

# MAPPING OF ELECTRICAL AND TECHNOLOGICAL SYSTEMS

MEASURE OF QUALITY SERVICES FOR INSTALLATION AND  
MAINTENANCE



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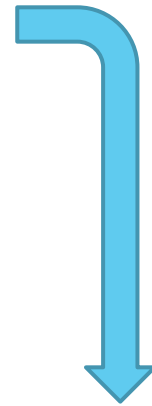
Dott. Nicola Lupo

# WHAT IT MEANS MAPPING?

Make immediately usable information of the electrical or technological system

## RELATED PROBLEM

- ▶ Identification the system
- ▶ Correct maintenance
- ▶ Loss of information



Loss of quality

# HOW MAP THE SYSTEM?

- ▶ RFID technology

## WHO IS RFID?

- ▶ Radio Frequency Identification
- ▶ The use of radio frequency tags to identify real objects

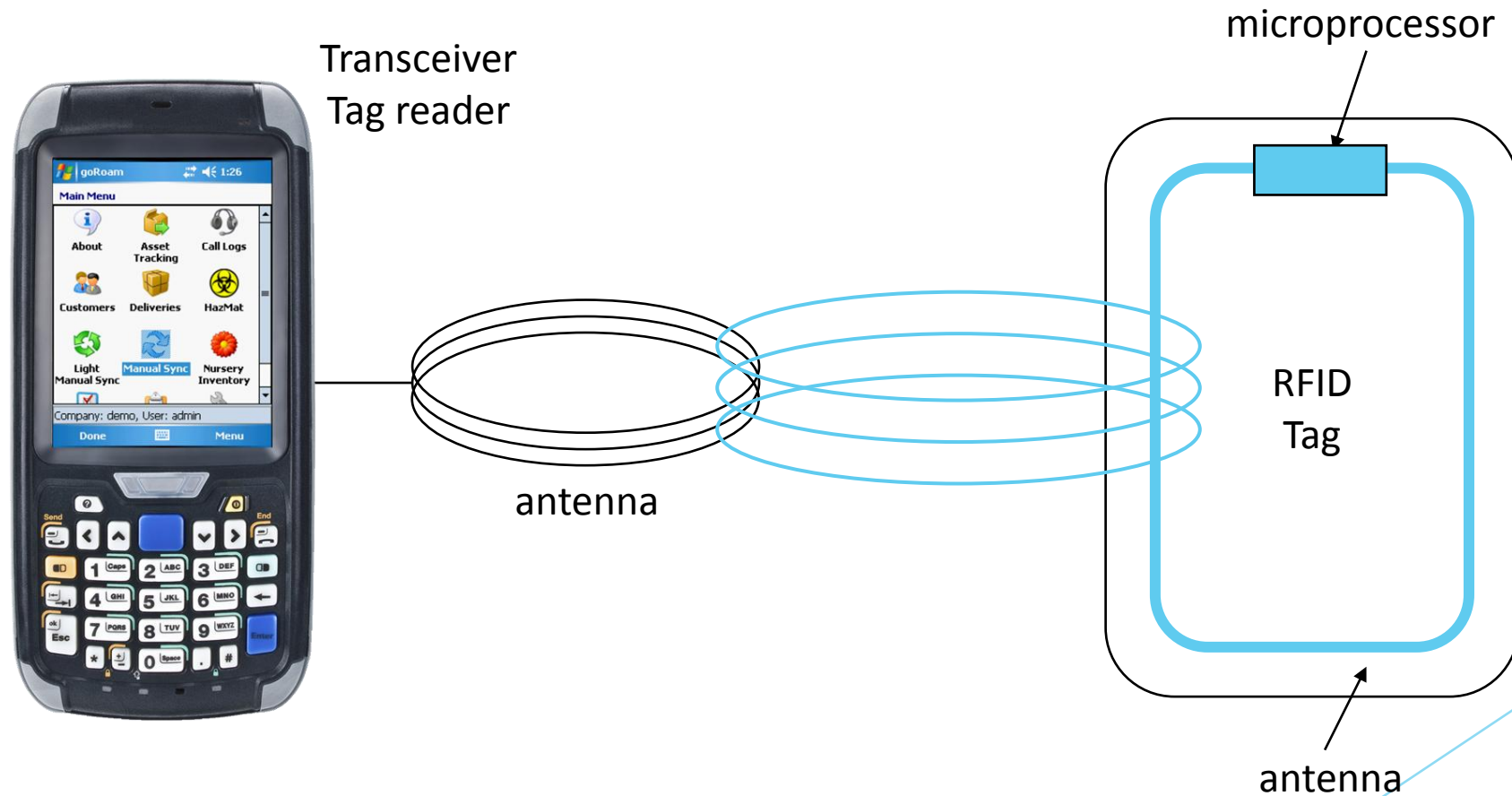
# RFID

- ▶ Assign IDs to objects
- ▶ Link the ID to additional information about the object
- ▶ Link the ID to complementary info

