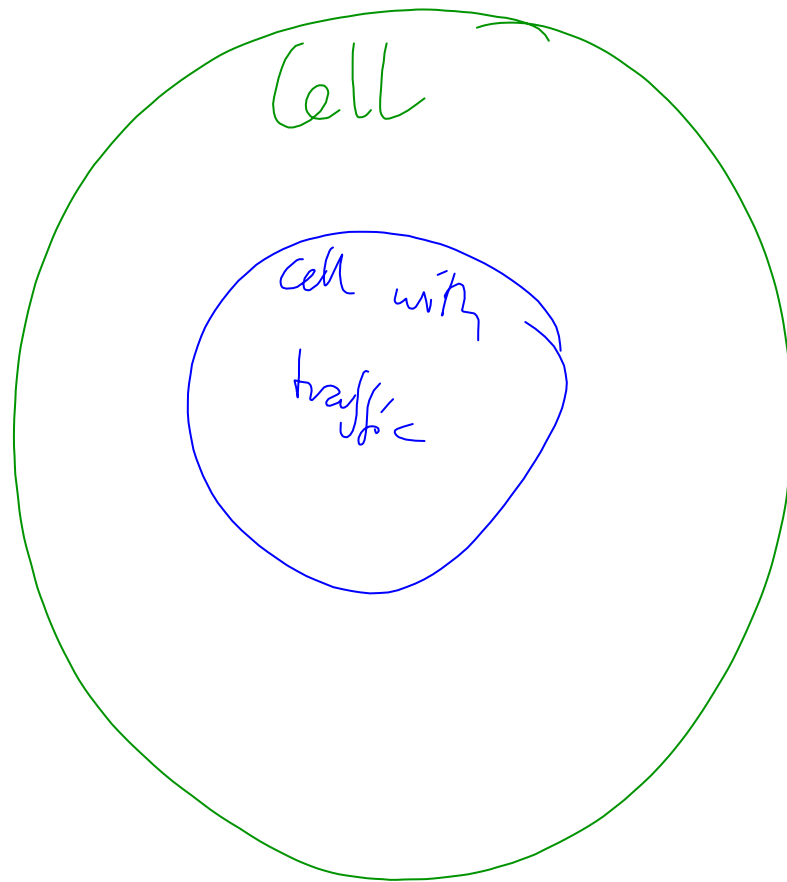


Josef Noll m:90838066 <http://cwi.unik.no/wiki/UNIK4700>

josef@jnoll.net

iotsec.no, T2.1

BasicInternet.org



Barcode houses

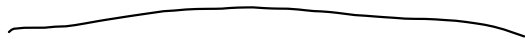
- thermal isolated
- electromagn. protected

→ ~~Mos, a?~~

Voice over Wifi

5G?

