Desem   Q1

1)

Beacon Responses
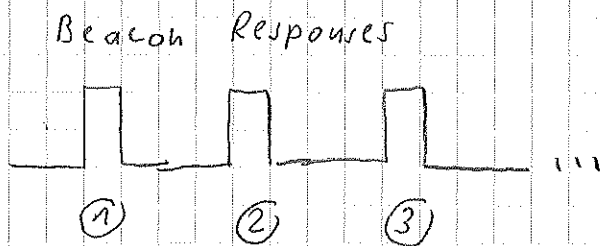

① ② ③

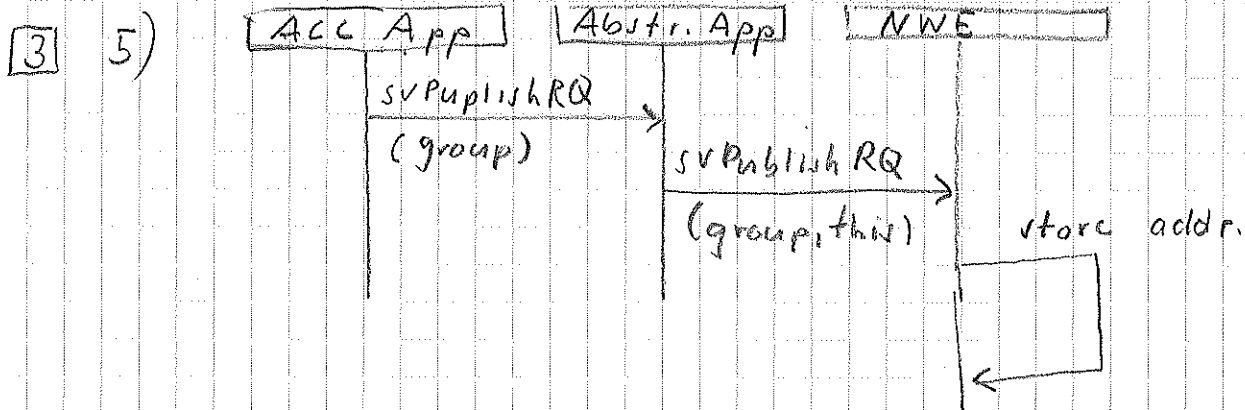[3] ① Master sends beacon and all sensors
        sample the values then

    ②,③ sensors reply data (sampled values)

