Preferred citation style for this presentation

Erath, Alex (2013) How to improve public transport services in Jurong Lake District? IDA Tech Showcase @ JLD CFC Networking Event, URA Function Hall, Singapore, May 2013.

How to improve public transport services in Jurong Lake District?
Tech Showcase @ JLD CFC Networking Event

Future Cities Laboratory
Singapore ETH Centre
Singapore

7th May 2013

(FCL) FUTURE CITIES LABORATORY 未来城市实验室

(SEC) SINGAPORE-ETH CENTRE 新加坡－ETH研究中心

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SINGAPORE UNIVERSITY OF TECHNOLOGY AND DESIGN
Established in collaboration with MIT

Real time public transport routing?

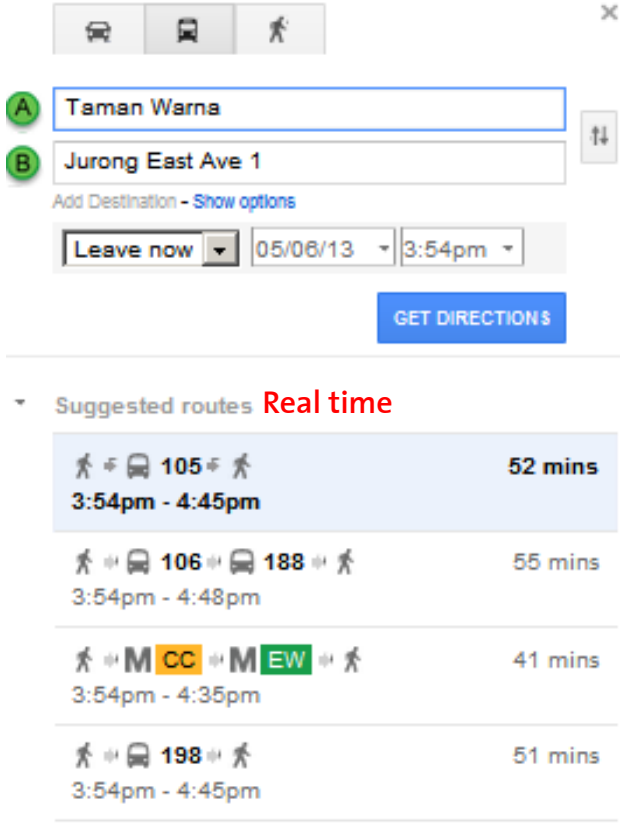
Should I go to

- bus stop a)
- bus stop b)
- Or MRT directly?

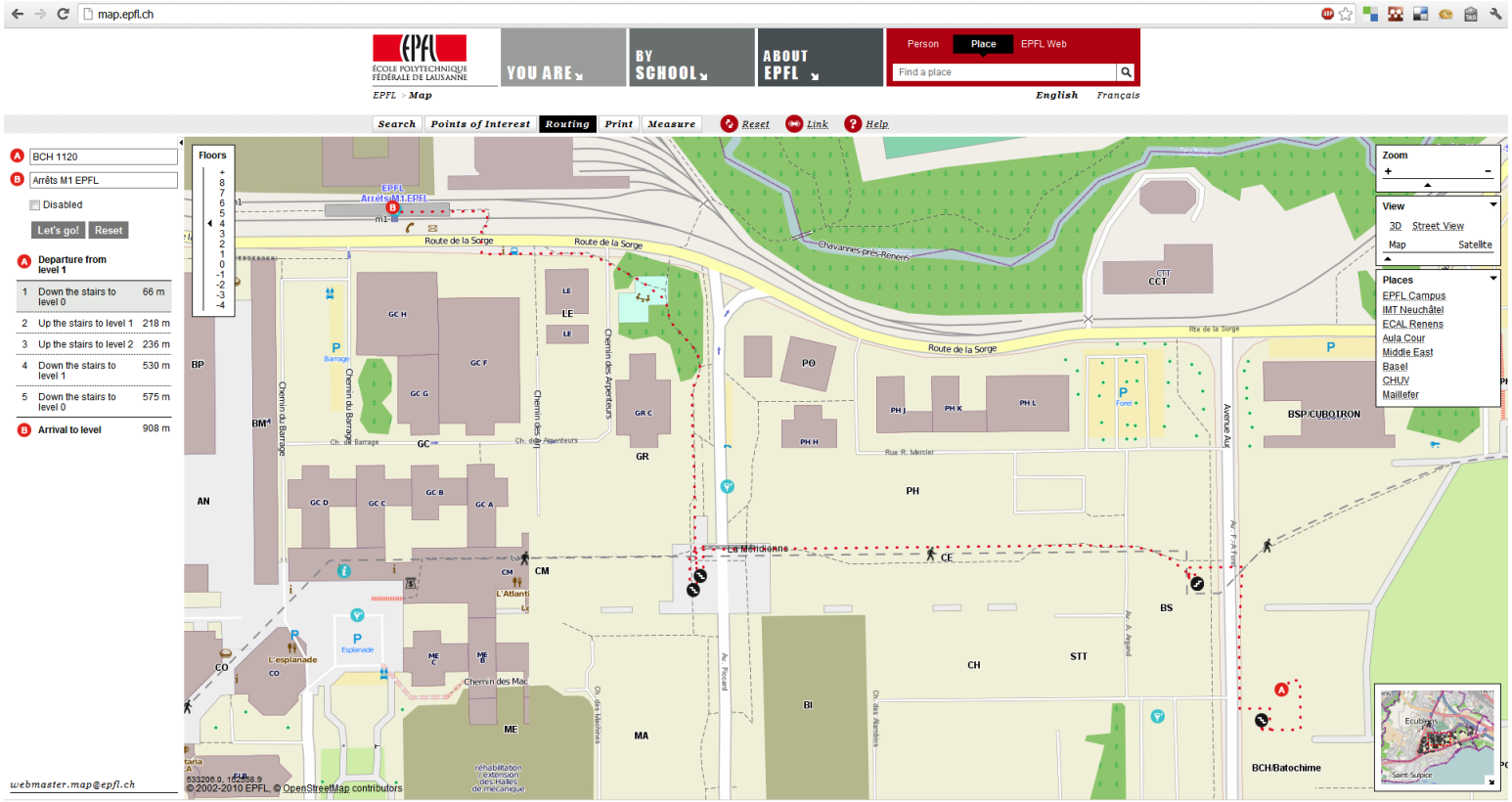
Equally important for transfers!

