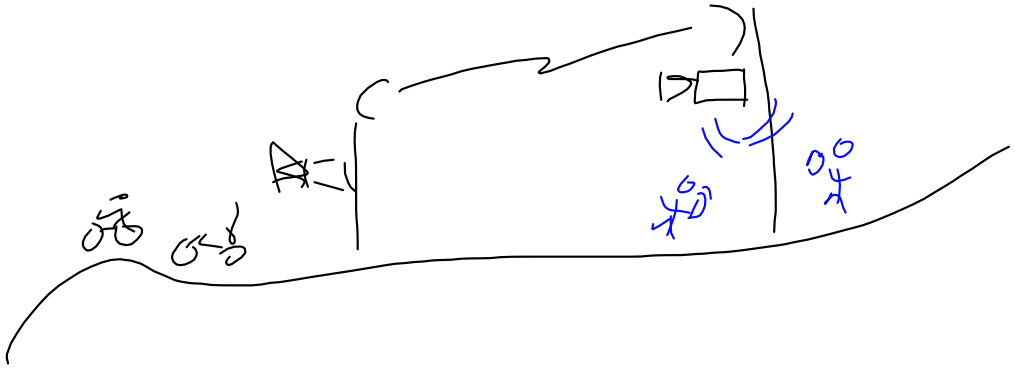
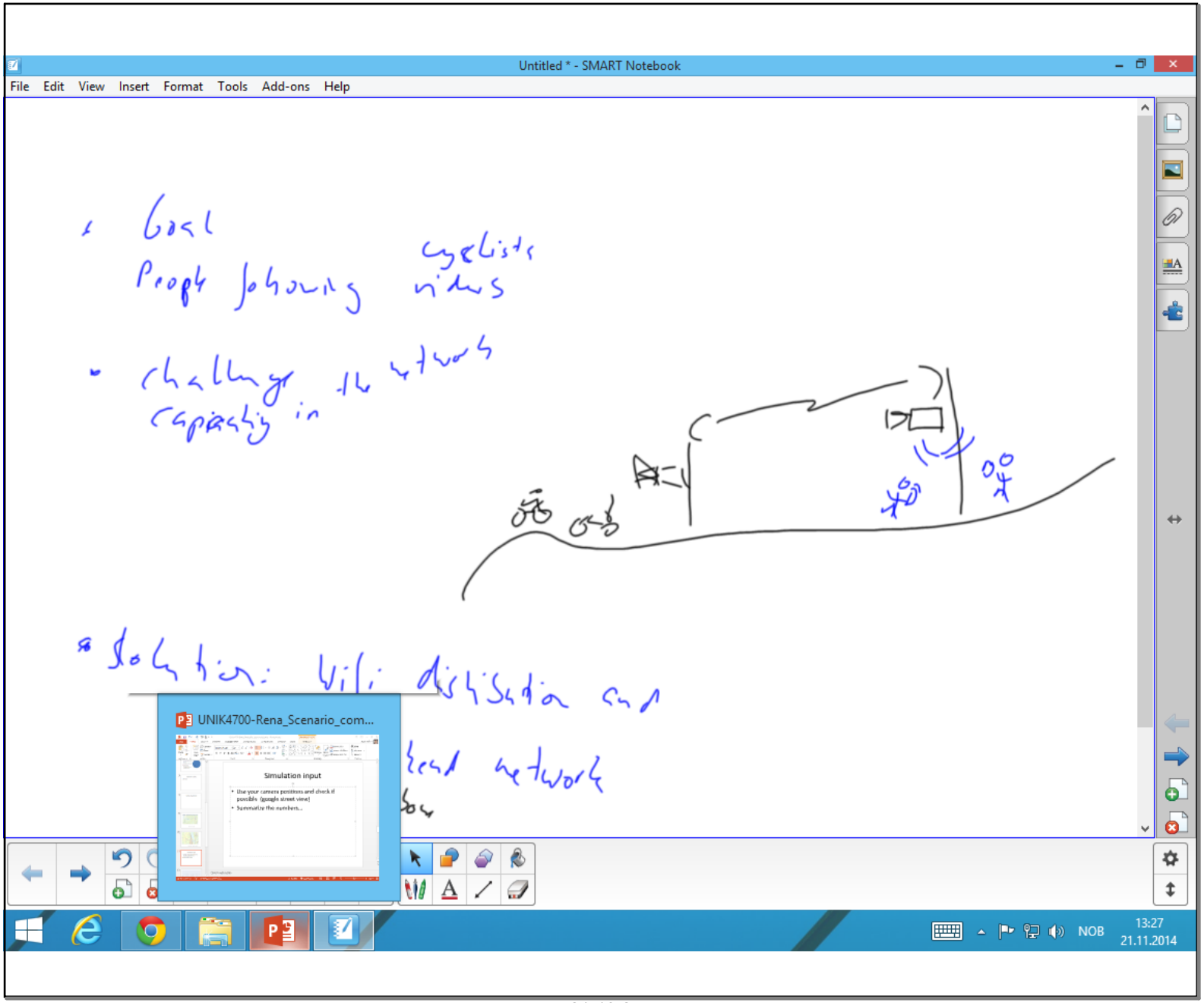
- Goal
  People following cyclists winds
- challenge the network capacity in



