

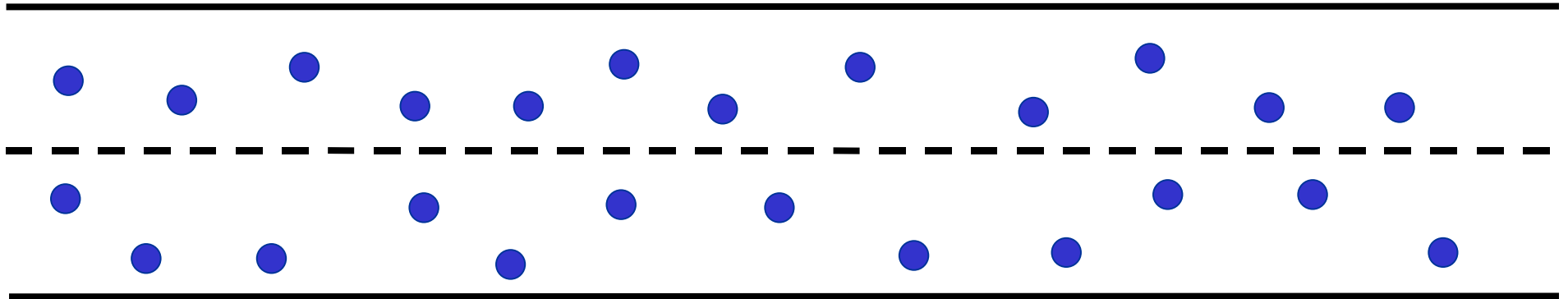
# C2C Communication: No Routing Required

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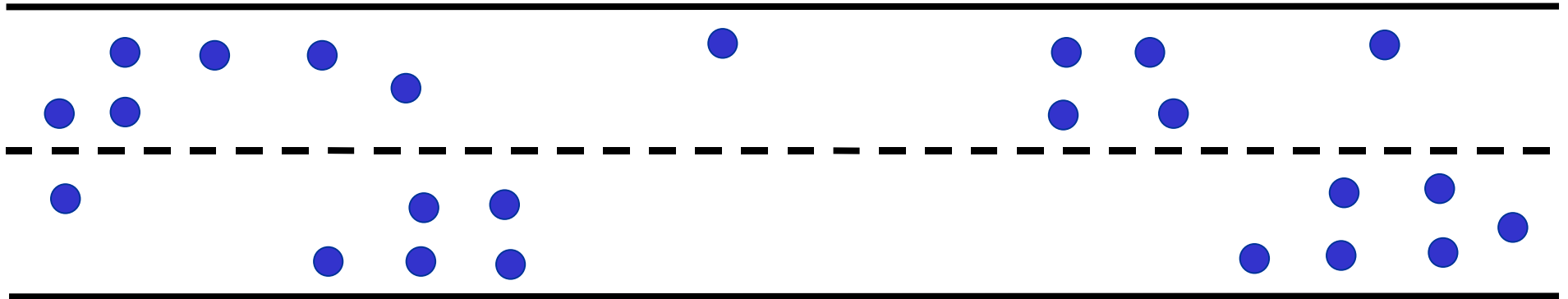
# Throughput & Connectivity

- Per-node throughput in wireless multi-hop networks decreases:
  - At least linearly with the average source-destination distance
  - At least like  $\frac{1}{\sqrt{n}}$  with node density
- The probability for connectivity on a single road decreases exponentially with the distance between source and destination

# What if we still want to do routing?

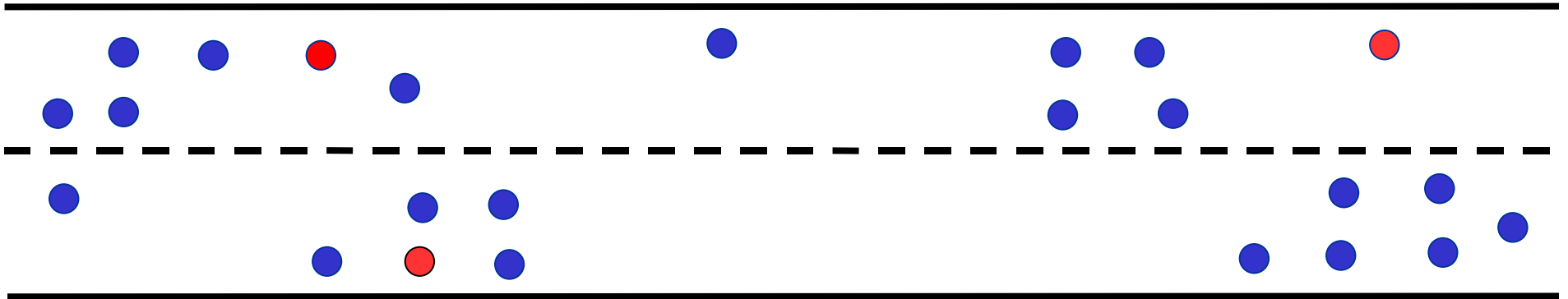


It gets worse ...



