

# Migration HAMNET 2.0 du nœud F6KBS (CEA Saclay)

Premier retour d'expérience  
par

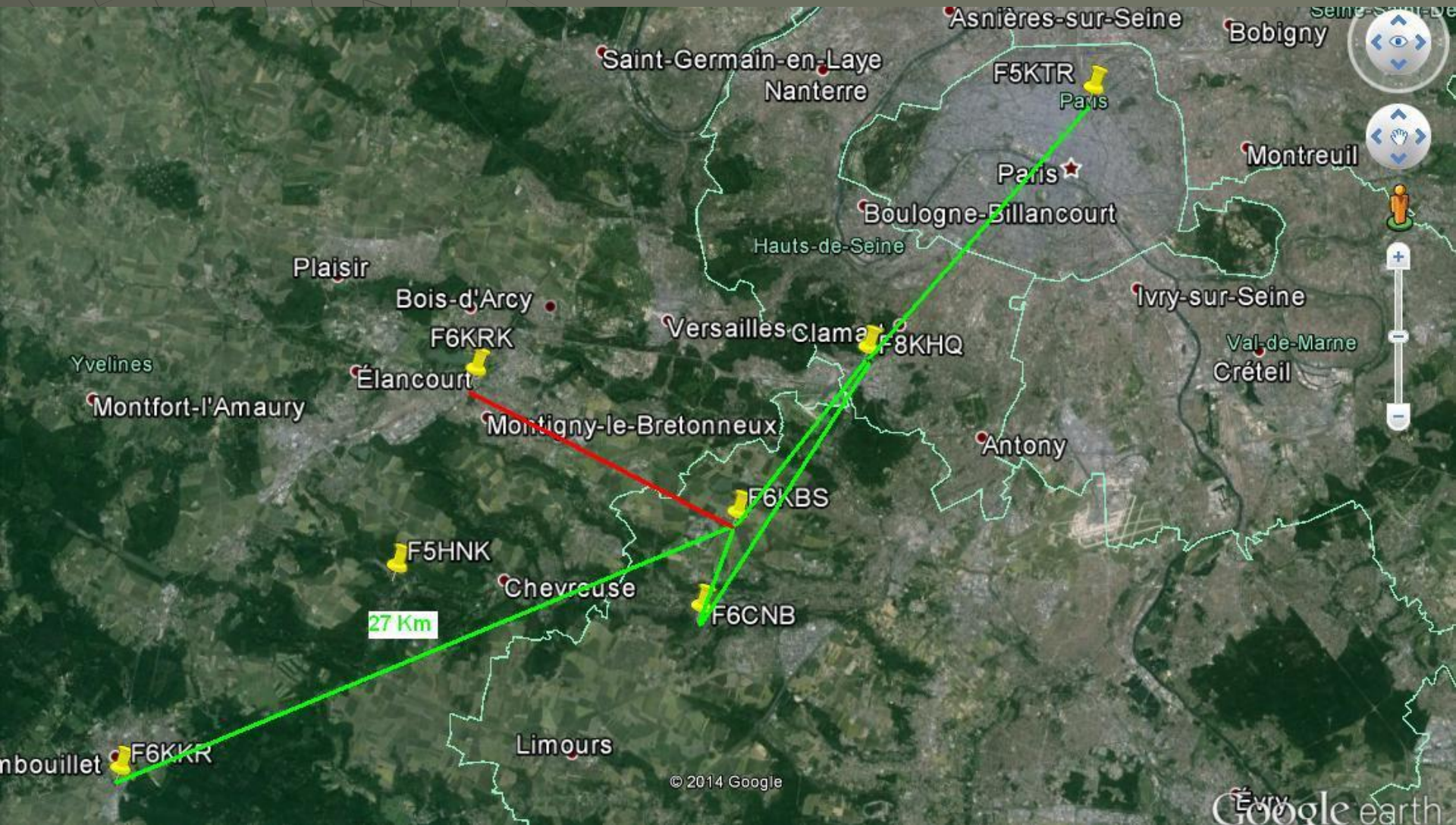
F5H NK, F6I QF, F5I AB, F6C NB

# HAMNET 1.0 du RC F6KBS



◆ 144, 432 Mhz, 1,2 Ghz depuis 1995...

