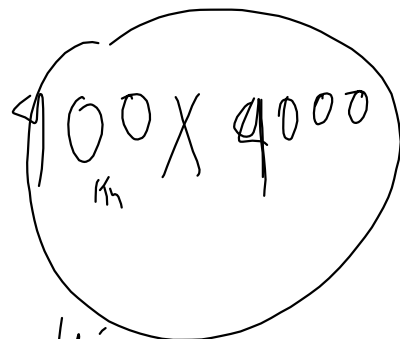


Currently \rightarrow MVNO

Prof & employees



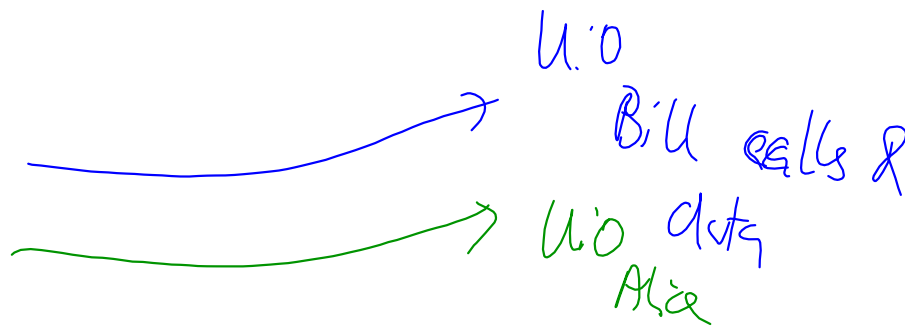
Jerry

Uio mobile bill
400 NOG/hrs

~~400 NOG/hrs~~ 90% calls with Finto
10% in Macro

Bill is Telenor Customer

Alice is Netcom Customer



U:O

- builds Fendo network

- provide service to

a) own people

b) Telenor/Netcom people

Telenor

- builds Macro network

- Save network costs

400 NOK → 130

40% (Home)

60 50% (Office)

9000

10% (MNO)

130mk

Termination fee

Bob
Telcom

Josef
Uio

Alice
Netcom

a) Bob calls Alice

→ Telcom pays term. fee to Netcom

b) Alice calls Josef

→ Netcom pays to Uio term. fee

0.16 ^{per min} / termination fee

Traffic in other networks (national roaming)

Josef

90% in Uio

10% in Telcom

Uio to pay to Telcom?

6000 employees - Uio

3) 0.16 ^{per min} → ARPV revenue
60% cost for the mobile network
0.1 ^{per min} traffic cost in mobile network

