Title: Get me to my plane on time

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Driverless Parking Shuttles

...better than buses?
• What is the problem with shuttle buses?
• Driverless shuttles
• Heathrow International Airport
• Greenville-Spartanburg International Airport
• Conclusions
What's the problem with shuttle buses?

- Passenger service
  - Connect times
  - Reliability
  - Limited seats
  - Lifting/storing luggage
- Congestion
- Emissions
- Bus maintenance and operations
Driverless Shuttles
• T-5 to Business Carpark
• 21 vehicles, 3 stations, 2.4 track-miles
• 1.2 M passengers since May 2011
Increased Occupancy & Revenue

- 2012 lot occupancy doubled over 2011
- Rate increased 20% June 2011
- Lot being expanded and rebranded – “Pod Parking”
• Increased dwell time in departures
• Passengers love it - predictable
• Revenue from sponsorships
• Adjacent hotel use
  – 2,000 per month @ £5
• Replaced 70,000 annual bus trips
  – Reduced congestion
  – Reduced emissions
Greenville - Spartanburg Intl Airport

6 to 10 minute connect times
Growing Parking Demand

![Graph showing increasing parking demand from 2018 to 2047. The demand for existing spaces stays constant, while the required spaces increase significantly.](image-url)
12 to 17 minute connect times
5 to 7 minute connect times
PRT: $181 M
Bus: $198 M

PRT has lower costs
Additional Charge vs. Time Saved

- BNA
- SDF
- ATL
Rates Used for Comparison

- PRT: $6.00 per day
- Bus: $5.00 per day
30-Year Parking Revenue

- PRT: $204 M
- Bus: $201 M

PRT has higher revenues

PRT based on $6.00/day
Bus based on $5.00/day
• Shuttle needed to maintain high level of service
• PRT is preferred to bus
  – Higher level of service
  – Lower capital costs
  – Higher revenues
  – Obviates need for parking structure
  – No disruption of surface traffic
  – No on-site emissions
  – Breaks even at $6.00 daily rate
• PRT can provide a much higher level of shuttle service
• It is cost effective at small and large airports
• Key airport parameters
  – Shuttle lot with more than 1,000 spaces
  – Employee lot shuttle buses
  – And/or rental car shuttle buses
  – Air quality non-attainment a bonus
  – Hotel connection a possibility