ROGER™
GPS repeater

Roger GPS Repeaters and some concepts for applications

ROGER GPS absolute antenna and repeater location 1/2

Amplifier

The repeated GPS signal inside is the one you get from the antenna position outside.

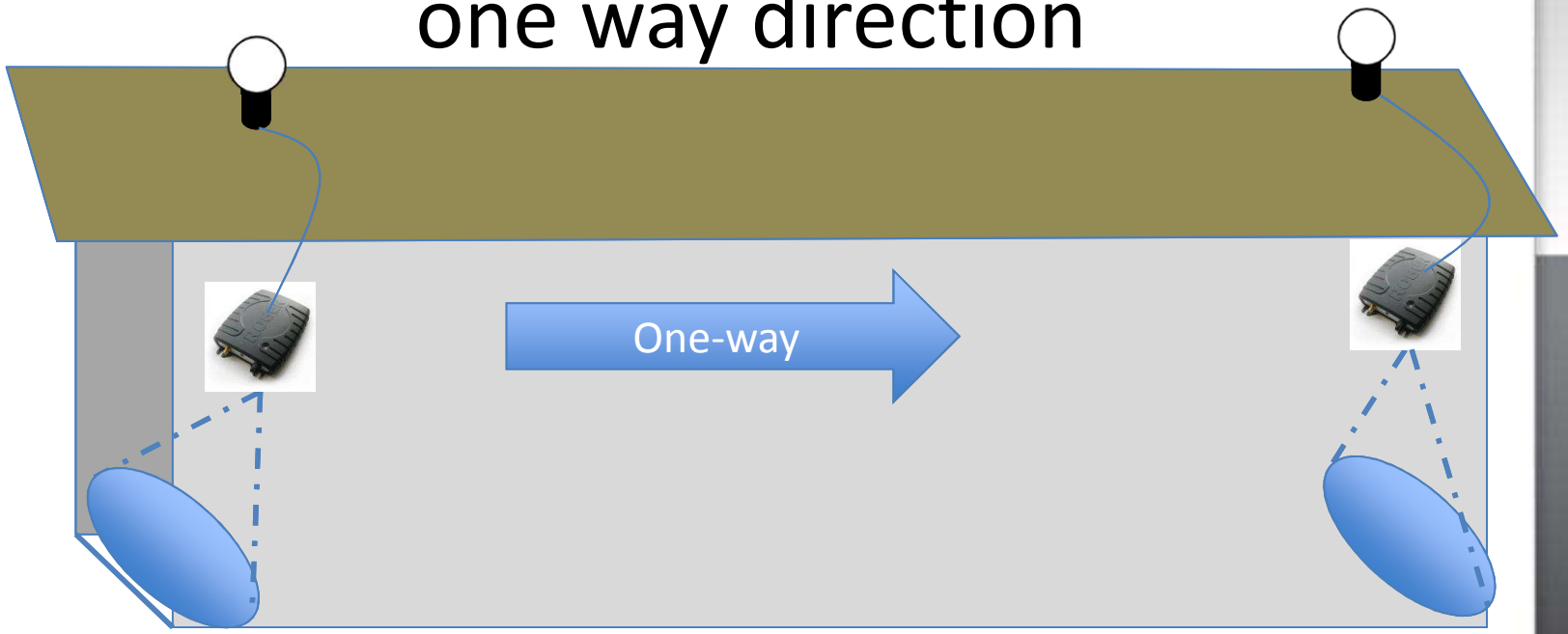
- You can use the repeater to bring in the GPS signal
  - Calibration
  - Reference point
  - Any other R&D use
  - To keep up in sync (in fix) your GPS devices
  - Relaying the GPS signal into areas where your tracked device is other wise out of coverage and your application looses the target
    - Here you have it under the pillar s area where the taxis load and unload the passengers for the hotel. The taxi fleet map application looses the taxi in the entry/exit point area.