- Solution: Wifi distribution and backend network
- Expected outcome: capacity in the network #of users/sharing


Untitled * - SMART Notebook
File Edit View Insert Format Tools Add-ons Help
UNIK4700-Rena_Scenario_com...
Simulation input
NOB
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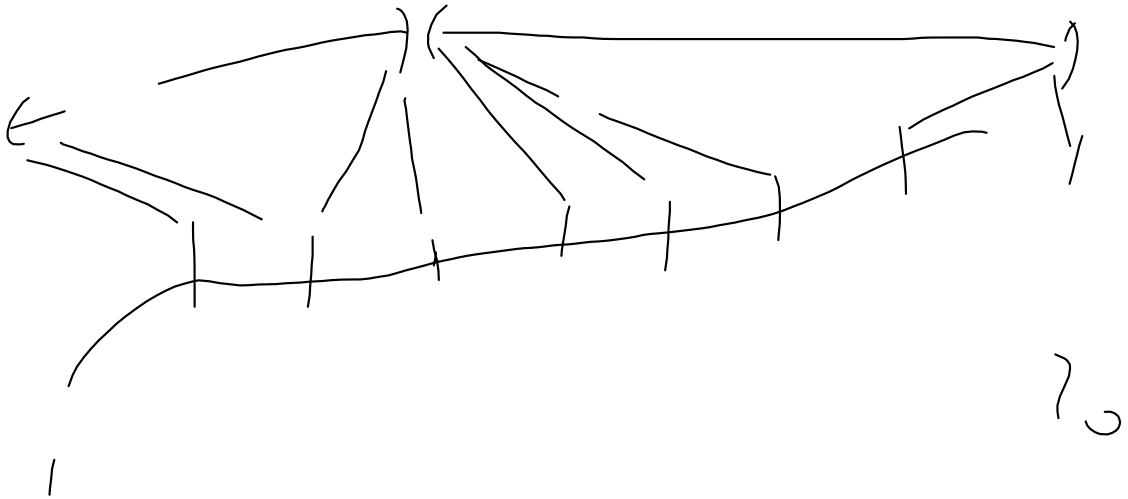

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Error analysis

Tx power EIRP = 20 dBm ← ISM band 2.4 GHz

$G_{Tx} = 13\,dBi \rightarrow P_{Tx} \leq 7\,dBm$

[Ref]

L = 80 dB for R = 100 m f = 2.4 GHz ?

Omtrent 410 000 resultater (0,46 sekunder)

Wave propagation of 900 MHz vs. 2.4 GHz - Digi International
www.digi.com › Support › Knowledge Base ▾ Oversett denne siden
To demonstrate the basic difference in wave **propagation** of 900 MHz and **2.4 GHz** waves, a quick look at path **loss** is provided. As waves propagate out from the ...

