

Memories since COST 207

Wim Kotterman



40th Year Anniversary Workshop, Lisbon, 22 Jan '24, Wim Kotterman

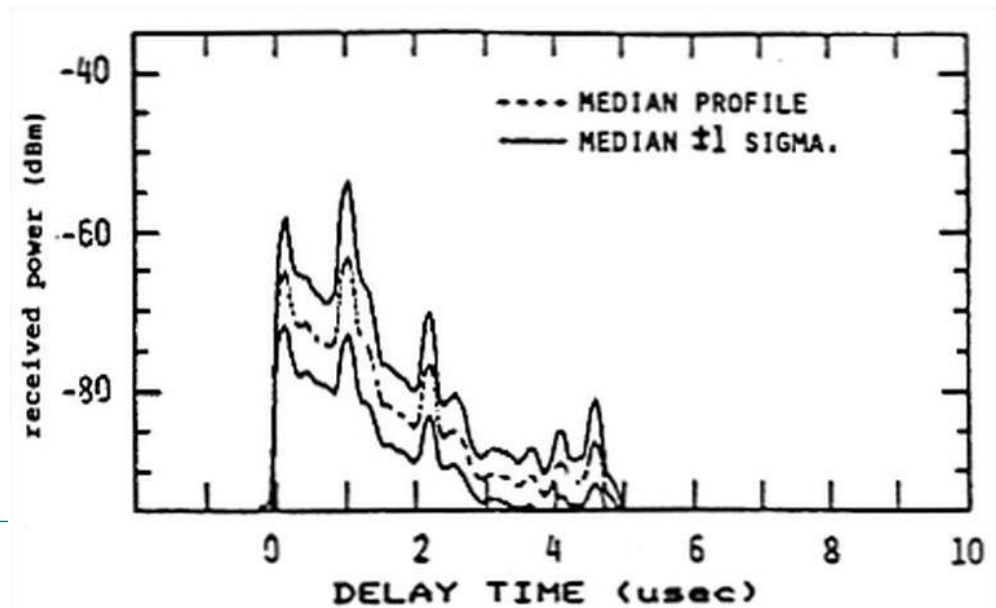
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Introduction

My start in the COST series

- August 1987: dr. Neher Laboratorium, Leidschendam, NL
 - Multi-disciplinary project MobiDiC
 - Transmission loss for coverage prediction/cell planning
 - Temporal dispersion considered done for the time being
- Replacing Jan van Rees
- Interim Agus "Bi" Mawira
 - COST205
 - COST210
 - COST235



Introduction

My start in the COST series II

- COST207 Rome, early '88
 - The BOOK
 - Trevi fountain
 - Multi-lingual delegates
- COST207 Stockholm, Sept '88
 - ABBA, Abu, Ericsson, SAAB, Volvo
 - Stockholm more like SAAB than ABBA
- COST231 Torino, constituting meeting
 - Making waves
- COST231 Høje Tåstrup, May 1990
 - Tivoli
 - ISDN speech quality

First experiences with "COST"

The meaning of being European I

- Co-operation On Science and Technology in Europe
- European, not EEC
 - CH, S, SF
 - N, A, CZ, PL
- Secretariat at EEC
- Berlaymont
 - Fall-back venue
 - Simultaneous translation
- Clichés and prejudices :-)



Source: European Commission

First experiences with "COST"