ROGER GPS absolute antenna and repeater location 2/2

Repeater

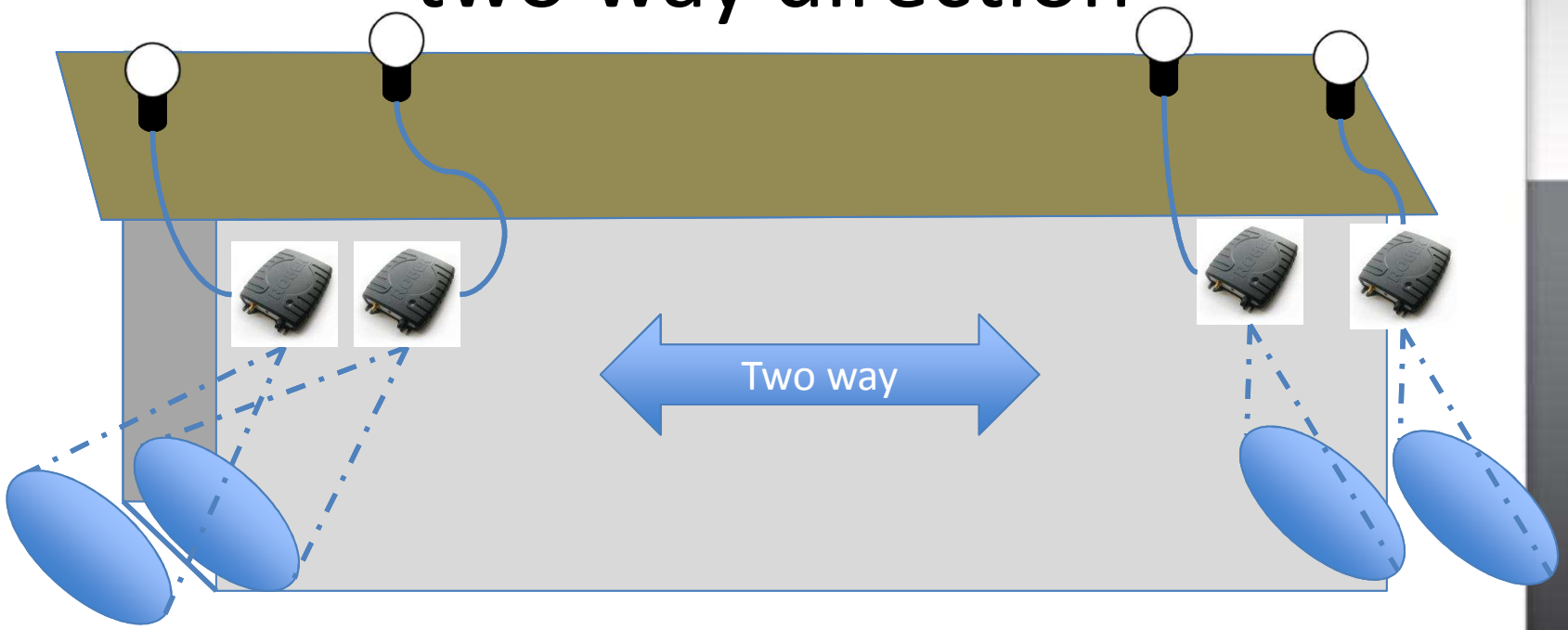
- When you know where the repeater is, you can use that point in your application as
  - Gate
  - Reference point
- No additional hardware required, just use your GPS