What



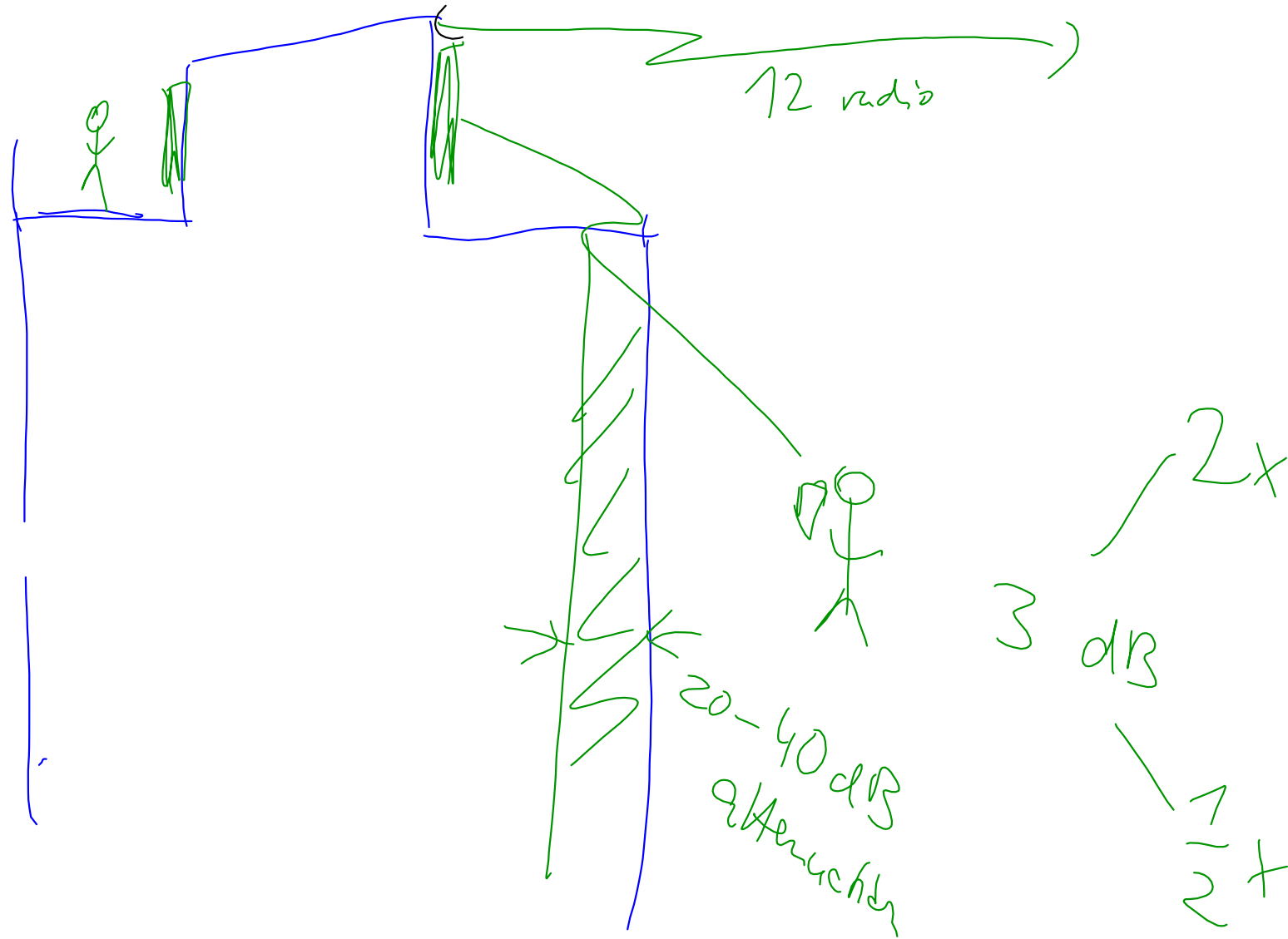
Basic Internet.org

free access

Info Internet

GSMA: 77% people in
develop economies
no broadband Internet

Relation
frequency
bandwidth \Rightarrow range
noise / interference capacity



1.

2. Signal strength \rightarrow far/near
 more users \rightarrow signalling

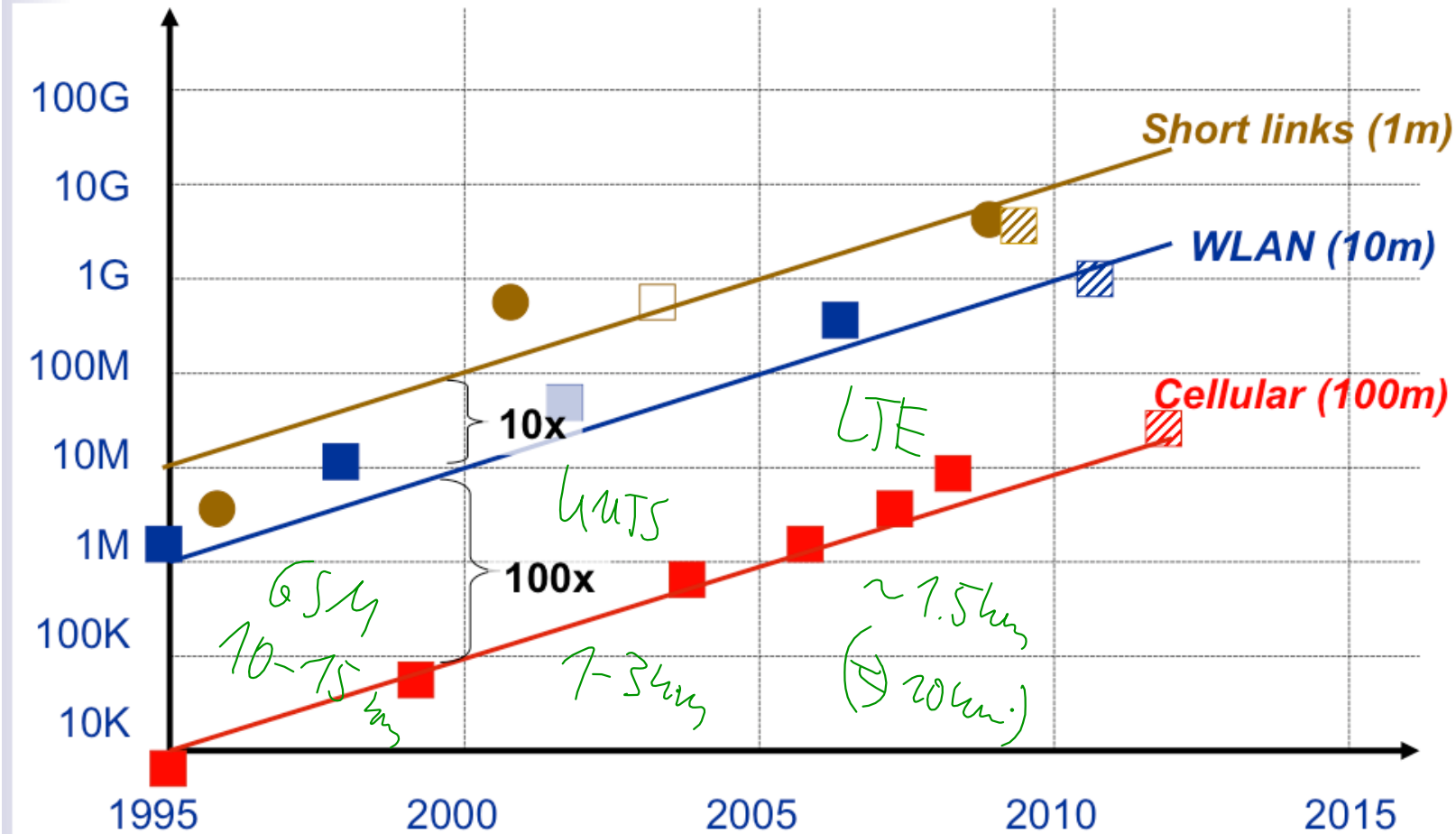
3. continuous vs. time, eg. 654 8 time slots