# L'intégration à HAMNET 2.0 IDF



# Liaisons backbone à 5,7 Ghz

## ◆ Matériel Ubiquiti

- Très grande diffusion chez les WISP aux USA
- +27 dBm, jusqu'à +30 dB de gain avec une parabole de 60 cm
- Double polarisation vert/horiz
- Bande amateur en mode « compliance test »
- Emission OFDM et schéma de codage adaptatif
- Bande passante réglable
- Coût très raisonnable



# Les travaux de rénovation...

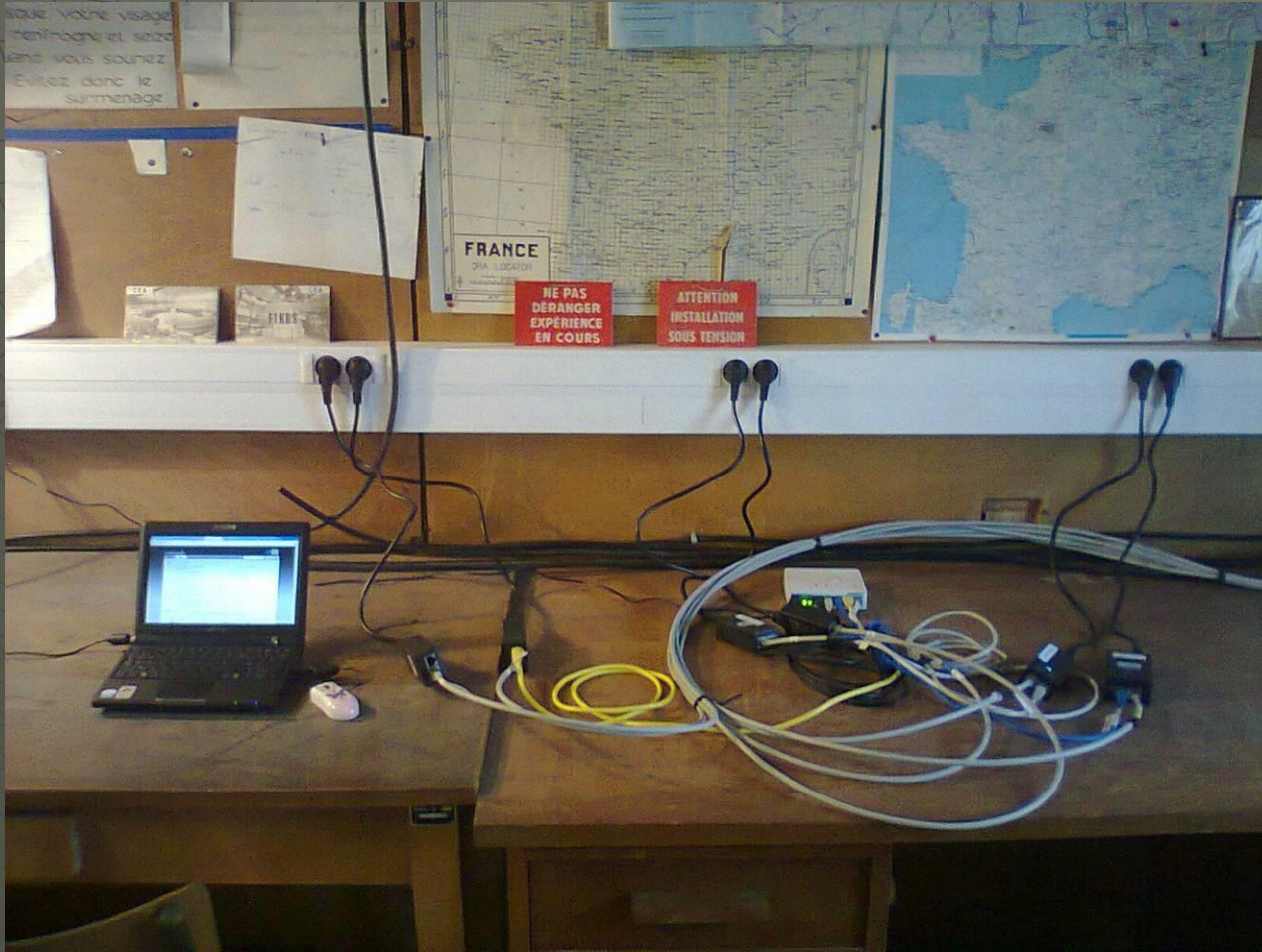


# Les antennes aujourd'hui...



- ◆ 1 accès 2,4 Ghz, 4 liaisons 5 Ghz

# Le local « radio » aujourd'hui...



- ◆ 1 routeur IP, 6 alimentations POE