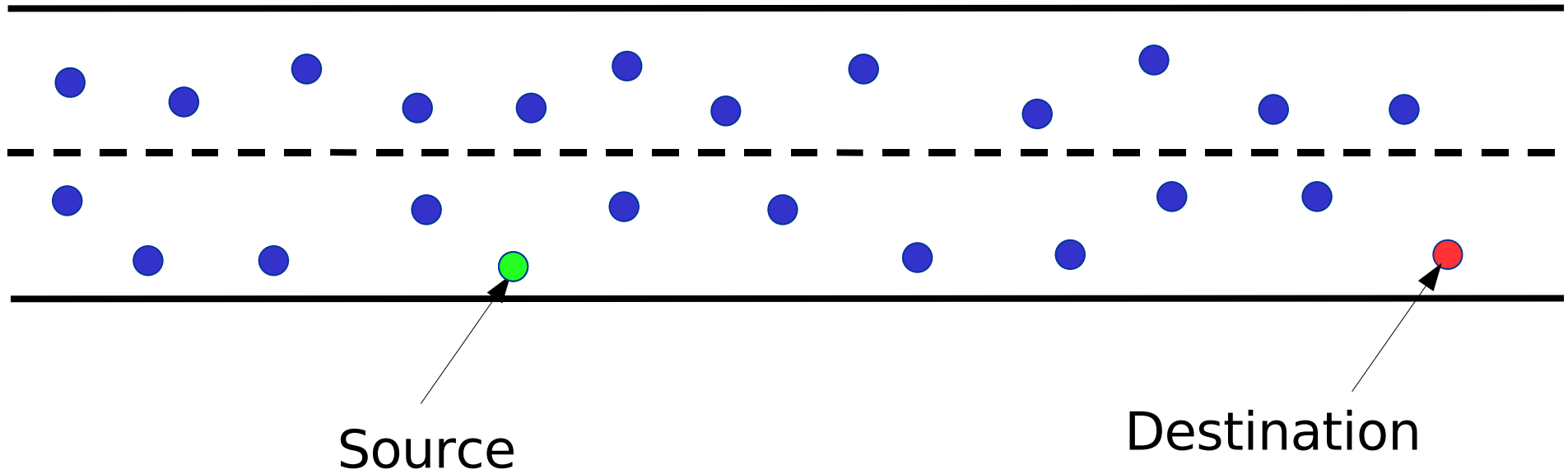
Cars are not evenly distributed!

... and worse.



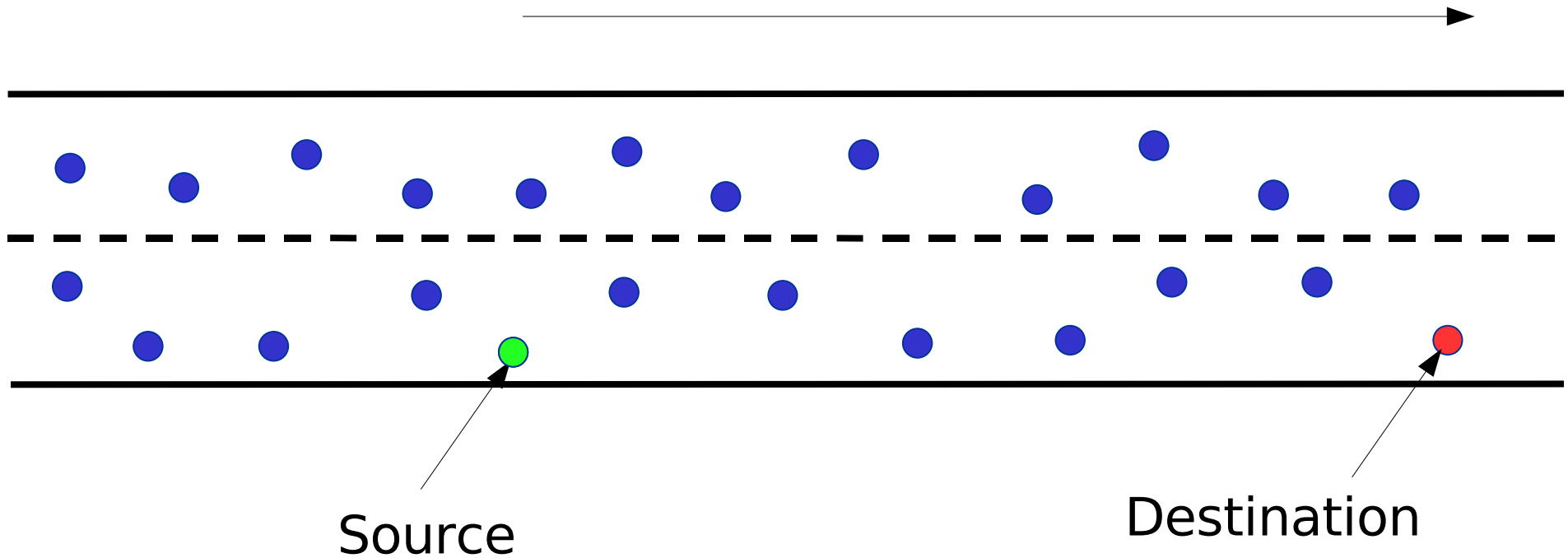
100% market penetration is unlikely!

# I still want to do routing!



# I still want to do routing!

Flooding in this direction



Living in a 1D world!

# Any more problems?

- Strong competitor: mobile Internet access

# Classes of C2C Communication

- Single-hop broadcast and limited flooding
  - safety applications
- DTN/Beaconing + Aggregation
  - Traffic information systems
  - Automated parking guidance system
- Routed messages
  - Short distance, low bandwidth
  - Limited connectivity
  - Competition with mobile Internet access
  - Any applications?