Bob

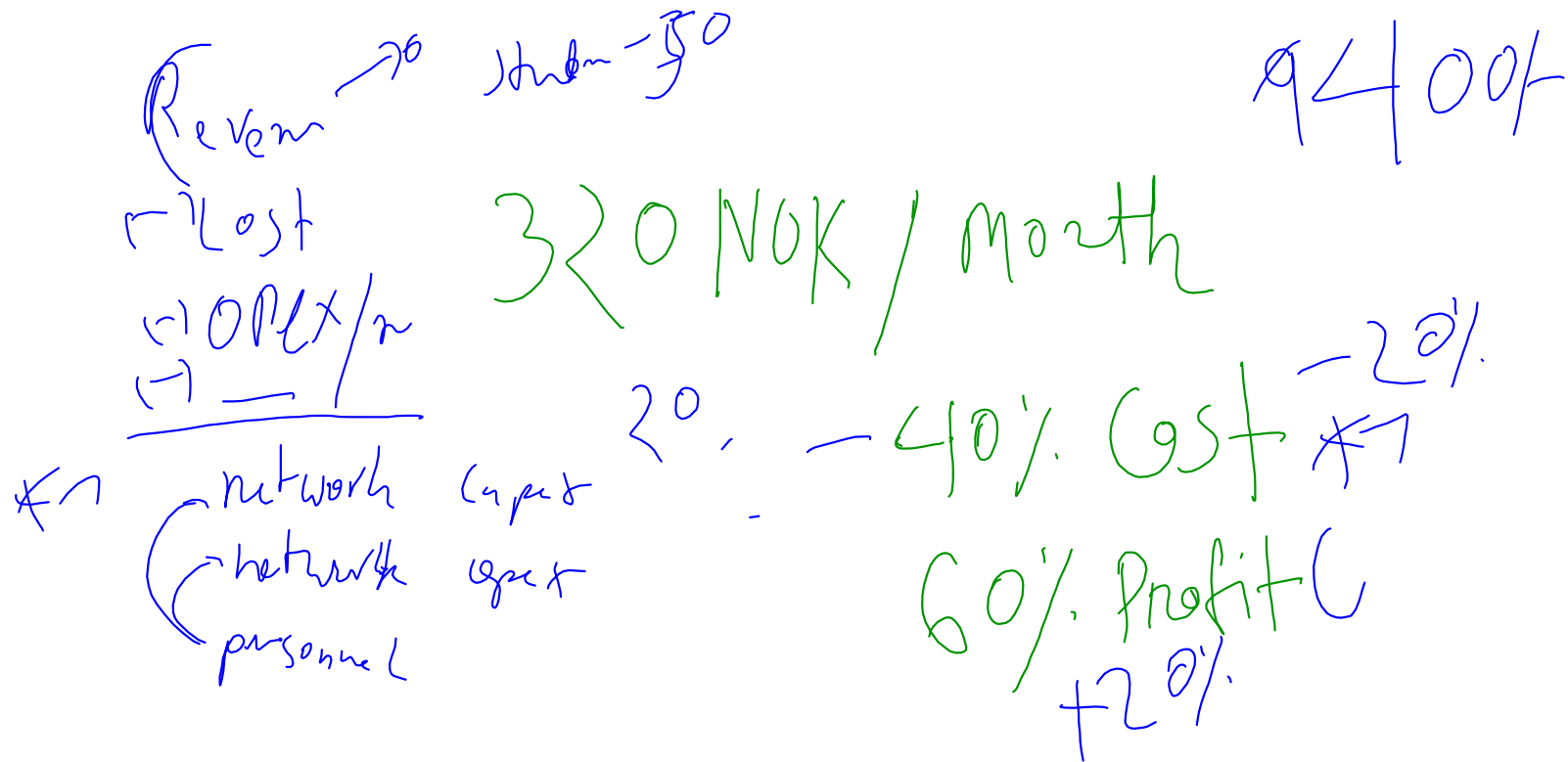
99.6% in Telcom network