Free-space path loss - Wikipedia, the free encyclopedia
en.wikipedia.org/wiki/Free-space_path_**loss** ▾ Oversett denne siden
... the FSPL against distance for fixed frequencies of **2.4 GHz**, 5.1 GHz and 5.7 GHz ... A better choice of the name would have been unity-gain **propagation loss**.
Du har besøkt denne siden 4 ganger. Siste besøk: 20.10.13

[PDF] 2.4 GHz Propagation Prediction Models for Indoor Wireles...
www.ijsce.org/attachments/File/.../C0709052312.pd... ▾ Oversett denne siden
av BR Jadhavar - Sitert av 5 - Beslektede artikler
propagation losses are developed. In section 2 various models are summarized. In section 3 indoor test results for two. **2.4 GHz Propagation** Prediction Models ...

[PDF] indoor propagation modeling at 2.4 ghz for ieee 802.11 ...
www.cse.unt.edu/~rakl/ATL06.pdf ▾ Oversett denne siden
av R Akl - Sitert av 52 - Beslektede artikler
nel for 802.11 wireless local area networks at **2.4 GHz** frequency. This work ... are determined using log-distance path **loss** model and log- normal shadowing.

[PDF] Indoor Propagation Modeling at 2.4 GHz for IEEE 802.11 ...
www.cse.unt.edu/~rakl/Tum05.pdf ▾ Oversett denne siden
av R Akl - 2005 - Sitert av 2 - Beslektede artikler
Indoor **Propagation** Modeling at **2.4 GHz** for IEEE 802.11 Networks. ... exponents from log-distance path **loss** model and standard deviations from log-normal.

[PDF] MATERIALS' INSERTION LOSS AT 2.4, 3.3 AND 5.5 GH...
www.jpier.org/PIERM/pierm30/01.13022803.pdf ▾ Oversett denne siden
av B Taha-Ahmed - 2013 - Sitert av 1 - Beslektede artikler
INTRODUCTION. In indoor communications and localization, **propagation loss** measure- ... to measure the **propagation loss** at the (**2.4**, 3.3 and 5.5)**GHz** bands.