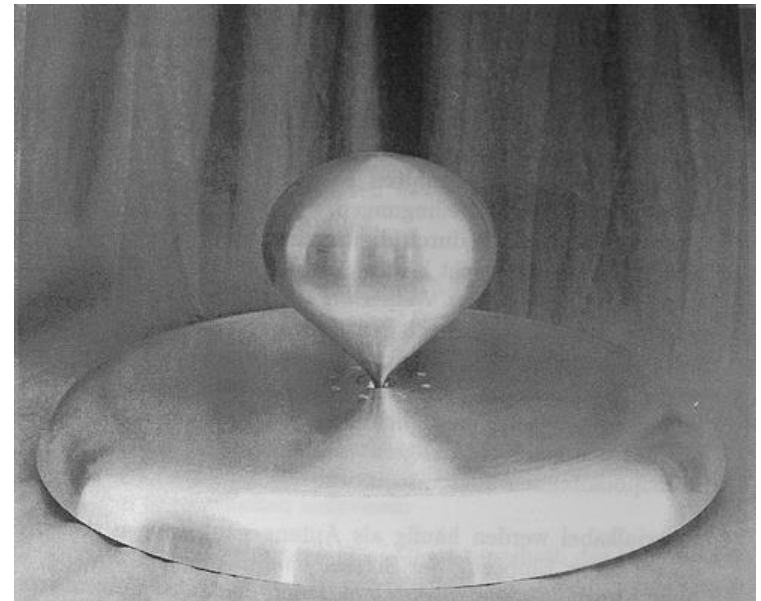
The meaning of being European IIA

- Conférence Européenne des Administrations des Postes et des Télécommunications
 - Non-standard standardisation themes: Groupe Spéciale
 - Groupe Spéciale Mobile
 - Document nr. 0 tabled: "On heaven and hell in Europe"
- Heaven in Europe is:
When the cooks are French, the policemen are English, the mechanics are German, the lovers are Italian, and the whole thing is run by the Swiss.
- Hell in Europe is:
When the cooks are English, the policemen are German, the mechanics are French, the lovers are Swiss, and the whole thing is run by the Italians.

First experiences with "COST"

The meaning of being European IIB

- Working Group 2 on UHF Propagation in COST231
 - Ernst Zollinger (ETH Zürich)
 - indoor measurement campaigns
 - hi-tech antennas
 - extremely wideband:
2000 MHz bandwidth for
carrier 1800 MHz
- Scandinavia and alcohol
 - Høje Tåstrup May 1990
 - Grimstad May 1993



Source: Zollinger, Dissertation ETH Zürich, 1993

Own activities in "COST"

My contributions

- Presenting campaign data from dr. Neherlab
 - Sub Working Group on microcells
- Had to remain silent about models and cell planning
- Sharing results again, first after move to Aalborg

Own early activities

COST231 SWG microcell models

- Personal Communications Networks
 - UK regain the lead in mobile comms
 - Handsets (battery powered)
 - Indoor (wireless)
 - Competing with fixed networks
 - High traffic densities / smaller cells
 - 1800 MHz, 2x 75 MHz bandwidth, DCS1800
- New coverage and interference prediction models
 - Few data on 1800 MHz / 2 GHz (UMTS)
 - Few data on short distances, low Base Stations
 - "To be or not to be, is a question of 2 dB"

Own early activities

The limits of Hata-Okumura

- Planning tool CAESAR by dr.Neherlab
 - Whole network fit on one PC
 - Resolution 1 km²
 - Simple distance laws (tuned Hata model)
- Successor needed with higher resolution
 - Still simple models demanded
 - "Can't we stretch the Hata validity range?"