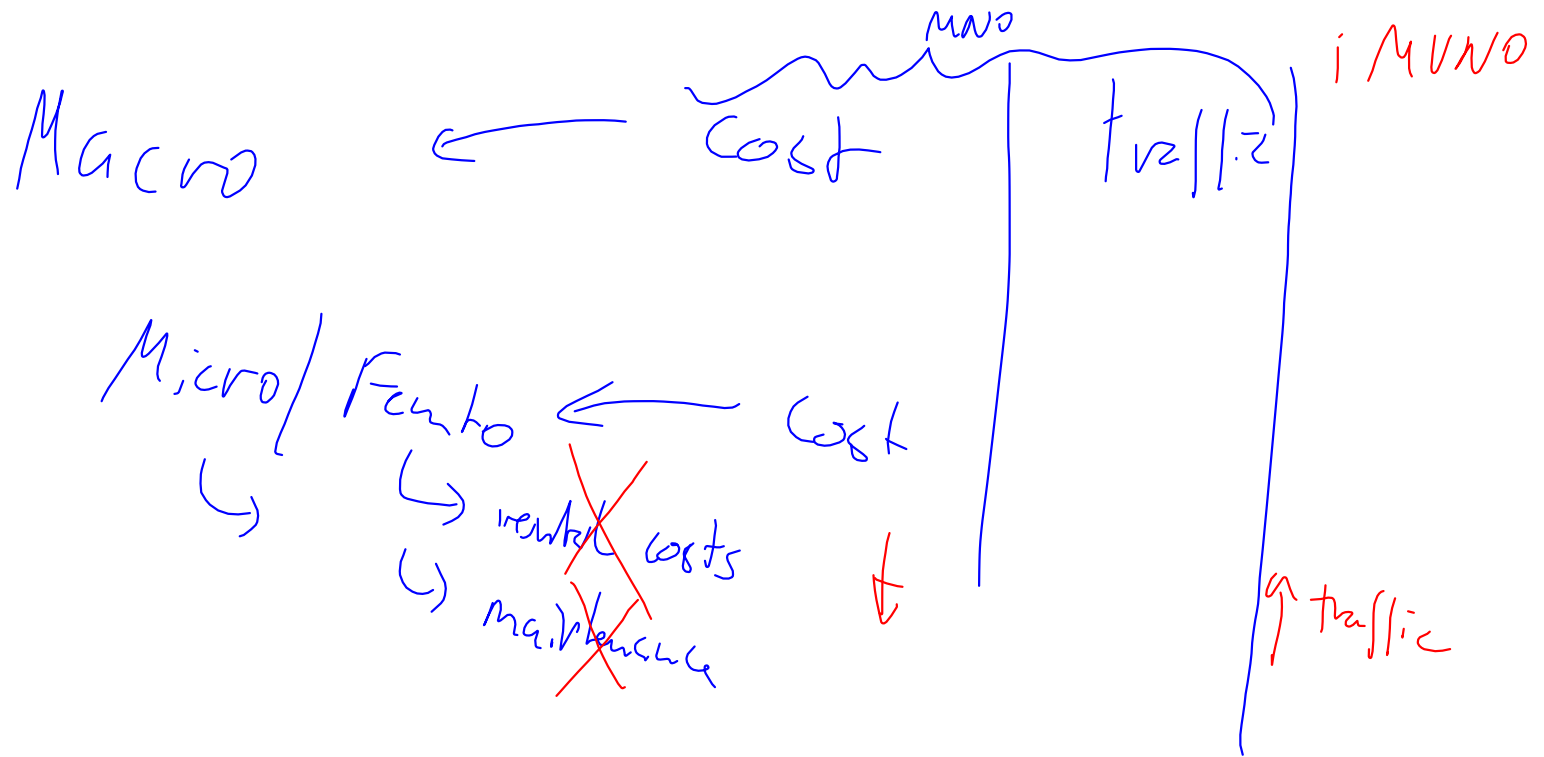
0.4% in Uio network

how much Telcom & Netcom pay to Uio?