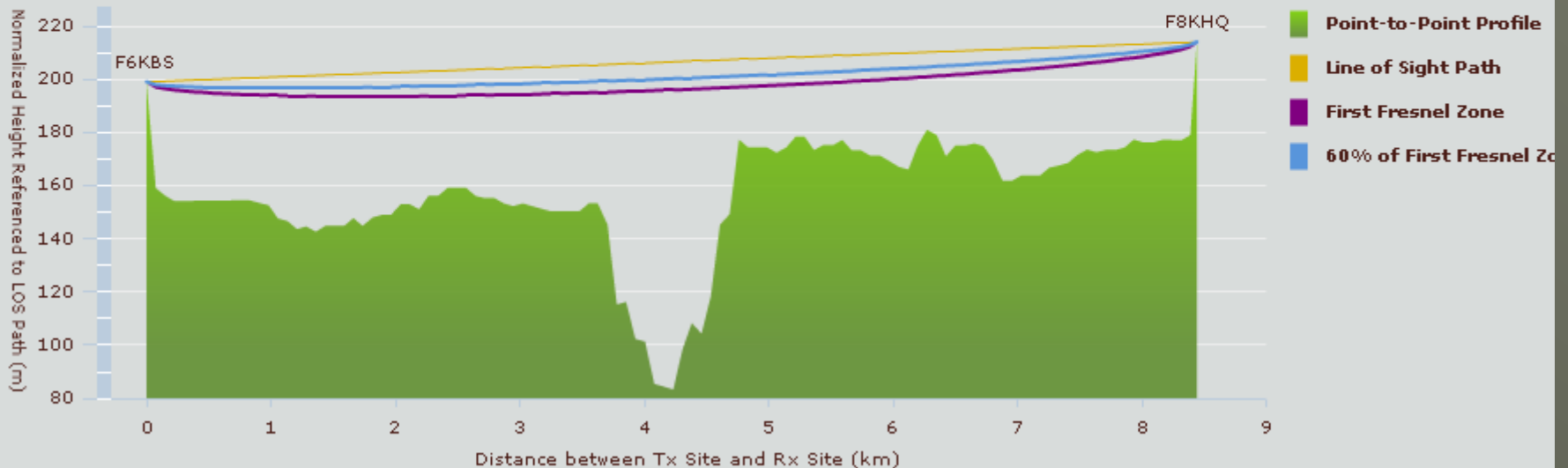
# Le challenge des liaisons 5 Ghz...

- ◆ Liaison F6KBS – F8KHQ, 9 Km à vue

## LINK ANALYSIS

Total path loss	126.09 dBm	Thermal fade margin	13.91 dBm	Create Report (PDF)
Signal level at the RX site	-71.09 dBm	Distance between Sites	8.44 km	Save to your account
EIRP	41.00 dBm	Link availability due to rain	N/A %	Share this Link (?)

## PATH PROFILE BETWEEN TX AND RX SITE



DISCLAIMER: Ligowave provides this link calculator as a courtesy. Results are provided as is with no warranty or guarantee.

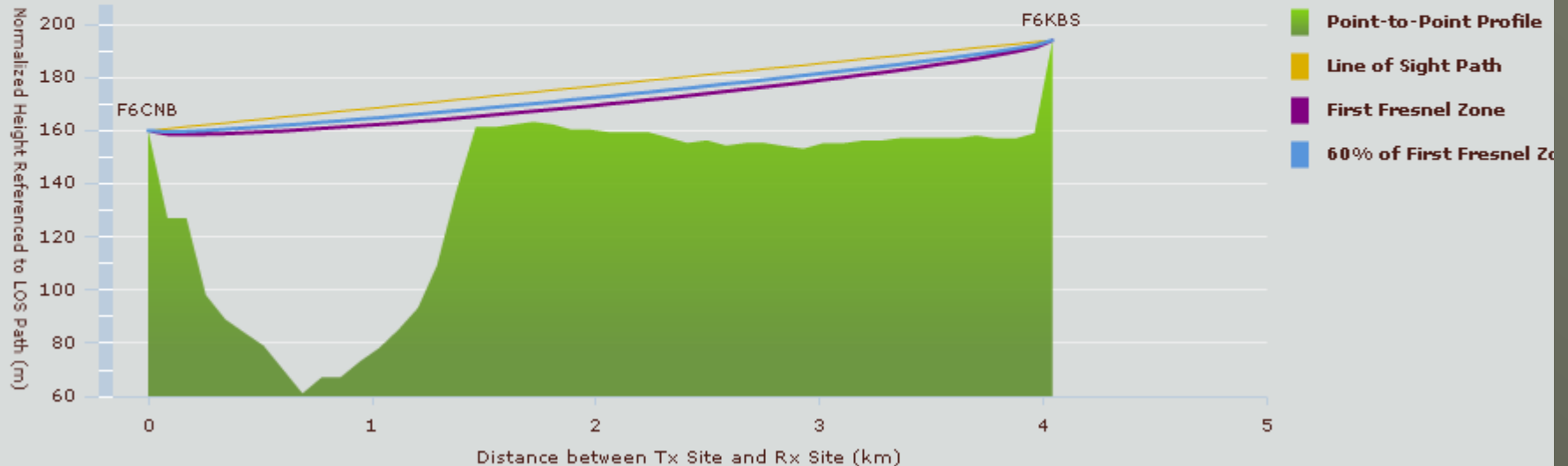
# Le challenge des liaisons 5 Ghz...