The gate and one way direction



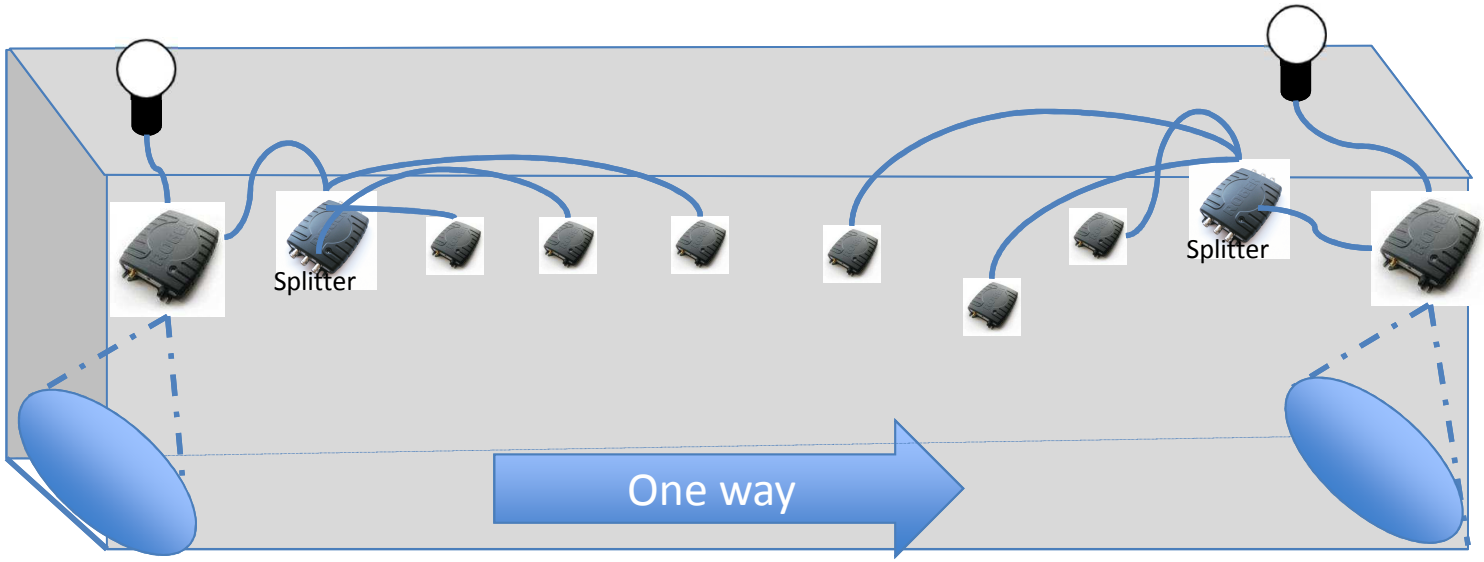
- Your application knows where your antennas and repeaters are
- The tunnel, corridor, terminal, depot, entry to a mall/exhibition centre, sports arena, etc.
  - If it is one way street, you only need one repeater at both ends
- When somebody or something passes by, you get an incident into your application
- Assuming: your GPS device is able to get fast a fix or the distance is between the repeaters is short so you have the coverage (fix) all the time
- If there is fast fix capability, you can minimize the gain to get a small spot where you have the GPS signal available

The gate and two way direction



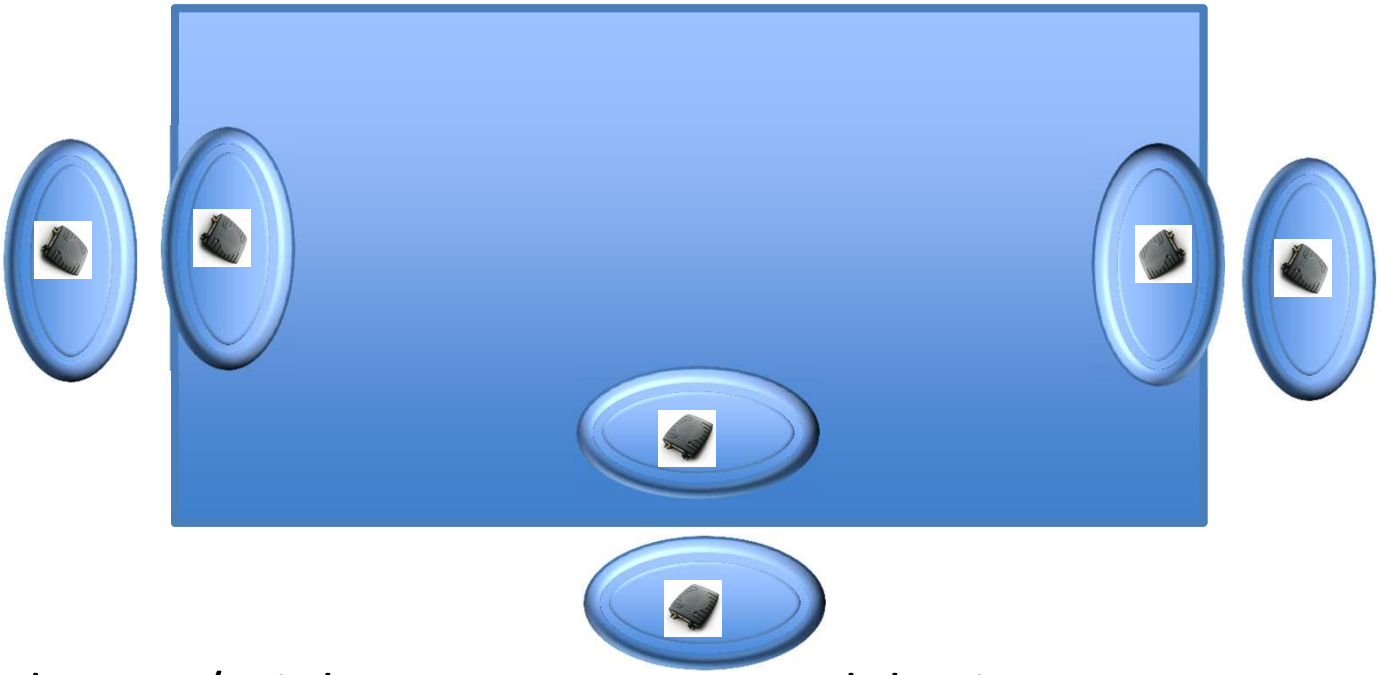
- Your application knows where your antennas and repeaters are
- The tunnel, corridor, terminal, depot, entry to a mall/exhibition centre, sports arena, etc. is a two-way street, you need two repeaters at both ends
- When somebody or something passes by, you get an incident (trigger) from the position from the entry as well as second incident when you're inside. Or Vice Versa.
- Now your application can tell the position and the direction (in or out).
- If you have fast fix capability, you should minimize the gain so you get only a small area where you have the GPS signal available