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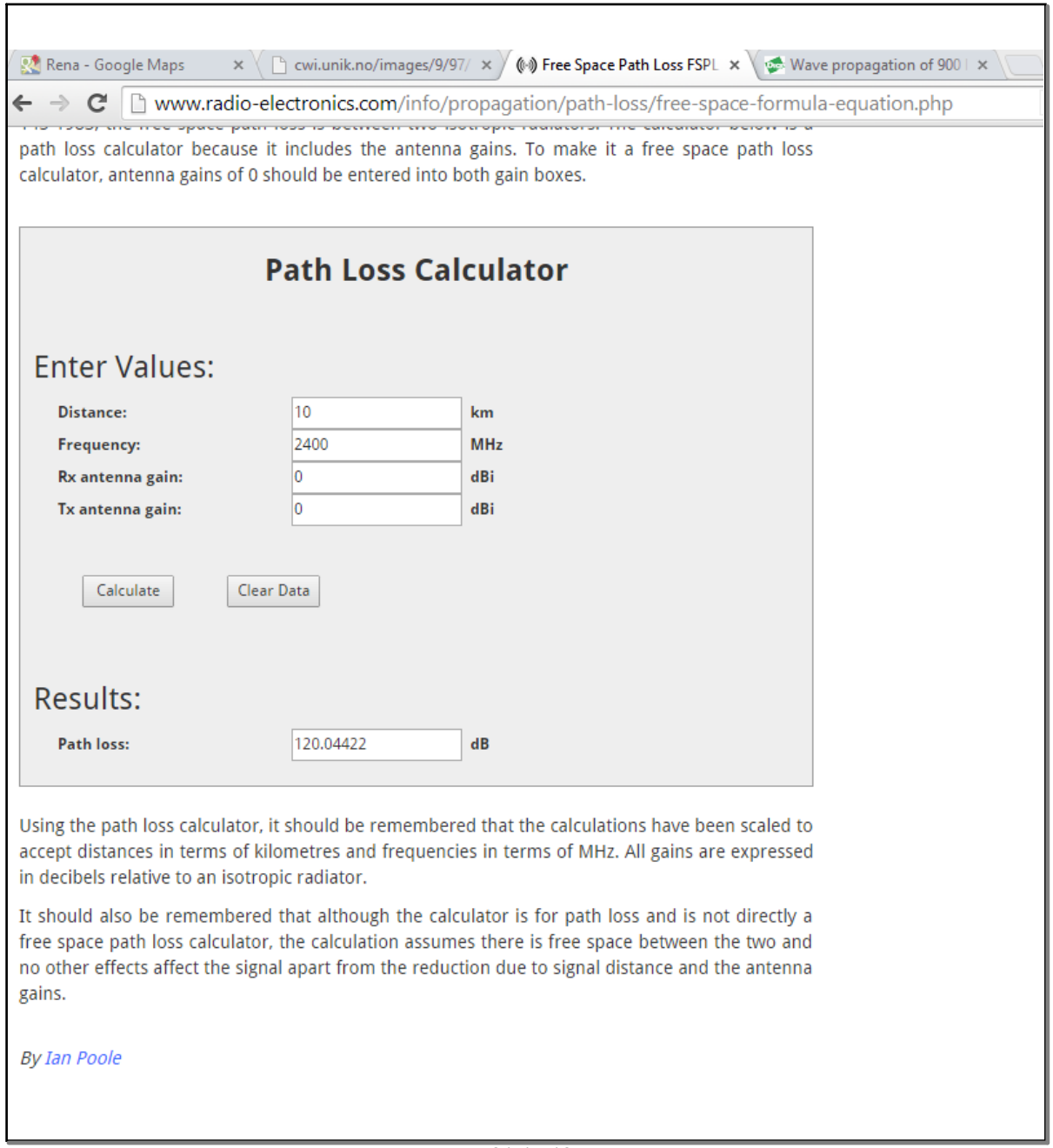

Rena - Google Maps
cwi.unik.no/images/9/97/
Free Space Path Loss FSPL
Wave propagation of 900
www.radio-electronics.com/info/propagation/path-loss/free-space-formula-equation.php
path loss calculator because it includes the antenna gains. To make it a free space path loss calculator, antenna gains of 0 should be entered into both gain boxes.
Path Loss Calculator
Enter Values:
Distance: 10 km
Frequency: 2400 MHz
Rx antenna gain: 0 dBi
Tx antenna gain: 0 dBi
Calculate
Clear Data
Results:
Path loss: 120.04422 dB
Using the path loss calculator, it should be remembered that the calculations have been scaled to accept distances in terms of kilometres and frequencies in terms of MHz. All gains are expressed in decibels relative to an isotropic radiator.
It should also be remembered that although the calculator is for path loss and is not directly a free space path loss calculator, the calculation assumes there is free space between the two and no other effects affect the signal apart from the reduction due to signal distance and the antenna gains.
By Ian Poole