- ◆ Liaison F6KBS – F6CNCB, 4 Km à vue ?

## LINK ANALYSIS

Total path loss	119.36 dBm	Thermal fade margin	38.64 dBm	Create Report (PDF)
Signal level at the RX site	-46.36 dBm	Distance between Sites	4.04 km	Save to your account
EIRP	48.00 dBm	Link availability due to rain	N/A %	Share this Link (?)

## PATH PROFILE BETWEEN TX AND RX SITE




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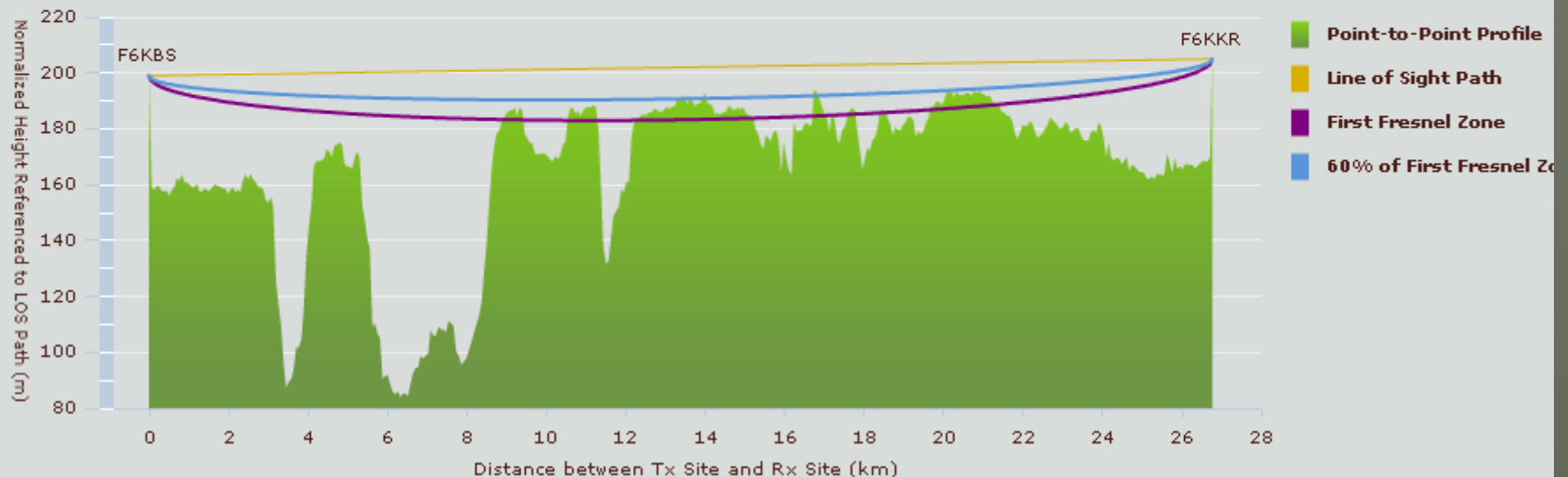
# Le challenge des liaisons 5 Ghz...

- ◆ Liaison F6KBS – F6KKR, 27 Km à vue ?

## LINK ANALYSIS

Total path loss	141.05 dBm	Thermal fade margin	20.95 dBm	Create Report (PDF)
Signal level at the RX site	-64.05 dBm	Distance between Sites	26.77 km	Save to your account
EIRP	52.00 dBm	Link availability due to rain	N/A % 	Share this Link (?)

