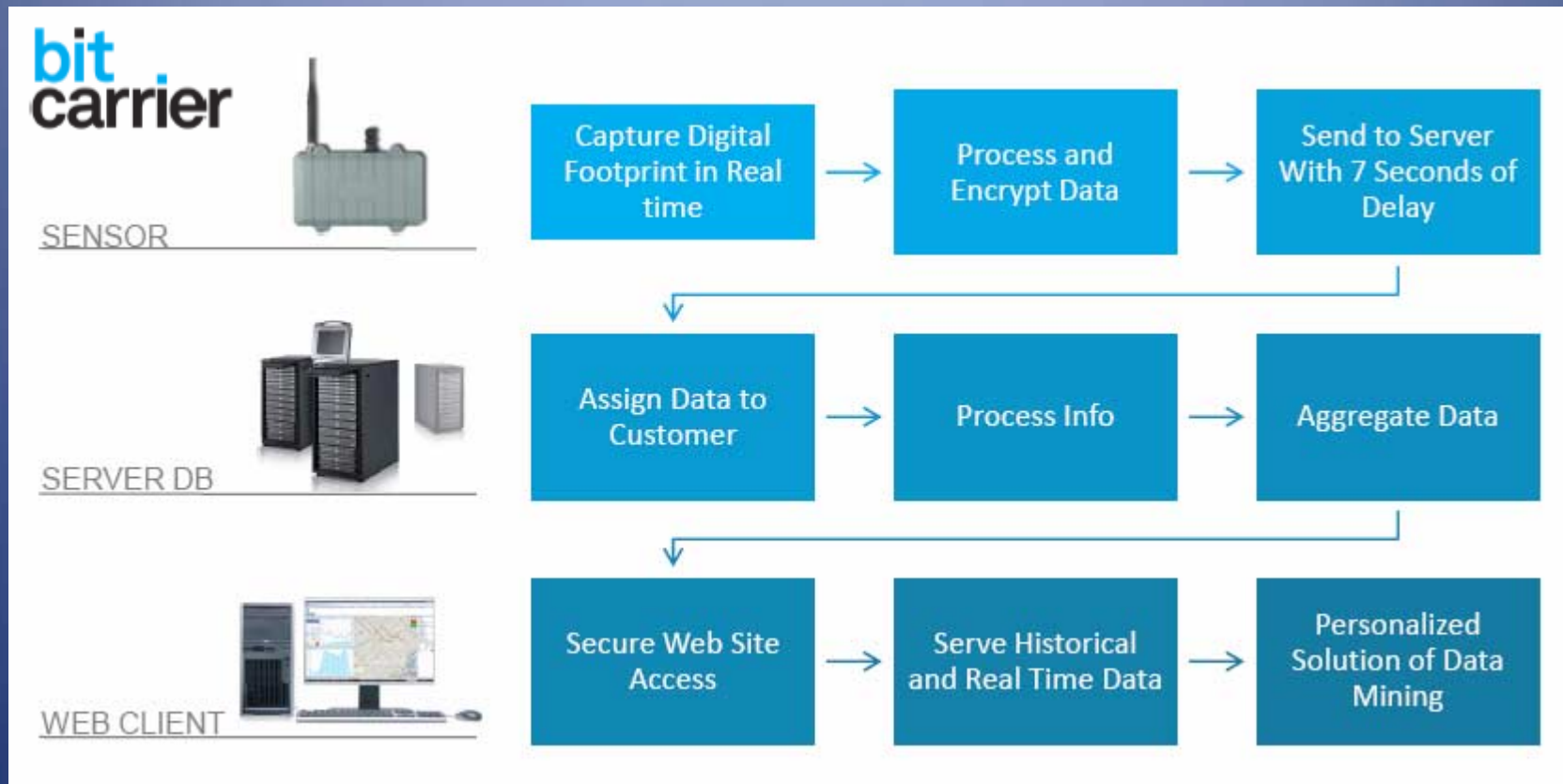
- Nowadays almost everyone in developed world carries a mobile device
- Today there are more than 1.000 million of Bluetooth devices over the world
- WIFI has become a standard in terms of connection for mobile devices
- Urban areas are plenty of people with digital hash that can be collected and processed