$$EIRP \left[\frac{W}{m^2} \right]$$

4. other channels : 20 MHz (802.11g) 40,80 MHz (9g)
 interference

5. no : radio can be observed/trapped

Comparison Of Communication Technologies



[Presentation G. Fettweis, IEEE VTC forum Baltimore],

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(Redirected from [Block Seminar](#))

UNIK4700:Block Seminar

Course	UNIK4700, UNIK9700
Title	Block Seminar
Lecture date	2012/10/30 - 1 November 2013
presented	by Josef Noll , Johan Tresvig , Susana Rodriguez de Novoa , Ali Zaher , Joachim Tingvold
Objective	<p>Radio network planning and handover</p> <ul style="list-style-type: none"> work together on the programming framework for radio propagation and handover evaluation achieve typical results for mobile and wireless handover <p>Hands-on experience for WLAN</p> <ul style="list-style-type: none"> get hands-on experience in 802.11b,g propagation and attenuation design and testing av 2.45 GHz antennas for satellite antennas
Learning outcomes	<p>Having followed this block seminar, you will</p> <ul style="list-style-type: none"> have gained an understanding of typical cell/coverage sizes in mobile and wireless systems have an understanding on how cell size and cell dimensions affect handover know typical attenuation values for walls, doors, a human body and other obstacles in the 2.45 GHz band know where to place antennas for an indoor coverage
Pensum (read before)	Create your programming modules, as assigned by Susana
References (further info)	
Keywords	Wifi, Handover, range, frequency, Cell Coverage, Indoor coverage

this page was created by [Special:FormEdit/Lecture](#), and can be edited by [Special:FormEdit/Lecture/UNIK4700:Block Seminar](#).

G+1 0

previously: <http://cwi.unik.no/wiki/UNIK4700:Assignments>

1. Assignment

	A-Basics of Communication
ist	Electromagnetic Signals
ney	Radio Communication Principles
	Digital communication: Signal/Noise Ratio
	Signal strength and Capacity: Shannon
	B-Antennas and Propagation
	Free Space Propagation
	Antennas, Gain, Radiation Pattern
	Multipath Propagation, Reflection, Diffraction
	Attenuation, Scattering
	Interference and Fading (Rayleigh, Rician, ...)
	Mobile Communication dependencies
	C-Propagation models
	Environments (indoor, outdoor to indoor, vehicular)
	Outdoor (Lee, Okumura, Hata, COST231 models)
	Indoor (One-slope, multiwall, linear attenuation)