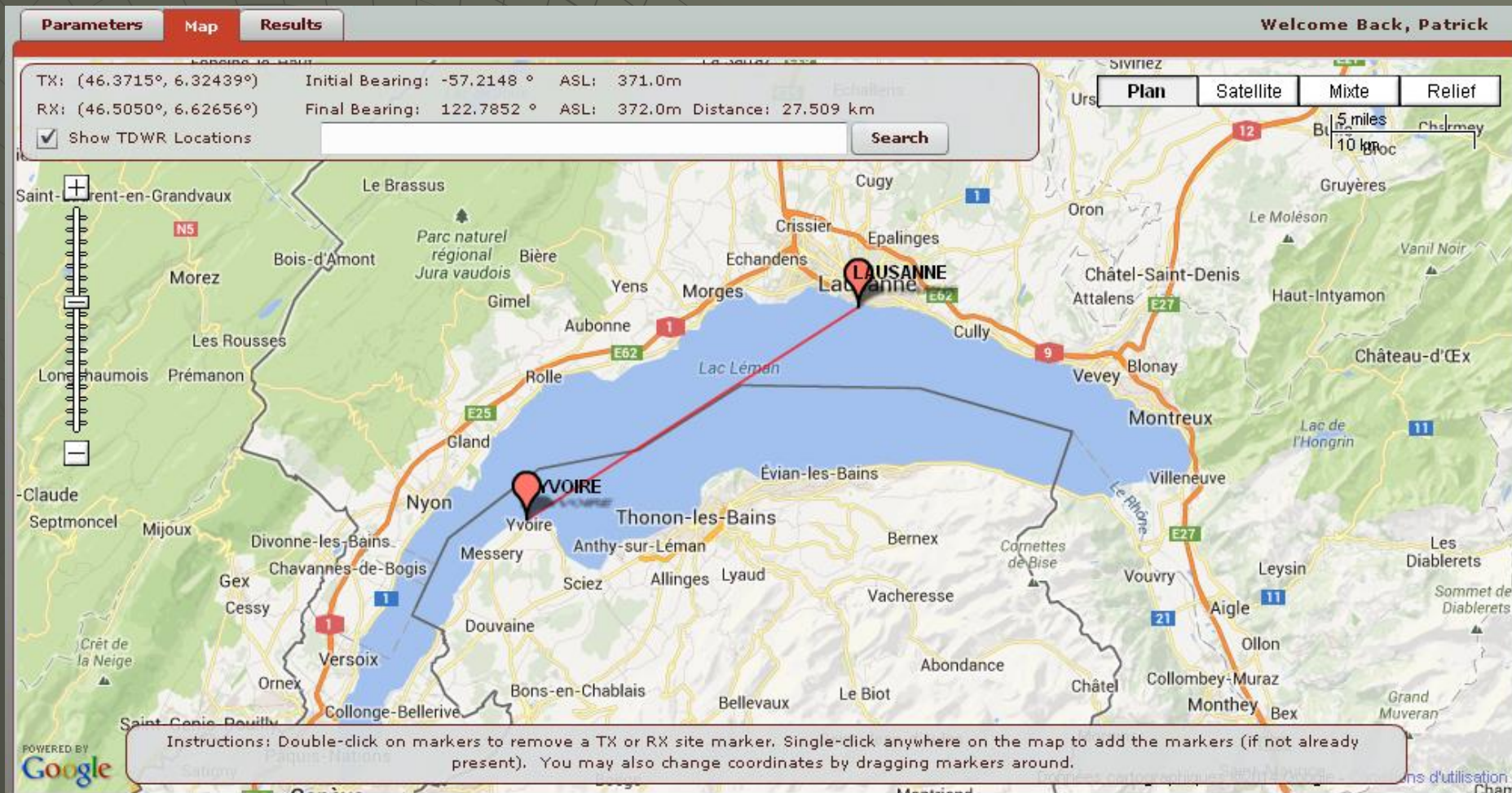
## PATH PROFILE BETWEEN TX AND RX SITE



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# Le challenge des liaisons 5 Ghz...

- ◆ Simulation Yvoire–Lausanne, 27 Km à vue



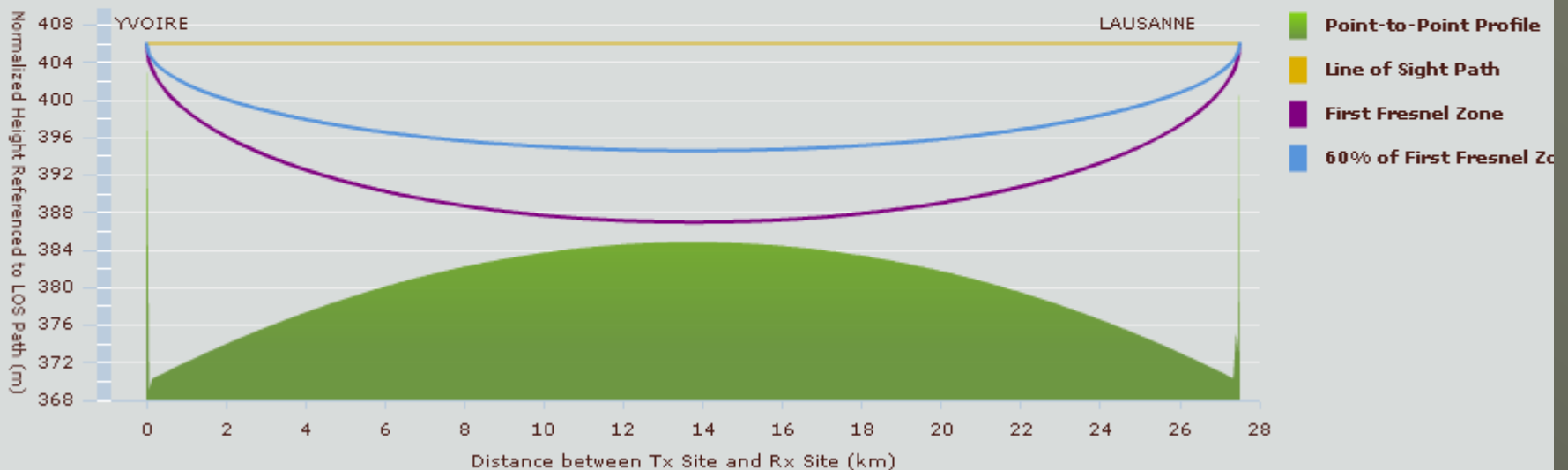
# Le challenge des liaisons 5 Ghz...