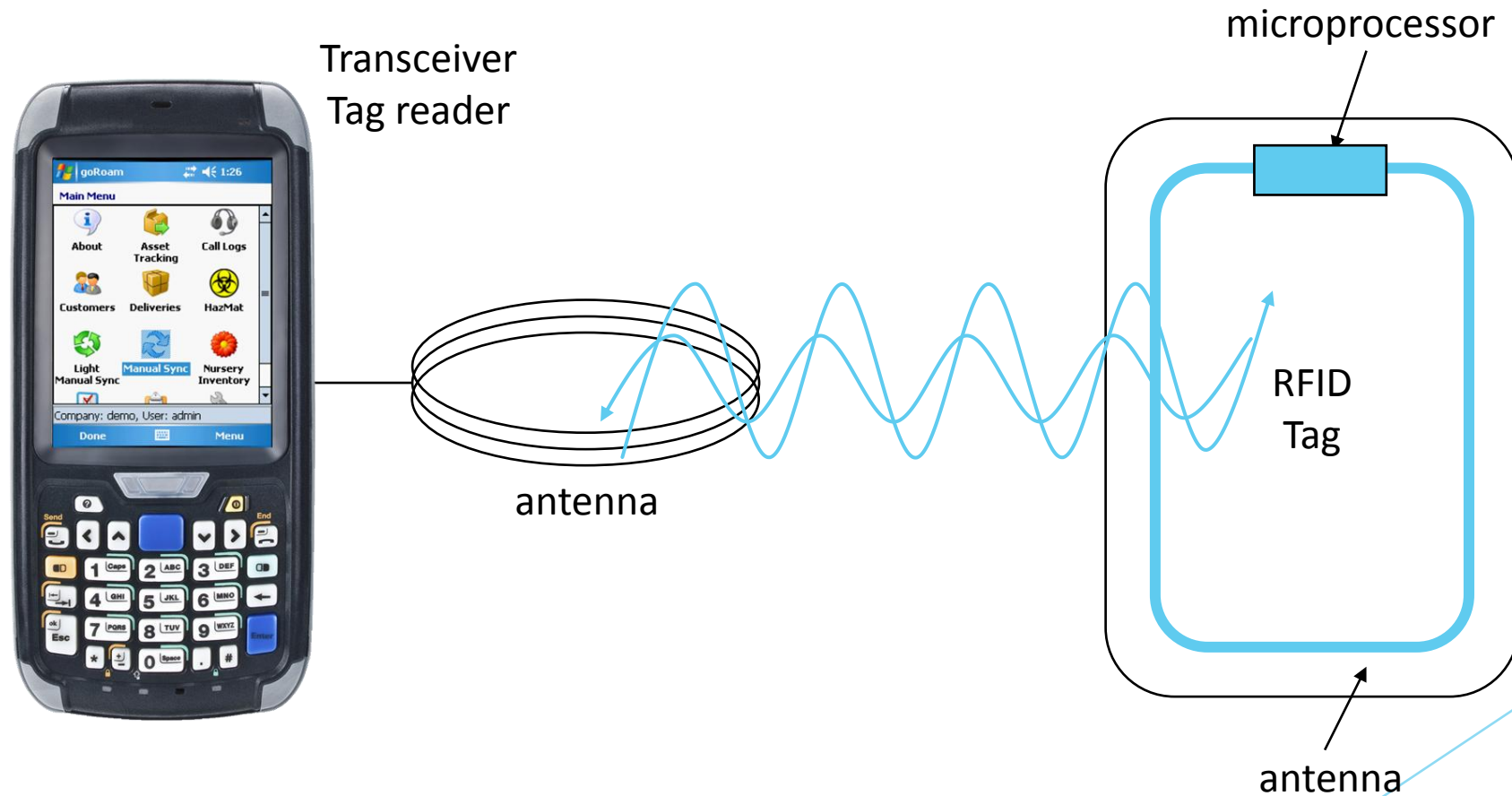
# HOW DOES RFID WORK?