[2] 2) Sensor ID = 7 bits → 128

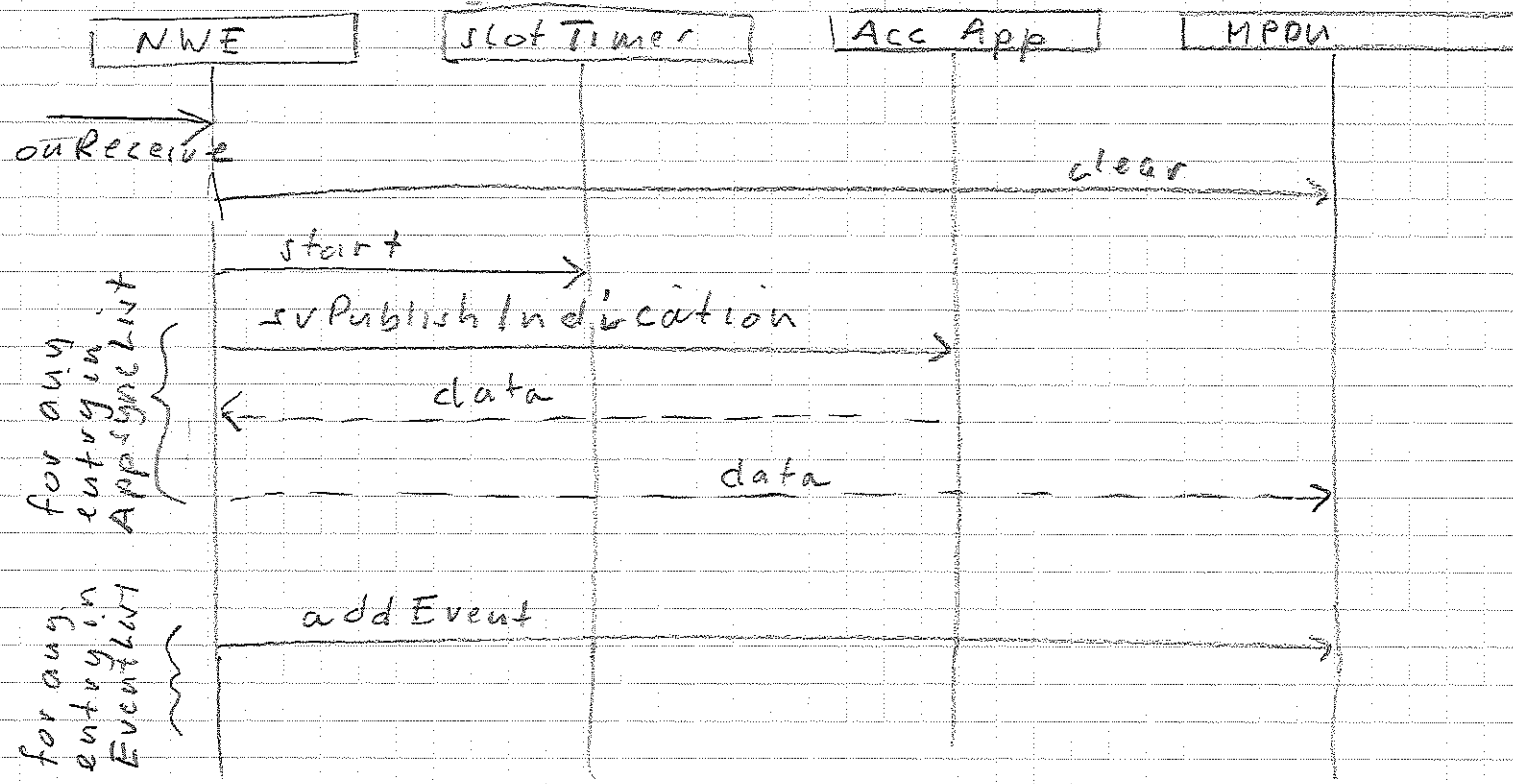[3] 3) The slot duration

[2] 4) The frame rate of the transceiver

[3] 5)

[Acc App]   [Abstr. App]   [NWE]

svPuplishRQ
(group)
                svPublishRQ
                (group, this)
                                store addr.

[2] 6) It is event based.

[5] 7) see next page

[2] 8) because it would last too long to
        sample

Design Q1

7)

App

NW

NWClient

+ dataInd (d: Data): void
+ dataConf (d: Data): void
+ connectConf (): void

− theApp

Network

+ dataRQ (d: Data): void
+ dataResp (d: Data): void
+ receive (m: Message): void

− theNet

− id: Byte

«uses»

Data

payload: Byte*

«uses»

− theData

Message

from: Byte
to   : Byte

«uses»

F

Factory
+ getNWC() : NWClient
+ getNW() : Network

+ buildSystem()