2.1 Million "Bobs" Telcom customers

MNO Revenue per subscriber



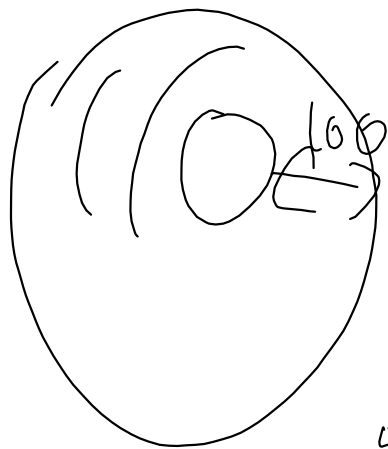


first 20 km

32 backend

Backbone

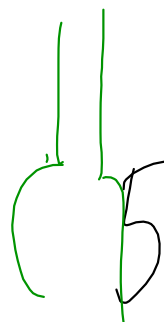
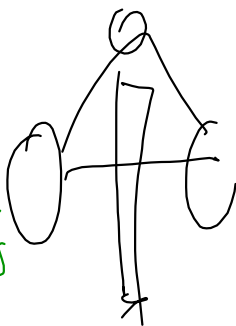
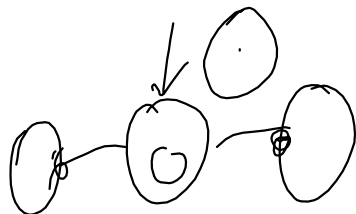
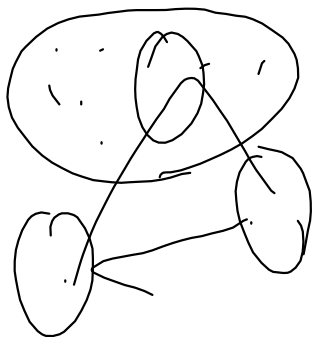
20 video cameras



