



Automated mobility on demand

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Antwerp, Belgium 

A Control Solution Suitable for Large
Scale ATN Applications

(Transit Control Solution, Inc.)



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Introduction

- Transit Control Solutions, Inc. has been developing vehicle control software that targets application on large scale, i.e. regional ATN network applications
 - High capacity at high speeds
 - Scalable
 - Open Architecture





Some Key Characteristics...

- Failsafe design
- Enforces precise movement of vehicles
- Conflict-free operation through complex track networks
- Headways less than Moving Block Headways
 - One second at 60 mph (96 Kmph)





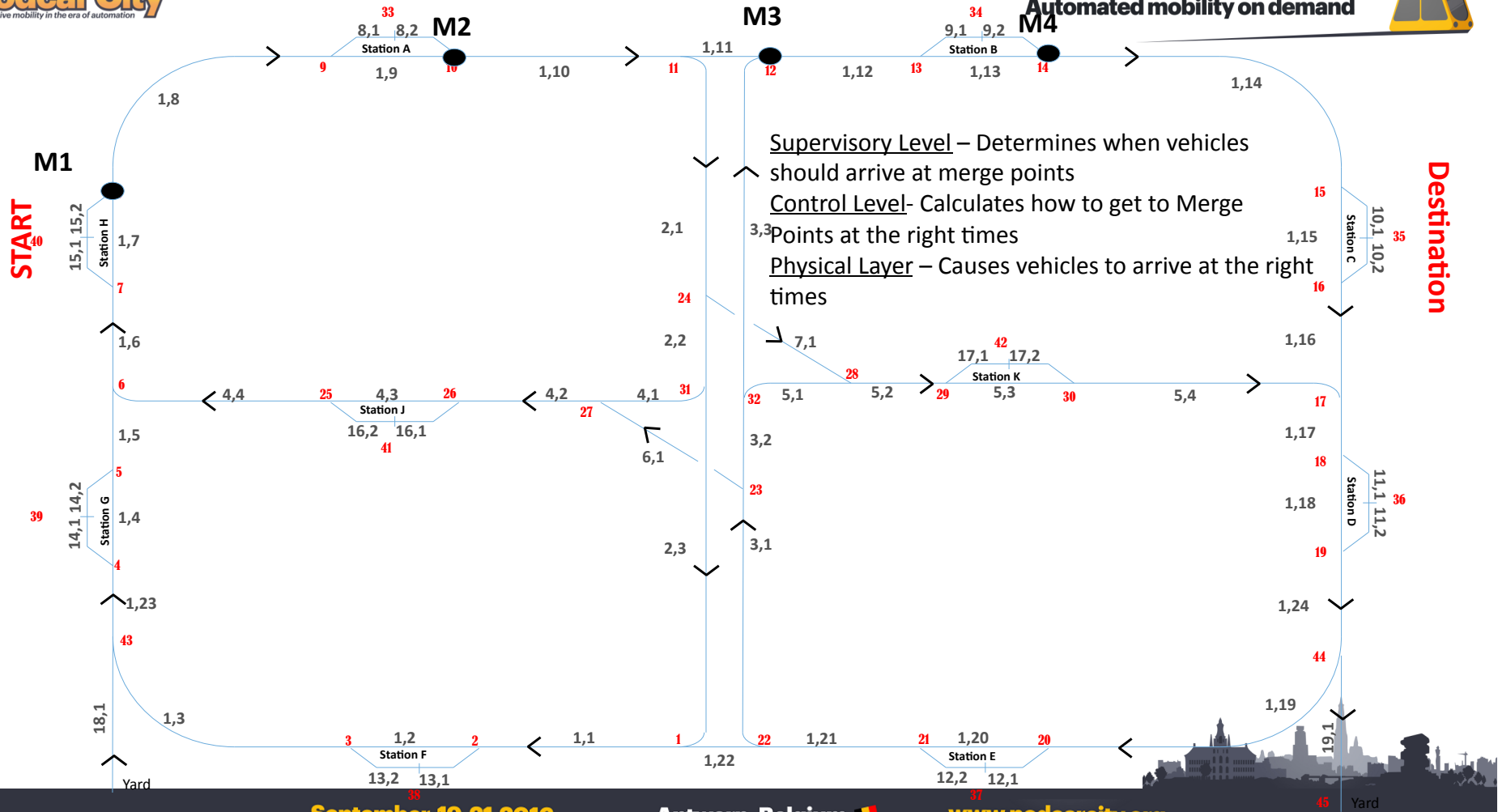
Functional Allocation

• Three Levels of Control – Non-Vital

- Supervisory Level: Fleet Management
 - Schedules the movement of vehicles through system merges
- Control Level: Motion Command Generation
 - Generates run trajectories that deliver vehicles to merge points at precisely selected and non-conflicted times
- Physical Level: Motion Control
 - Causes vehicle to track trajectory commands
 - Also controls door and switches

• System Safety Monitor – Vital







Today, ATN technology is viewed in many circles as a first/last mile technology...

BUT with the performance achieved by TCS' ATN Controller, higher speed, high capacity lines can be envisioned leading in the future to regional ATN networks.

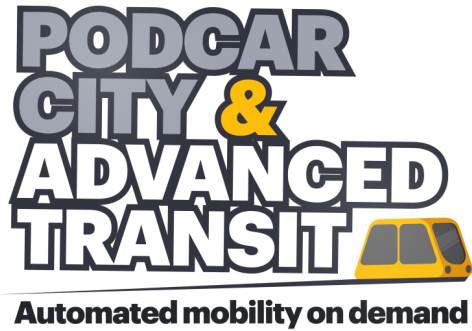




Current Status

- Emulation Code
- Scale model
- Field tested vehicle tracking sensors and wireless communication
- Several patents awarded, additional methods patent pending
- Licensing





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TCS 1/32nd Scale Model Video Presentation

<https://www.youtube.com/watch?v=Lrz-MKL3-aY>





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