App

NWClient
+ initialize() : void
+ InitRelations(...) : void

1 **** the NWC

◇ the NW

NetWork
+ initialize() : void
+ InitRelations(...) : void

NW

*) getNWC 1
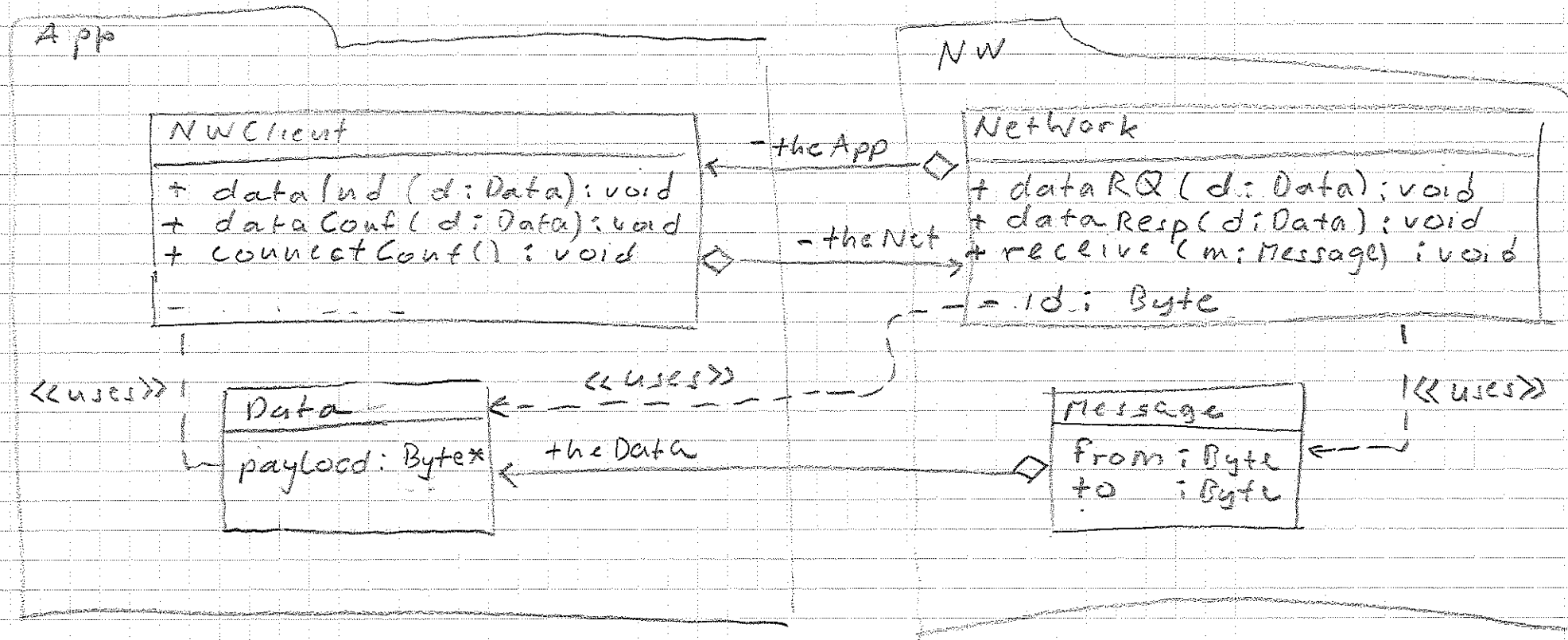getNWC 2
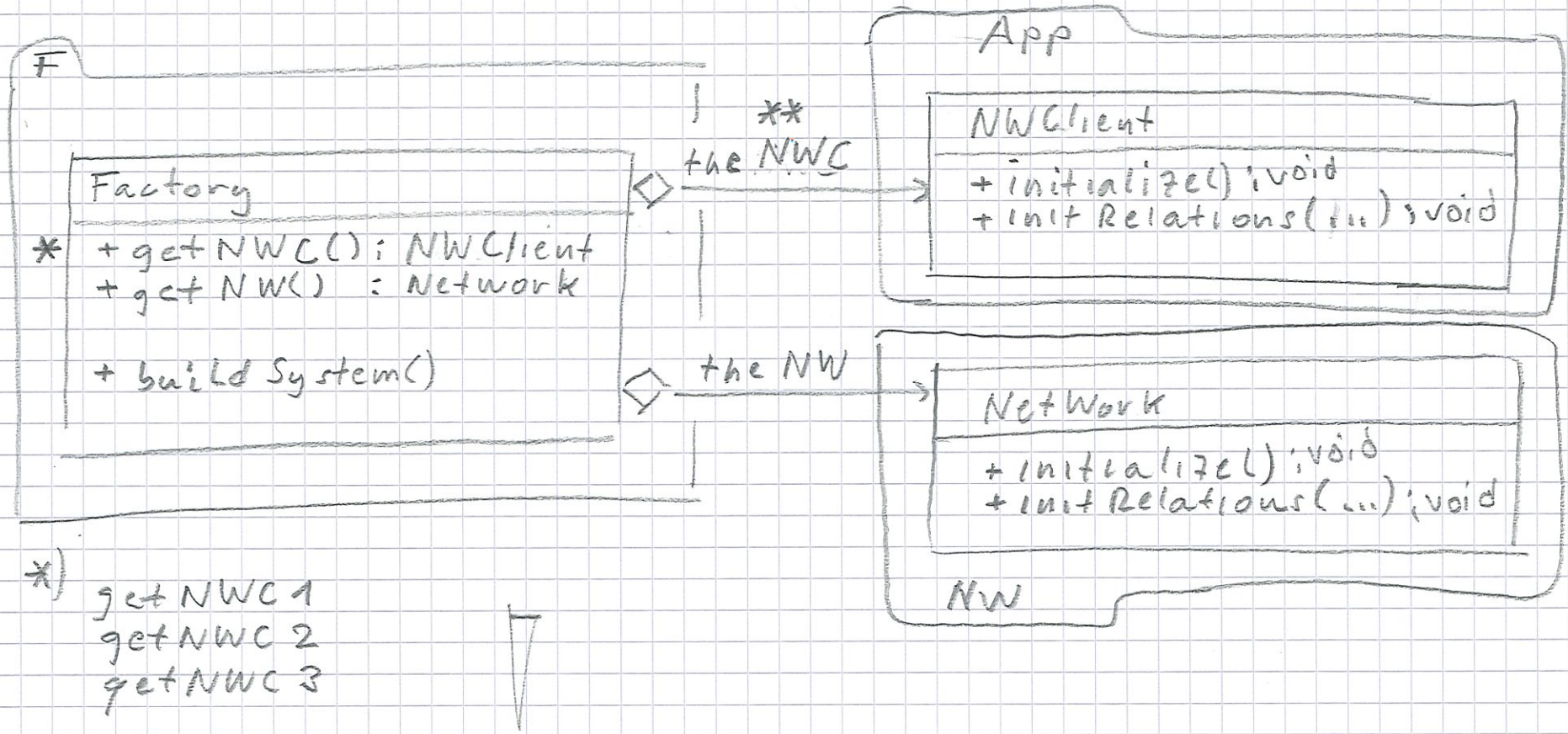getNWC 3

**) the NWC 1
the NWC 2
the NWC 3

Desenu Q2

2)

6

Dessau P2

6   3)

IF

I App.