The “tunnel”, gate and one way direction



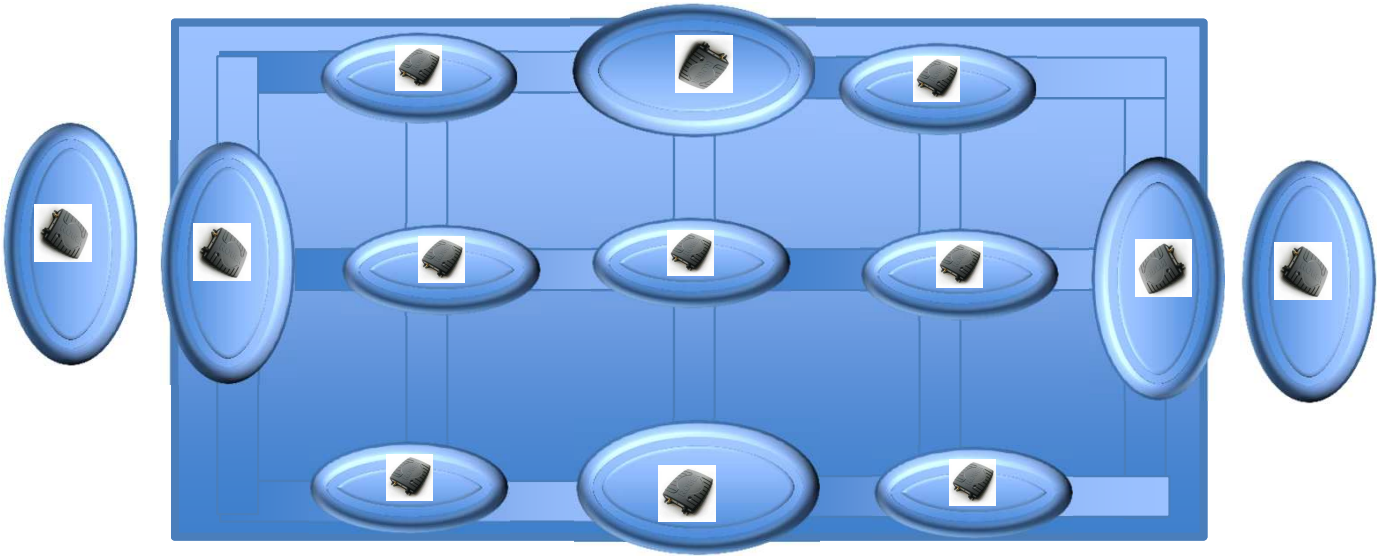
- Your application knows where your antennas and repeaters are
- If you can measure the GPS signal level so you get the position from each repeater with less antennas
- In this case your GPS devices have the fix all the time as you cover the whole area

Multiple entry/exit



- Each entry/exit has two repeaters each having own antenna
  - one inside and one outside
- If you get fast fix, you don't need full coverage in the building
- Your application knows who or what entered or exited and from which door