## ◆ Simulation Yvoire–Lausanne, 27 Km à vue

### LINK ANALYSIS

Total path loss	137.88 dBm	Thermal fade margin	24.12 dBm	Create Report (PDF)
Signal level at the RX site	-60.88 dBm	Distance between Sites	27.51 km	Save to your account
EIRP	52.00 dBm	Link availability due to rain	N/A % 🔍	Share this Link (?)

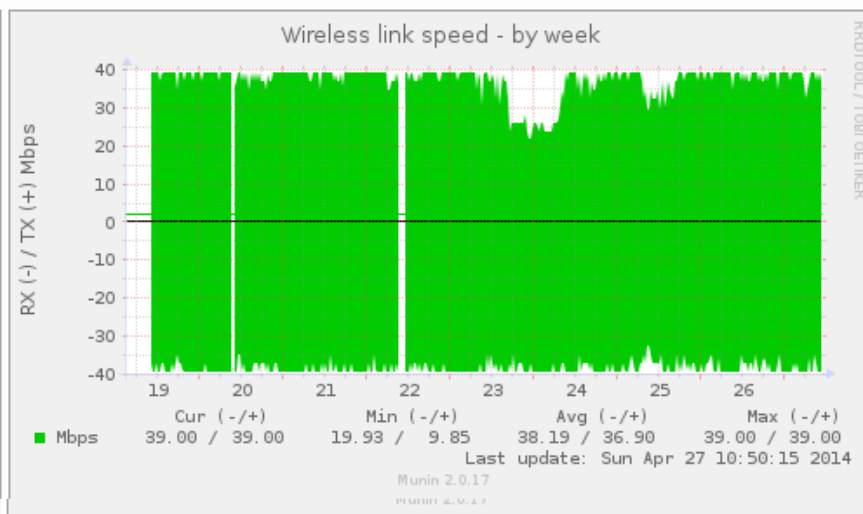
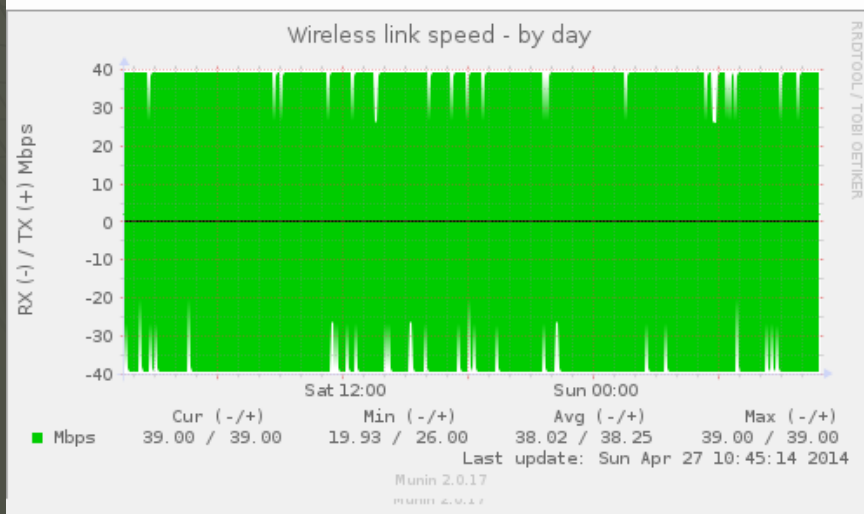
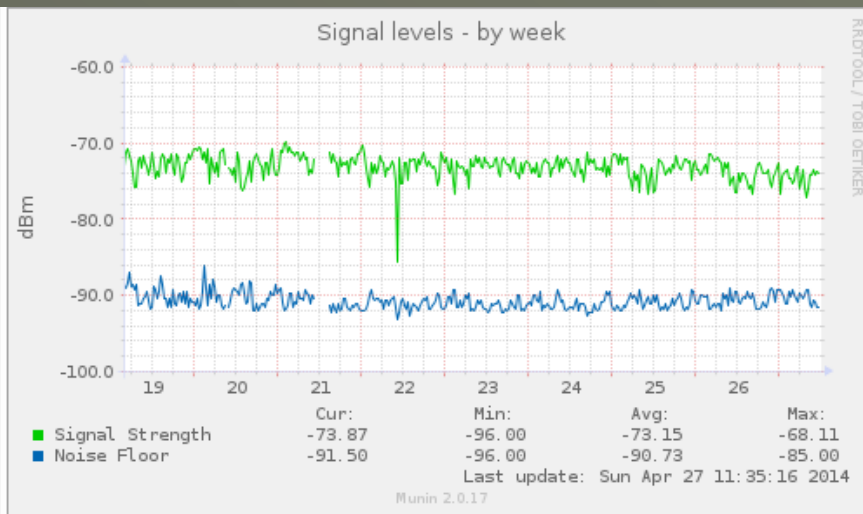
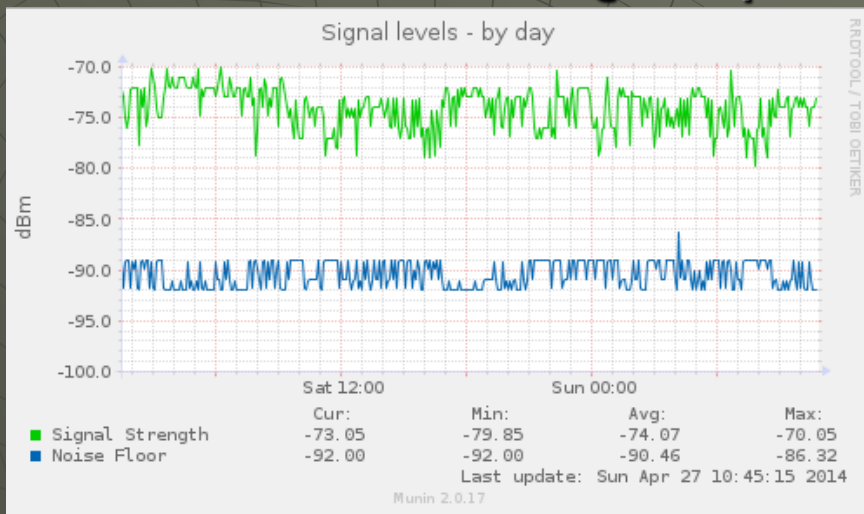
### PATH PROFILE BETWEEN TX AND RX SITE