Challenges:

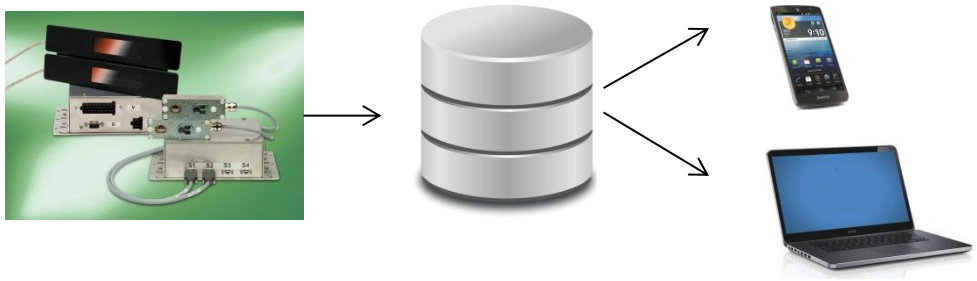
- Accuracy of bus position
- Update interval
- Data platform does not allow real time routing



Real time public transport routing – with 3d city model?



What is needed?



On board computers:

- Multi-sensor positioning system
- Continuous update of position through GSM/3G/4G

Common data platform, e.g. GTFS-realtime, -> publicly accessible datafeed

3d transport network

What else can be done?

Display of real time arrival times

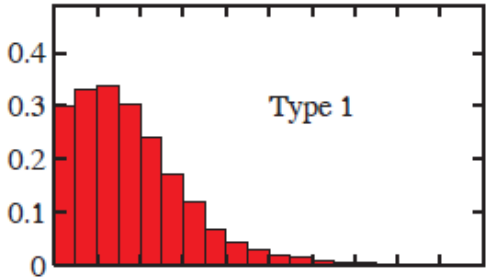
In public space, e.g. shopping centre

In vehicle to facilitate smooth transfers

What brings the future? Open source sensor data platform

Improving bus operations? Boarding and alighting process

Type (1)

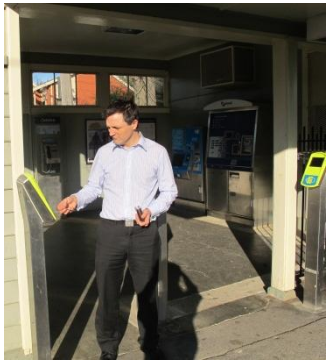


Off bus readers:

->faster boarding/alighting

+1 door:

->1.86 x faster alighting



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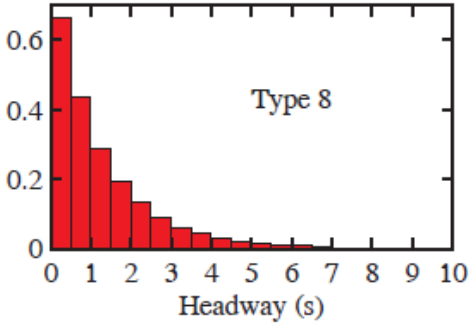
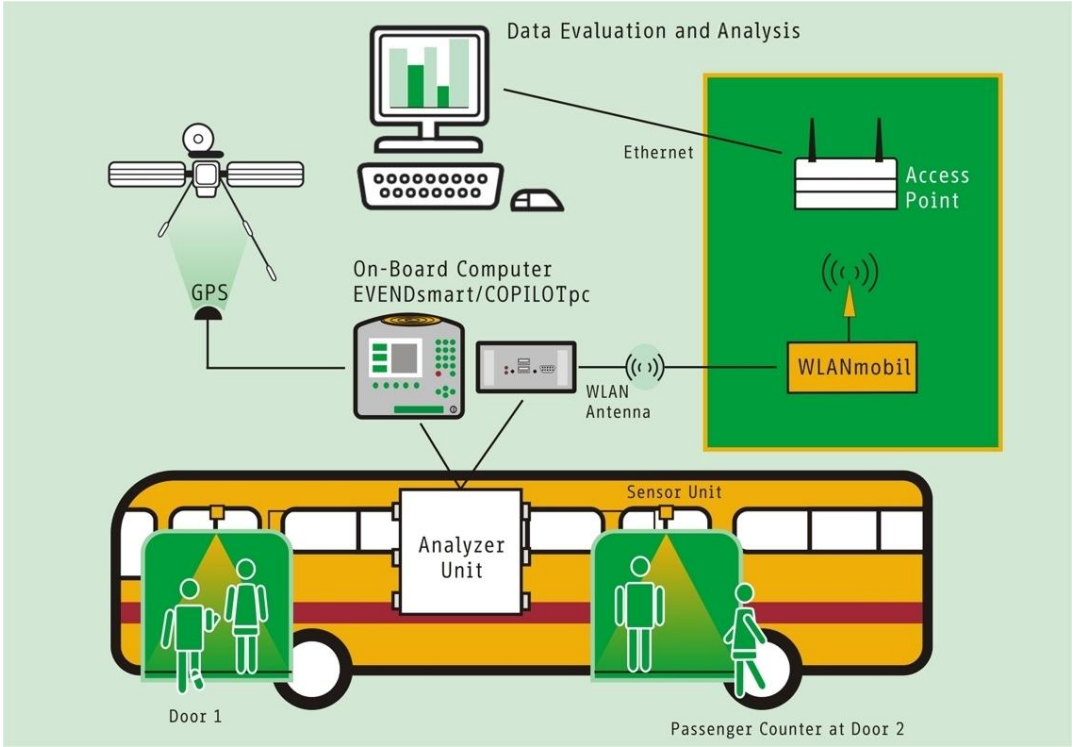


Improving bus operations? Dynamic bus bay allocation, also to gain space

What is needed?



Sensors for passenger counting:

- Real time information about on board passengers (even if they are students)
- Evaluation of time gains
- Relevance of fare dodging

Real-time operation control system

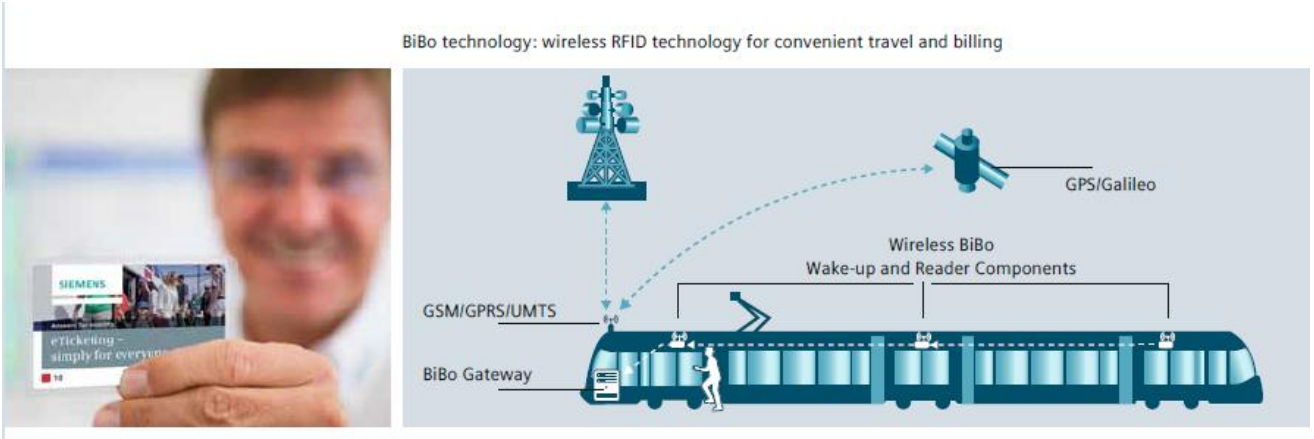
- Real time allocation of bus bays
- Communication to driver and passenger

What brings the future?

Bus Services Enhancement Programme

- 800 new buses
- 40 new services
- What combination of fare collection and bus type is most effective? And for which bus stops and bus line?

Future of fare collection technology: Be In – Be Out



MATSim for evaluation of benefits if rolled out for entire Singapore