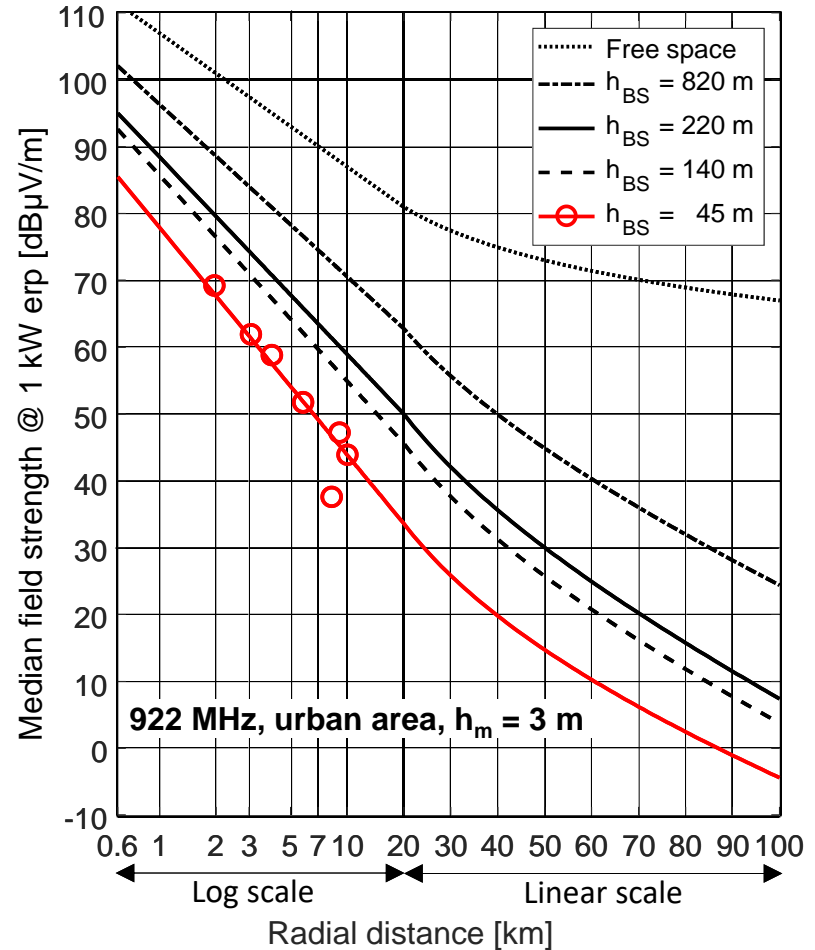
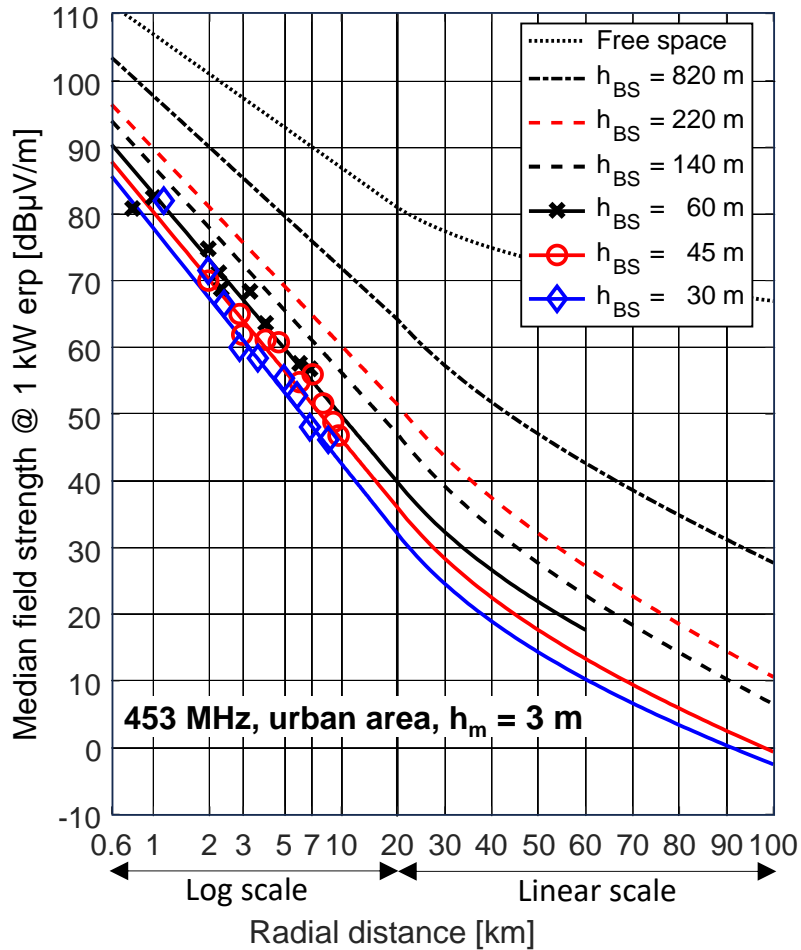
Frequency	150 MHz – 1500 MHz
Range	1 – 20 km
Basestation height	30 – 200 m
- Answer on basis of SWG work: No!
 - At high resolution, statistics do not work
 - Basis for Hata formulas too small

