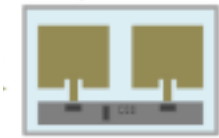# Design

Downlink communication - from reader to tag

- It is exactly what the downlink did:

  - Tag, though cannot extract msg from wifi packet (cannot read a letter), but can perceive **WHETHER** there is a wifi packet (the color of the envelope)

  - Using **presence / absence** of packets to encode data

Design

Downlink communication - from reader to tag

- Using **presence / absence** of packets to encode data

- For the sender (the WiFi reader device):

  - Send a CTS-to-Self, global silence first

  Silence!

  - Send the preamble - let Tag know that a transmission is about to happen

  - Send a sequence of packets

Presence/absence of packets encodes downlink data

CTS-to-Self 1 0 1 0 1 0 0 1 1 0 1 1 •••• 1 0 1 →t

Preamble   Payload