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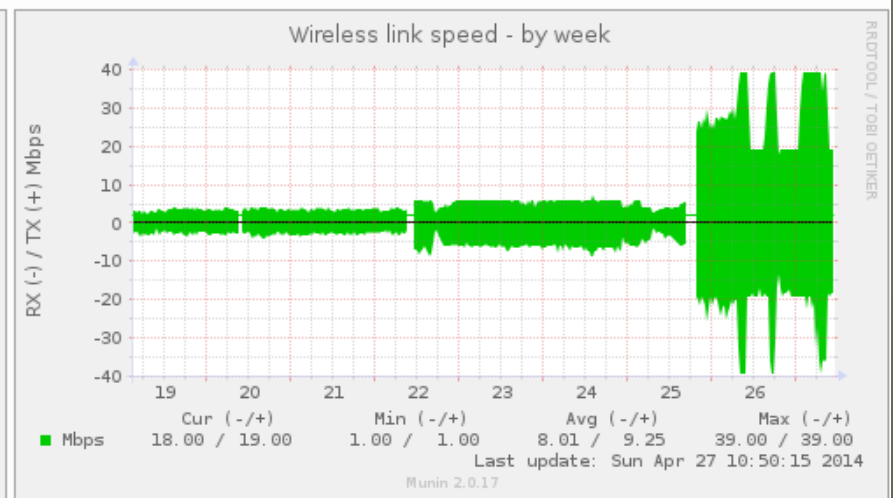
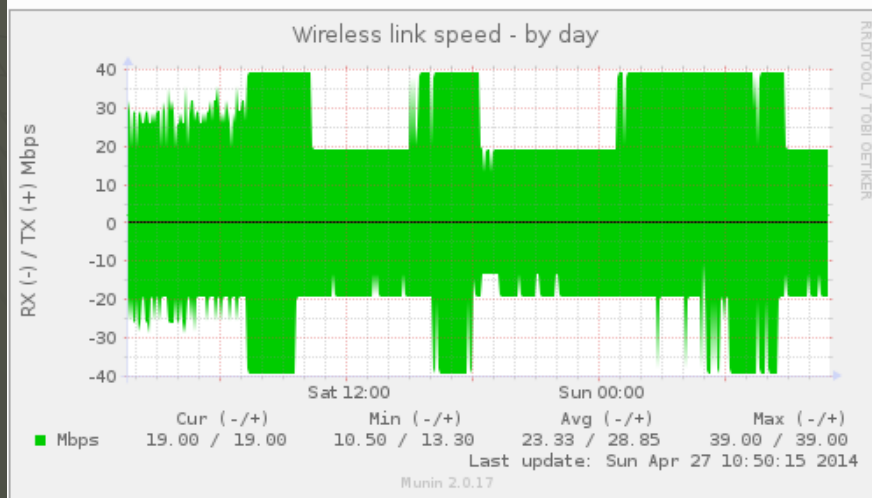
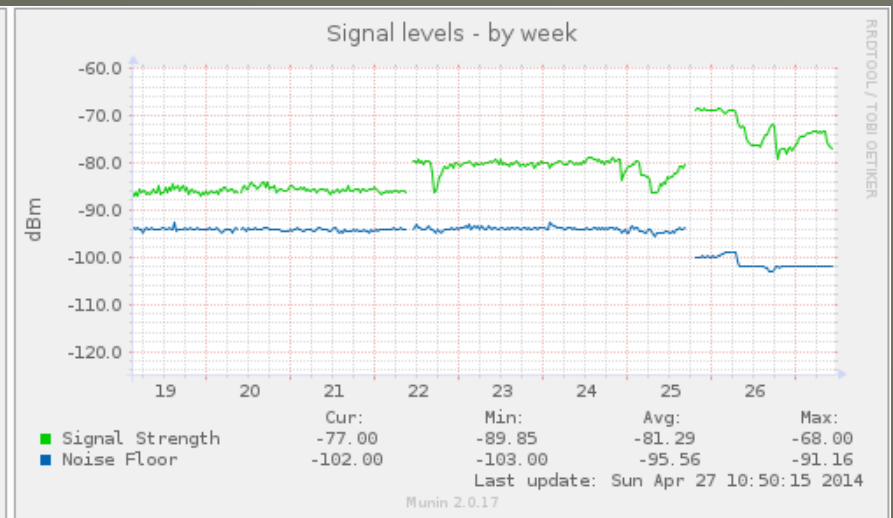
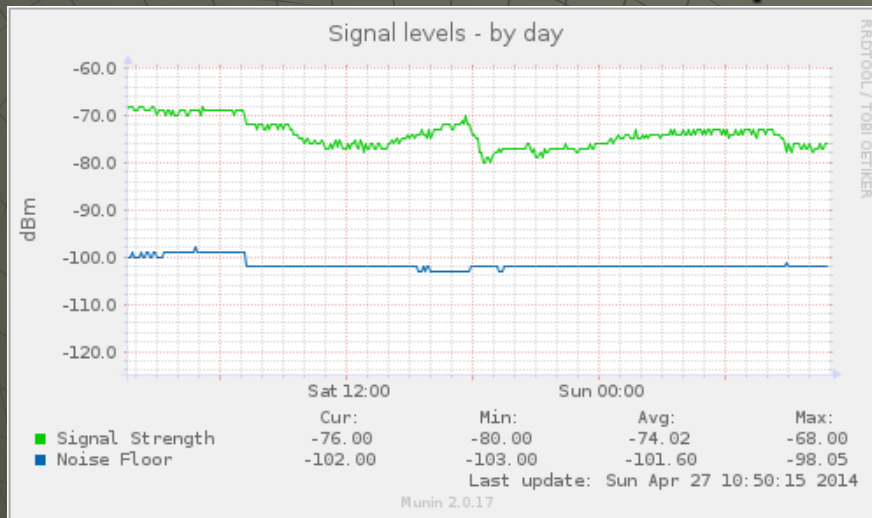
# Le suivi des liaisons