- ▶ Transceiver – Tag Reader
- ▶ Transponder – RFID tag
- ▶ Antenna

# RFID HARDWARE



# RFID HARDWARE





# TYPE OF TAGS

- ▶ Passive tags / Active tags
- ▶ Frequency
- ▶ Subject to tag

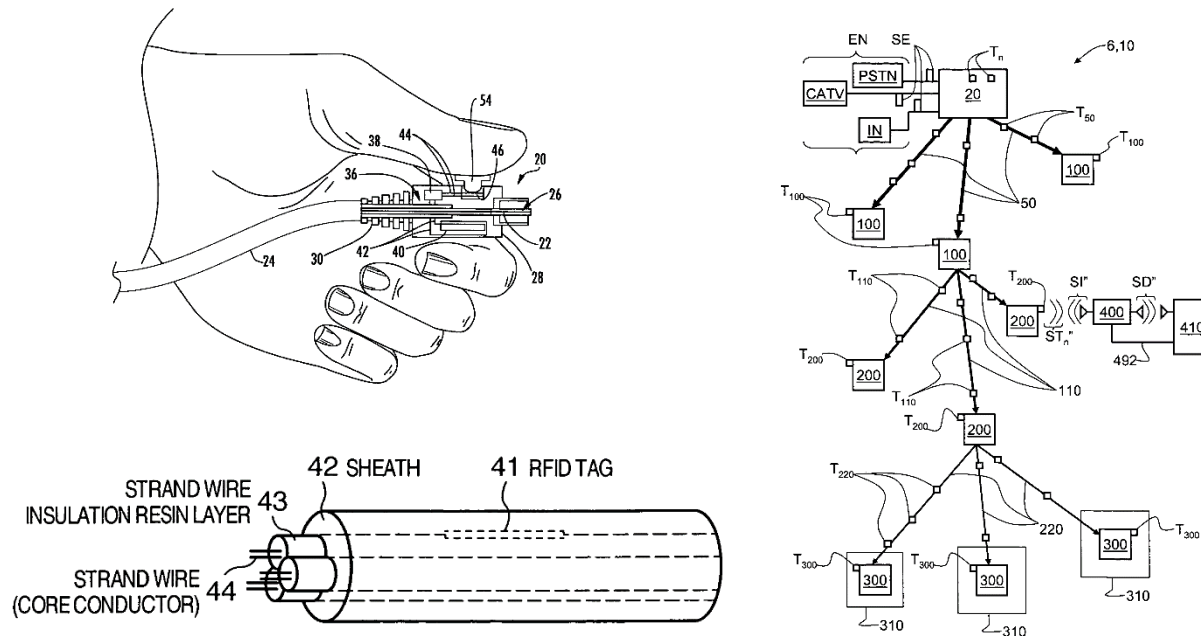


# CURRENT APPLICATION

- ▶ Logistics
- ▶ Animal tracking
- ▶ Postal package tracking
- ▶ Passive / Secure entry
- ▶ Airline baggage tracking
- ▶ Shop articles surveillance

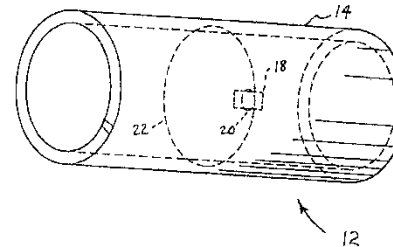
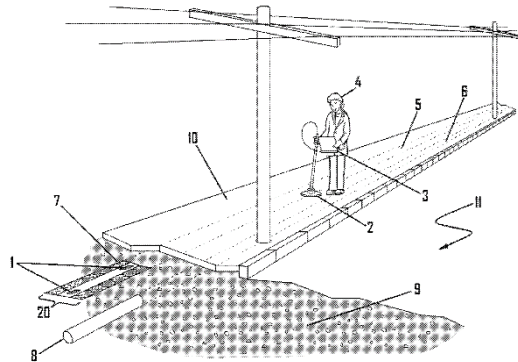
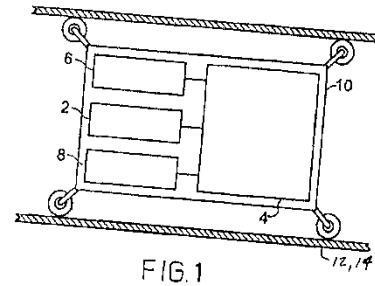
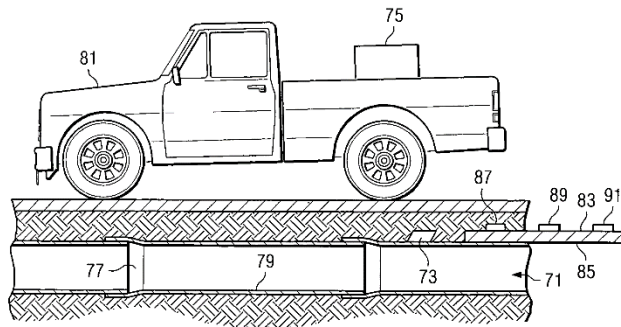
# MAPPING WITH RFID IN LITERATURE

- OFN mapping  
 (US 7760094 B1 - US 7772975 B2 - US 7760094 B1)



# MAPPING WITH RFID IN LITERATURE

- Oil pipelines / Water pipelines  
(US 7616119 B2 - US 8689653 B2 – US 07969295)



# VISION



# VISION





# VISION



# VISION





# VISION

Patent pending - PZ2015A0000002

# TEST

# TEST

# CONCLUSION

- ▶ Improve quality in technological systems
  - ▶ Identification the system
  - ▶ Improve and speed up the maintenance
  - ▶ Inform the user (datasheet, photo, guide)
- ▶ New quality standards
  - ▶ New regulation

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