○ + counConf(id:Byte)
+ data Ind (d:Data) : void
+ data Conf (d:Data) : void

I Net

○ + conn Rq ('id:Byte) : void
+ data Rq (d: Data) : void
+ data Resp(d: Data) : void

Factory

NWClient

Data

Network

Message

IApp

INW

c1..c3

c1..c3

nw

nw

*

*
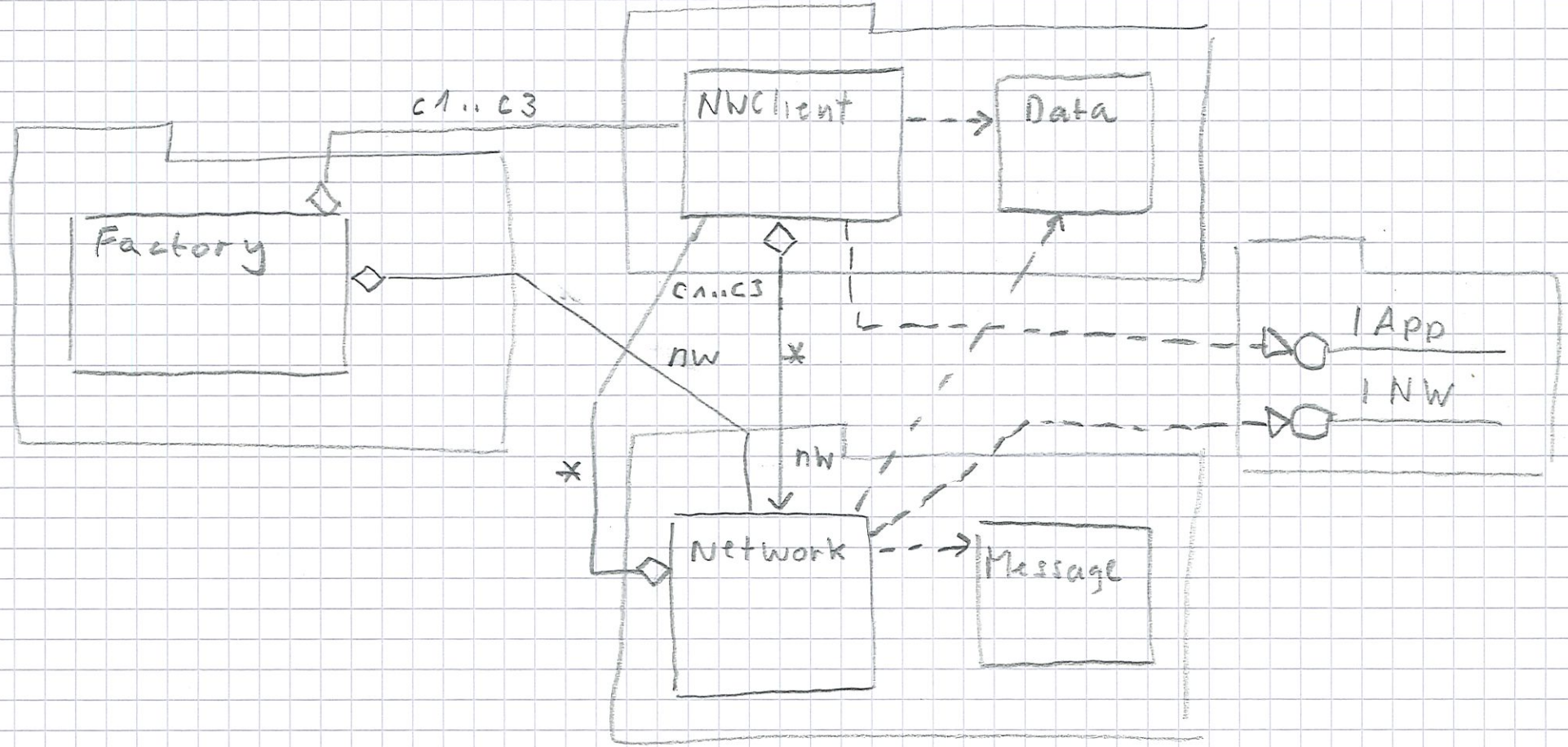
* could also use
  the Factory methods

Desem R2

4)