



# Senior Project Progress Presentation

Handicapped Parking System

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# Introduction



- ▶ The Problem
  - ▶ Handicapped parking abuse.
  - ▶ Affects 72% of handicapped.
- ▶ How big is it ?
  - ▶ Many attempts to solve the problem.
  - ▶ APPs to report abusers.
- ▶ Why ?
  - ▶ “I feel there are too many parking spaces reserved for the handicapped”
  - ▶ “I feel many people who have handicapped parking license do not really need them”



# Current Solutions

- Issue a handicapped permit from “The Ministry of Social Affairs”.
- Guard to check the parked cars.
- Remote controlled gates.




# Proposed Solution

- Allow only eligible people to use the parking spot.
- Show the number of empty handicapped spots at the entrance of the parking.
- Ability to issue temporary permits to use handicapped spots.



# Project Major parts (sub-systems)

- Identification & recognition sub-system.
- Blocking sub-system.
- Authorization sub-system.
- Parking spot counter.



# Identification & Recognition Sub-system

- Possible technologies available:
  - License Plate Recognition (LPR)
  - Passive RFID
  - Active RFID
  - QR code
- Final decision is Passive RFID

# Identification & Recognition Sub-system

- Sirit INfinity 610 Four-Port
  - 4-6 m range.
  - Multiple interfaces
    - USB
    - Ethernet
    - Serial





# Blocking Sub-System

- Possible technologies available:
  - Parking space guard.
  - Electro-Hydraulic Spike Barrier /Tire Killer.
  - Electro-hydraulically Blocking Bollards.
  - Parking Post.
- Final decision is Electro-Hydraulic Spike Barrier /Tire Killer.





# Conclusion

- What we finished until now:
  - Analysis the possible technologies for:
    - The identification and recognition sub-systems
    - The blocking sub-systems.
  - The final decision on the sub-systems.
  - Hardware choices.
- What is next ?