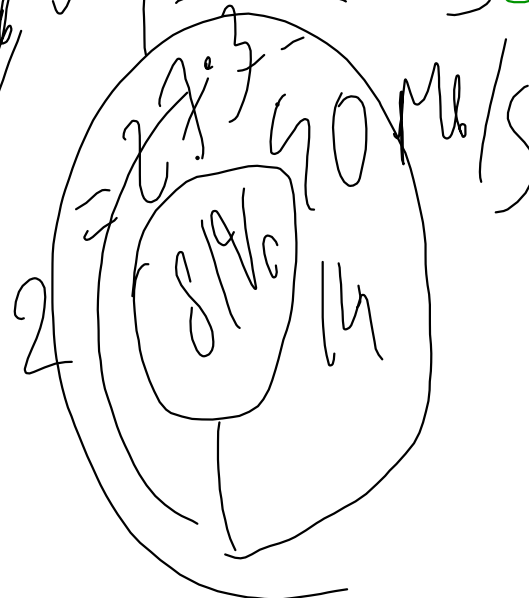
2.46

802.11n → no MIMO

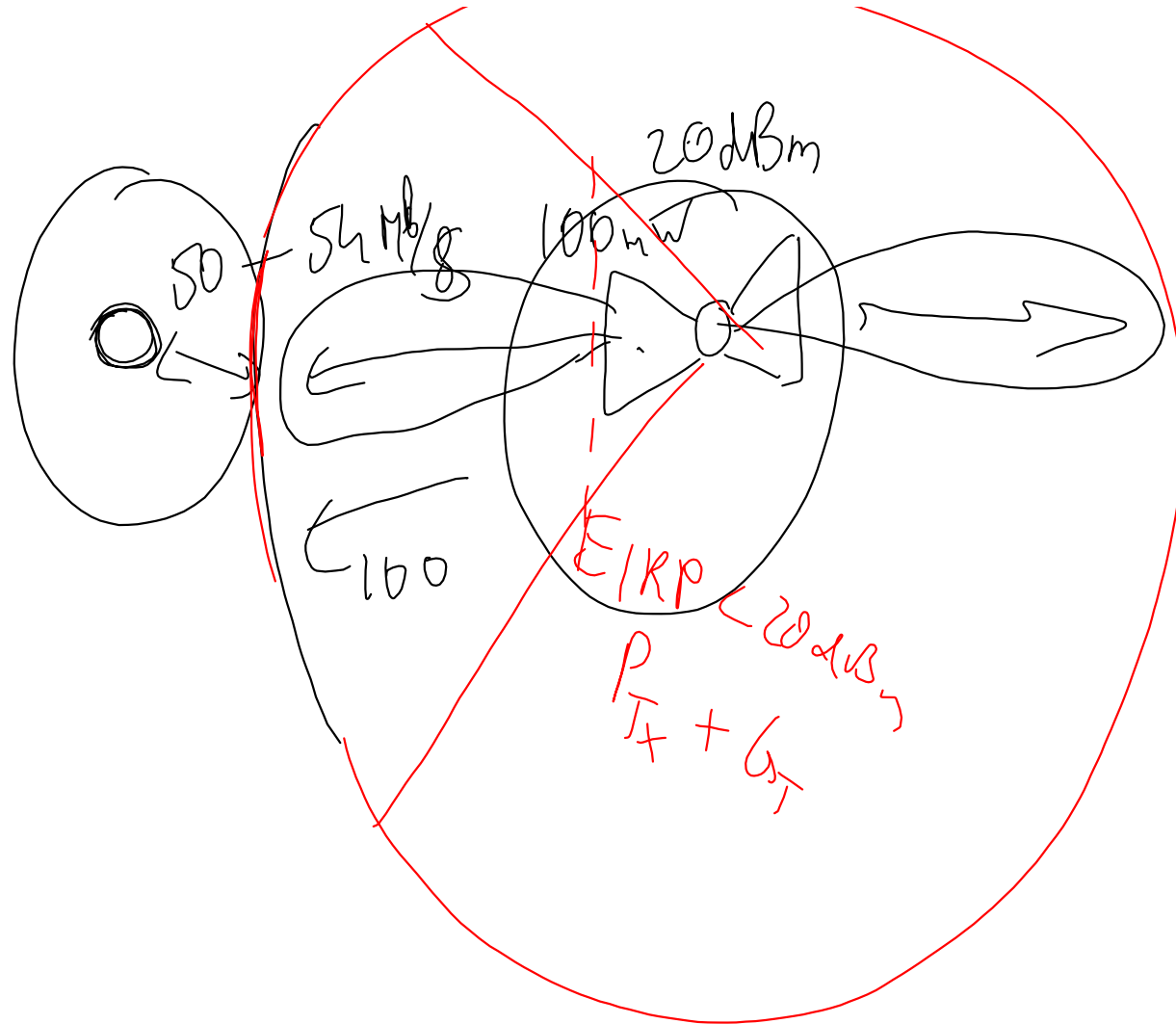
54 Mb/s



54 Mb/s SD 2 Mb/s 277



$\frac{20}{2} \times 2 = 40 \text{ Mb/s}$
54 Mb/s



100 mW
54 MHz
20 dB - 20 m
20 + 15 → 120 m
5 + 15 = 20 m

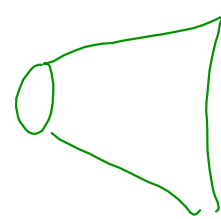
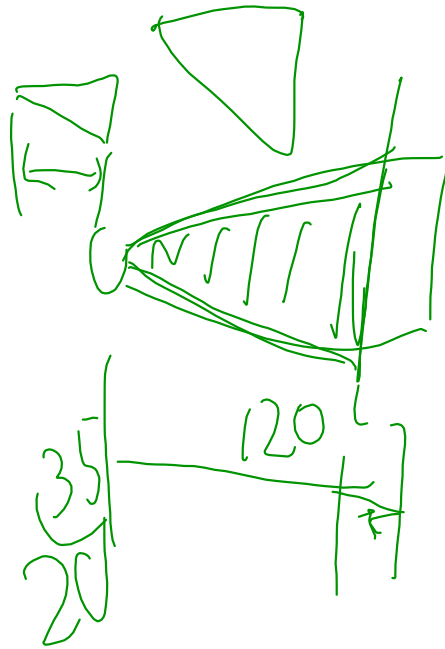


$$P_T = P_T + G_T + G_R - Loss$$

$20 + 15$
 $| 35 |$
 $5 + 15$

$\xrightarrow{\text{max } 20dB_m}$
 \downarrow isohyp
 \downarrow direction

$100m / 54MB/s$
 \uparrow loss
 $\frac{1}{R_2}$ id wred



3 major points

- EIRP and range

- # of camera streams (system)

- backbone 54 Mbps \approx 20 streams = 20 cameras

AP: Streaming protocol

MAC-

87 indiv. sessions/streams at each AP