nov 21-14:12

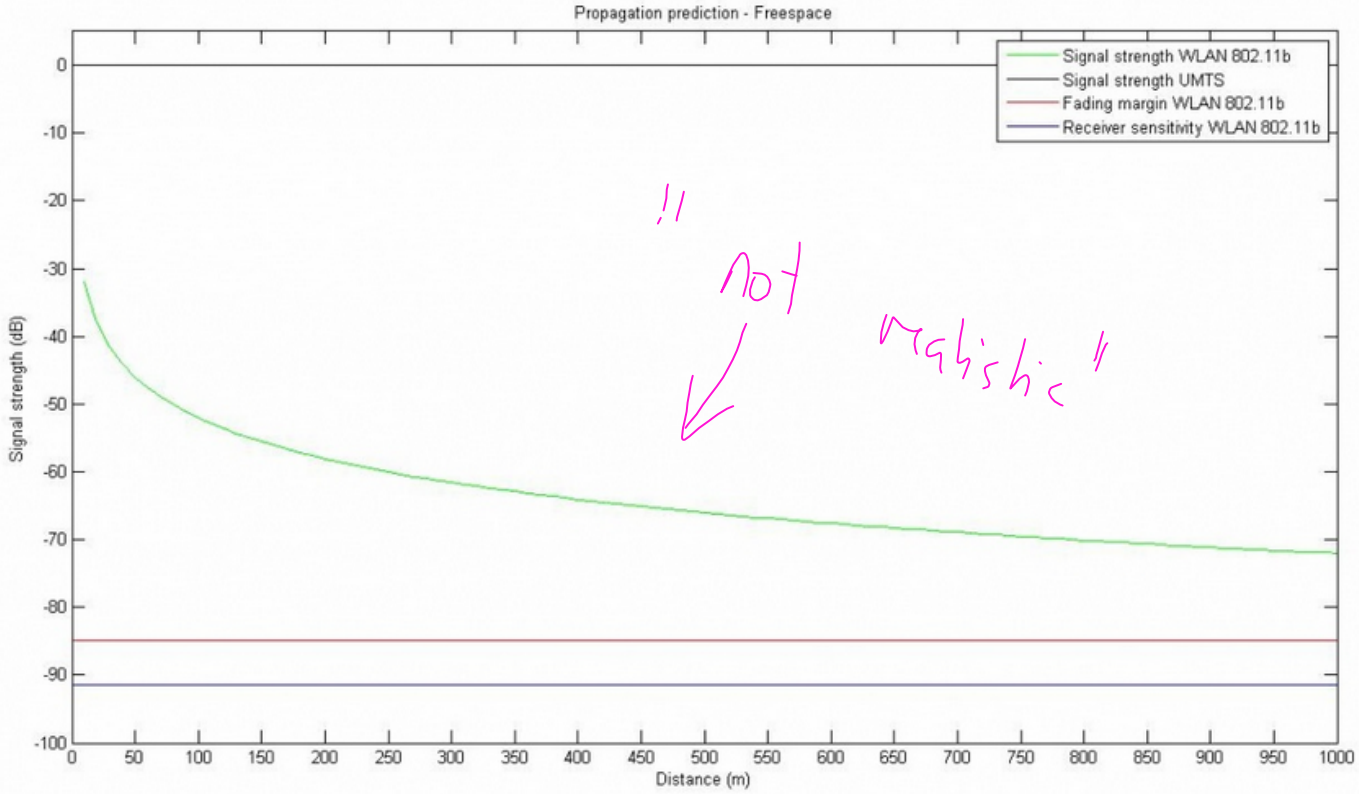
http://cwi.unik.no/wiki/Wireless_Handover_Simulations#tab=Simulation_results

- Traveling at 20 km/h
- UMTS signal strength 1W = 0 dB
- Collected other data from Media:201211UNIK4700-BlockSeminar.pdf, page 9

Assuming data rate of 11Mb/s for 802.11b

esults

ovided parameters suggest that UMTS signal level is a constant, due to the small area we are examining. However, the models/pathloss nction do not allow distances below 1 km (with the exception of the freespace model).