M. Hata, IEEE Tr. VT, Vol. VT-29, No. 3, pp. 317—325, August 1980

Y. Okumura et al., Rev. Elec. Commun. Lab., Vol. 16, No. 9-10 , pp. 825—873, Sept-Oct 1968

Own early activities

Okumura's curves*, the basis for "Hata"



* redrawn, after Okumura et al., 1968

Looking back

Early "M/W" Actions, things that changed

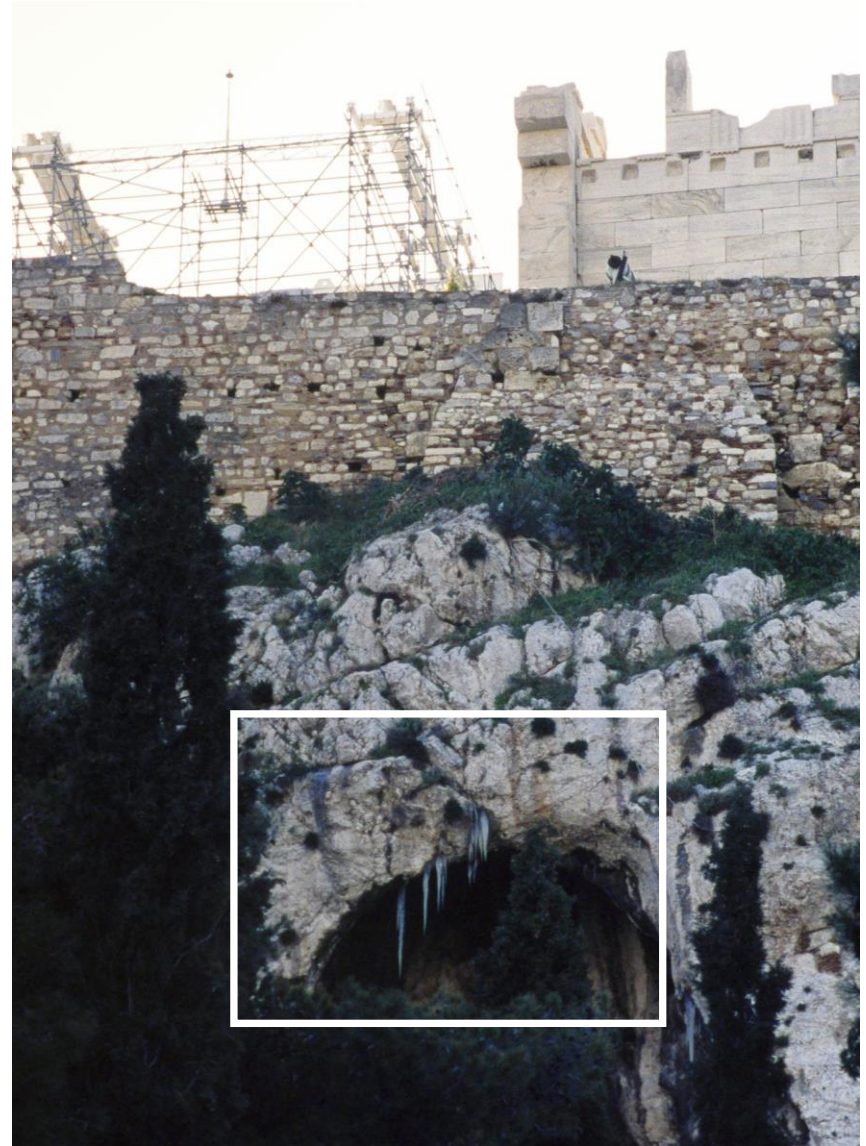
- Big incumbent, state-owned telecom operators
- National research institutes
- Copious lunches and dinners
- Lab visits
- Temporary Documents in print !!
 - P. Porzio Giusto (~1991), premature attempt
- No applauding
- „Transmission loss“ instead of „Pathloss“