Multiple position with entry/exit

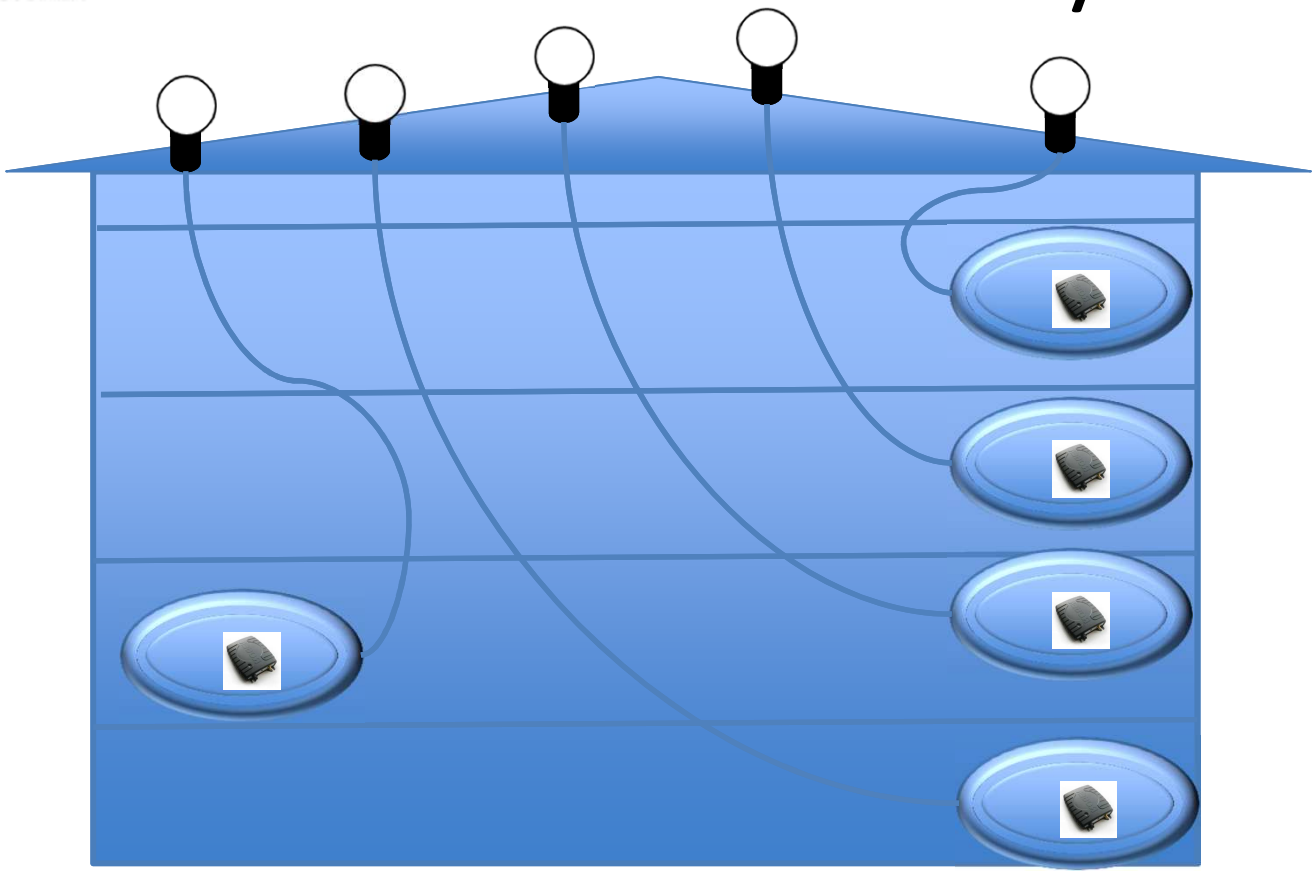


- Each entry/exit has a repeater
- If slower fix, you can build full coverage with multiple antennas
  - or with splitter you can go to less antennas by measuring the field strength, direction, etc.
- Your application knows who or what entered or exited and from which door

Multi floor house 1/2

- If you have a chance to put an antenna on each floor at the entry/exit level, at the elevator lobby, etc.

Multi floor house 2/2



- If you have a chance to put the antennas on the roof so far from each other that you get a different absolute position for each repeater at the entry/exit level, at the elevator lobby, etc.