Collect data from pedestrians digital footprints



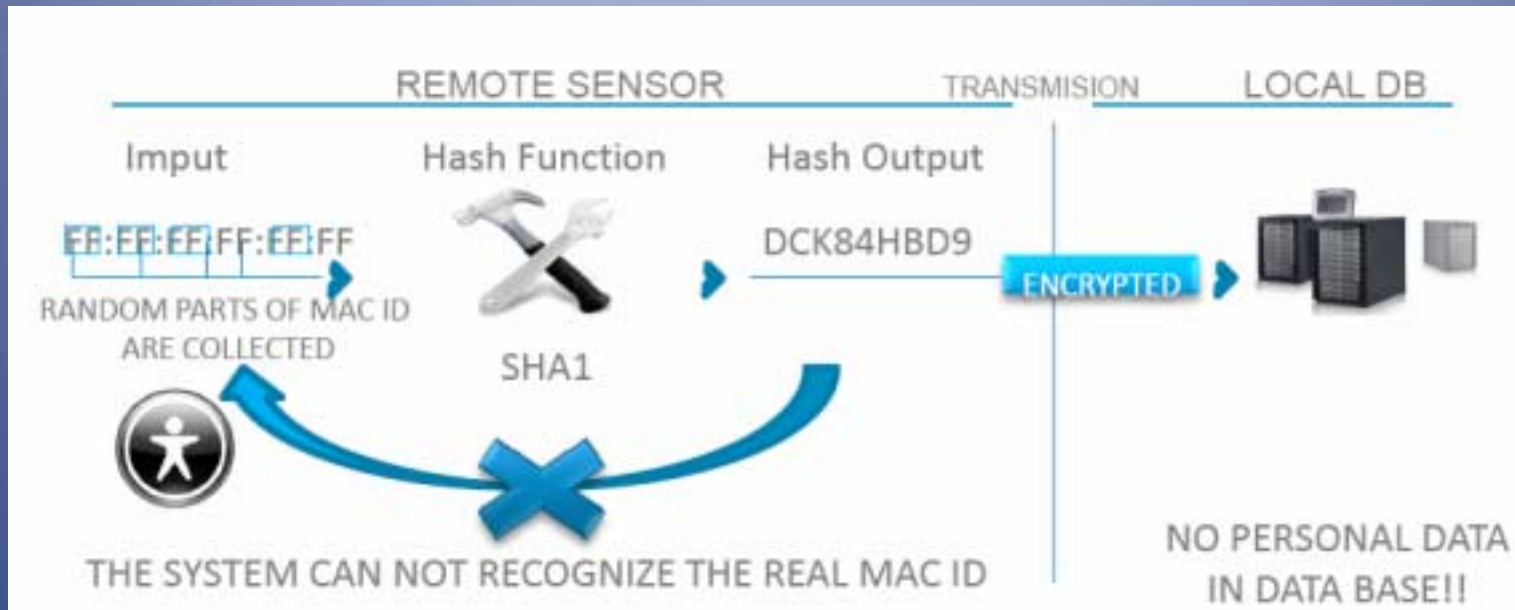
Barcelona's pilot



Privacy is one of the most important concerns in this project!



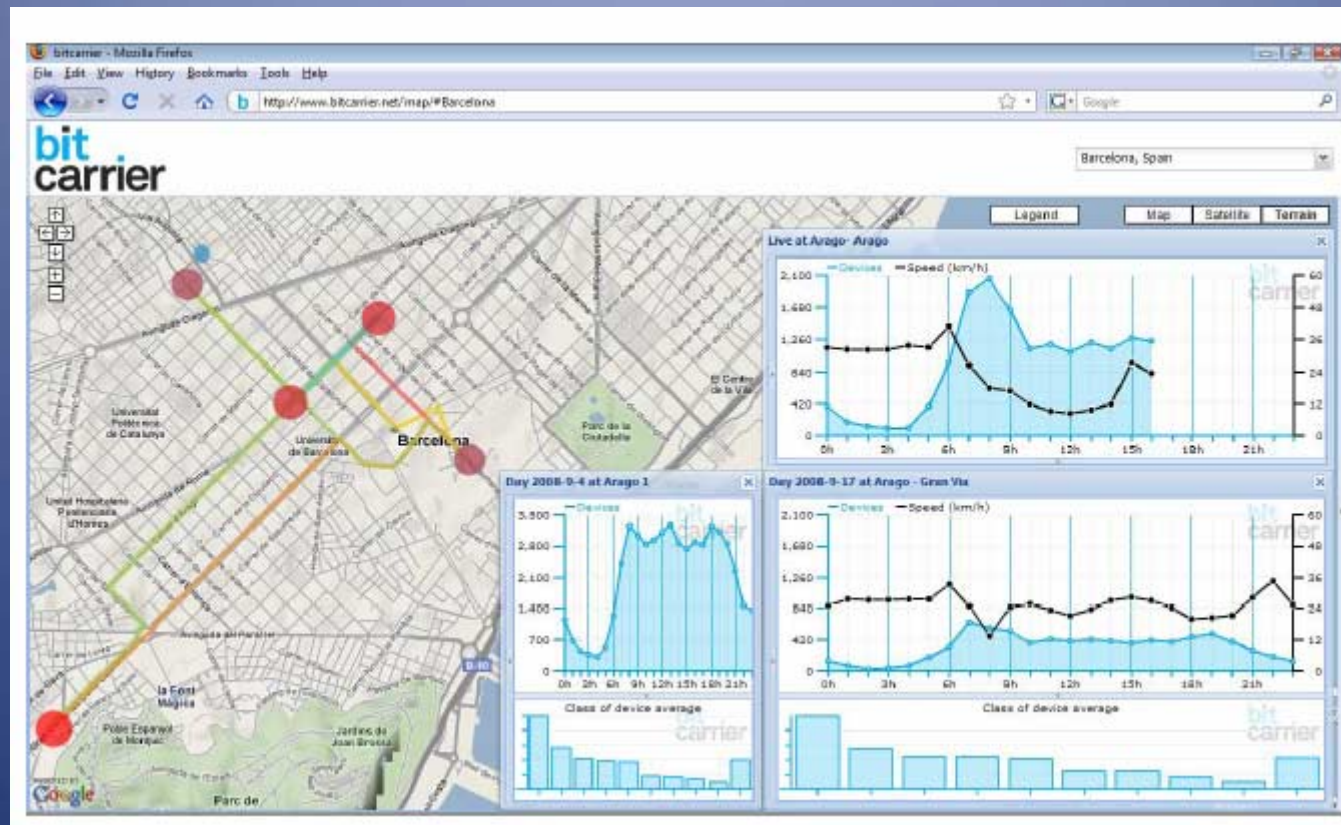
Barcelona's pilot



- This system captures a hash of data that can not be associated with device owner
- Phone numbers can not be captured or discovered
- Device is not disturbed by any sensor (no interference)
- When a remote sensor gets the data, we encrypt and send it to the server
- In the server we destroy the hash as soon as we aggregate the data

Barcelona's pilot

First application of this technology for vehicle monitoring



Barcelona's pilot

Next step: count pedestrians

- Choose a pedestrian area
- Install sensors
- Make manual counting to adjust the equipment
- Obtain first results



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Thank you

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