Looking back

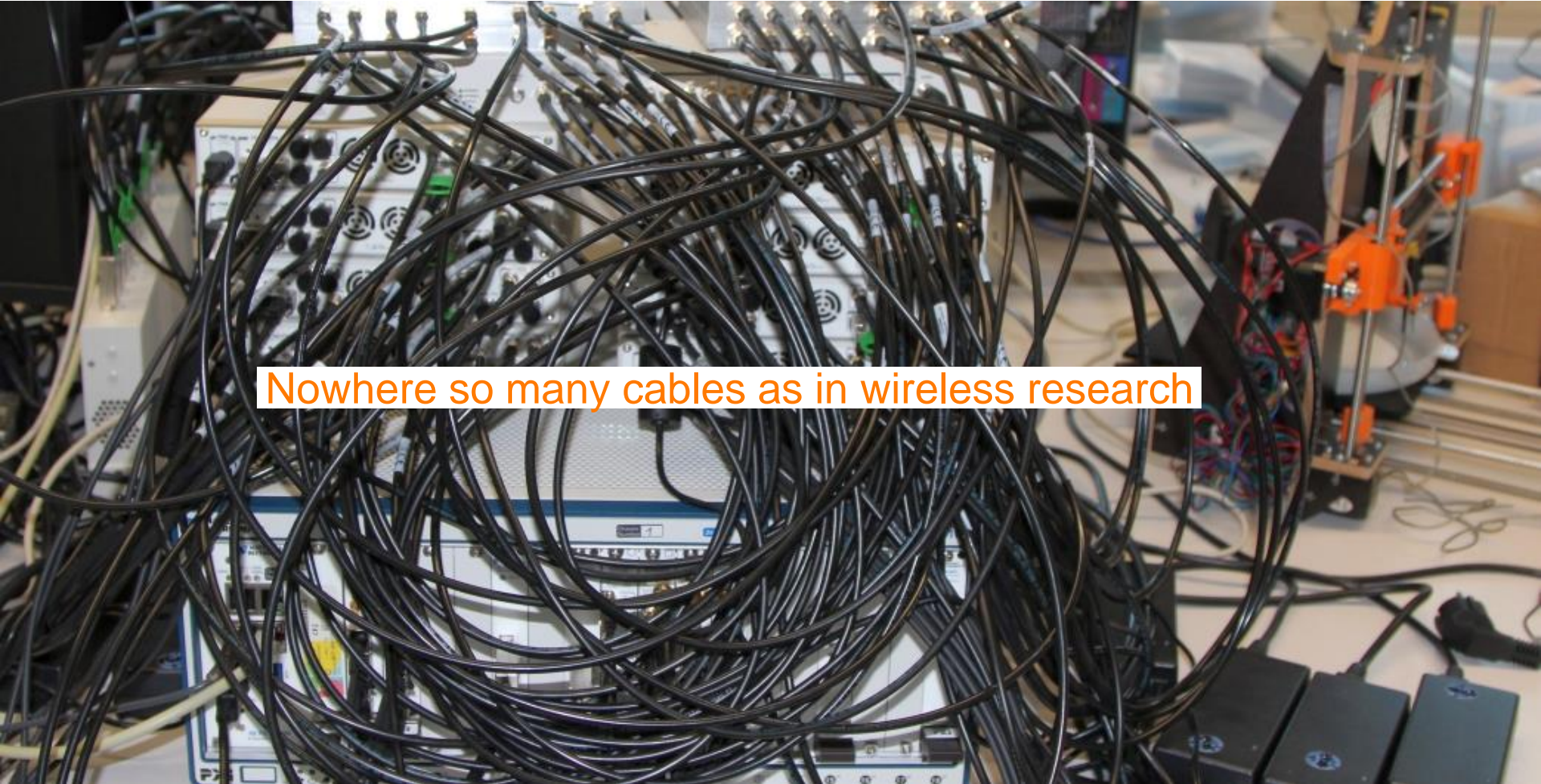
The (steady) traits of "M/W" Actions

- My umbrella
- Season rules for venues
- The BOOK
- Dinner speeches !!
- In "COST", you are colleagues
- De-facto Network-of-Excellence based in Europe

Akropolis, Athens,
25 January 2004, AM



Thanks!



Nowhere so many cables as in wireless research