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
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

CloudThink allows you to safely and privately use your driving data in many applications. View Presentation
Improving bus operations? Boarding and alighting process

Off bus readers:
- faster boarding/alighting

+1 door:
- 1.86 x faster alighting
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

![Diagram of BiBo technology: wireless RFID technology for convenient travel and billing]
MATSim for evaluation of benefits if rolled out for entire Singapore