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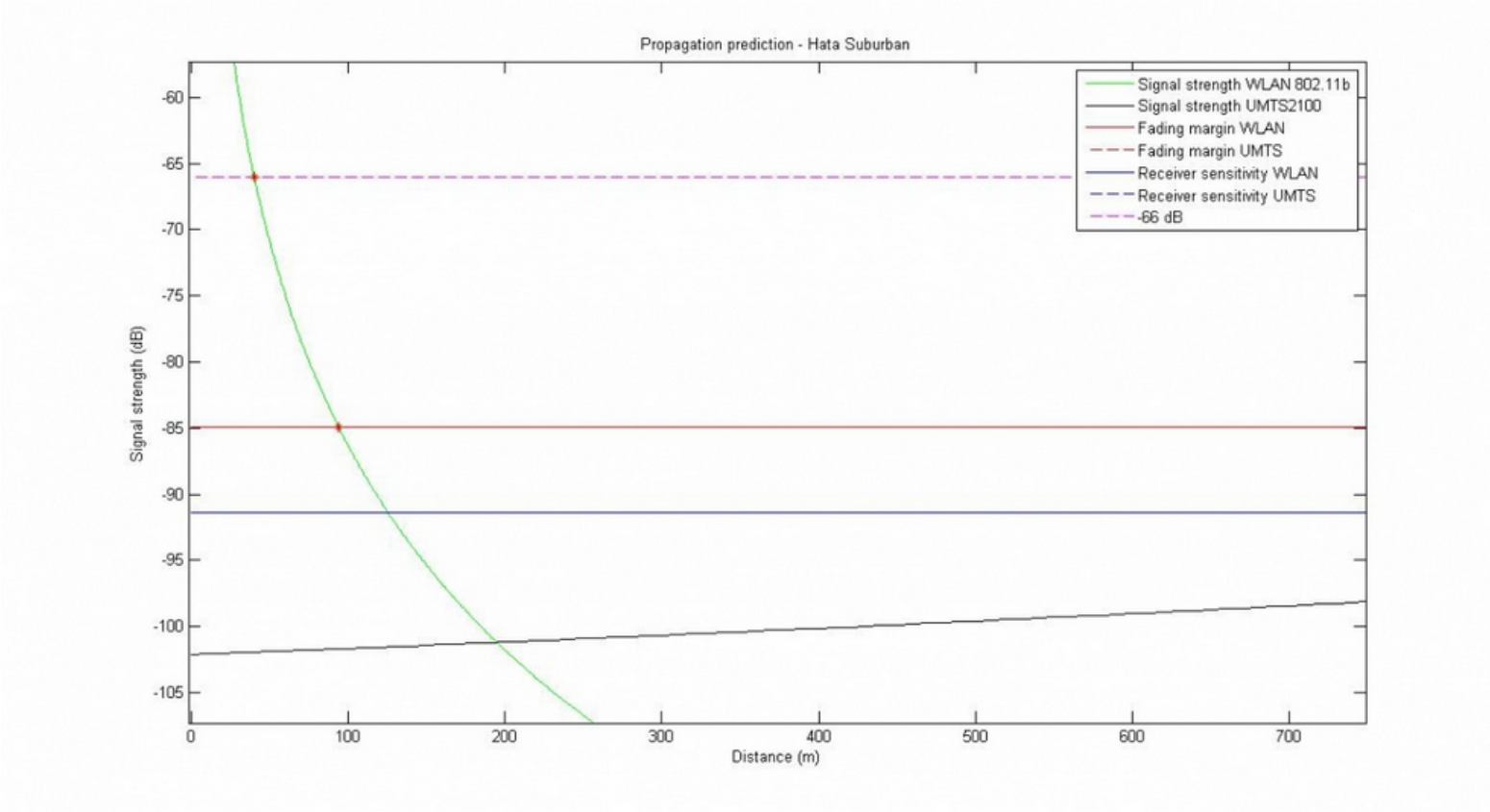
ssuming new value for transmitter height of UMTS (recommended numbers are 30-200m), and assuming that the Hata model does not give ntirely wrong results non-recommended parameters are used, we can try to create a better estimate. Using a near 0 value for the 802.11b eight (sea level lower than ground level, antenna barely above ground) and the Hata suburban model, we get these results:



- Fading margin for 802.11b hit at 94.2 m, at signal strength -84.9174.
- UMTS never dips below fading margin.
- Driving speed 20 km/h, walking speed 3 km/h.
- This gives us around 16.96 seconds from when we start driving to we hit the fading margin for 802.11b. For walking, 113.04 seconds.
- We hit -66 dB at 40.3628m. This gives us a time of 7.27 seconds from when we start to drive, or 48.44 seconds if we walk.