## ◆ F6KBS-F8KHQ la première semaine...



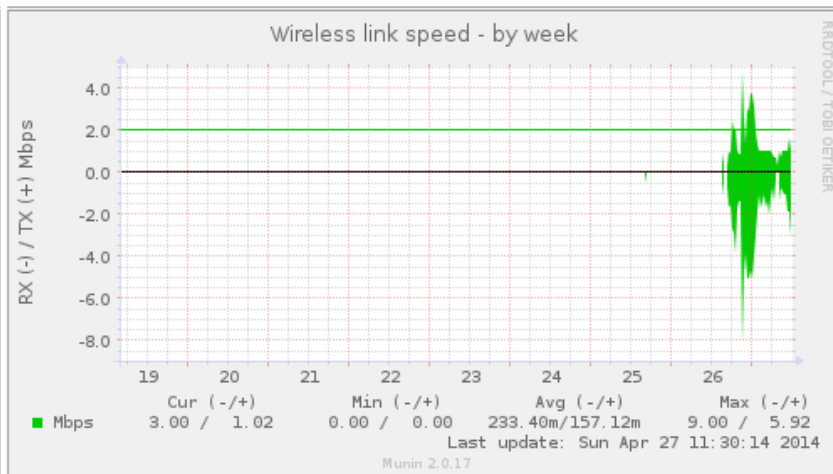
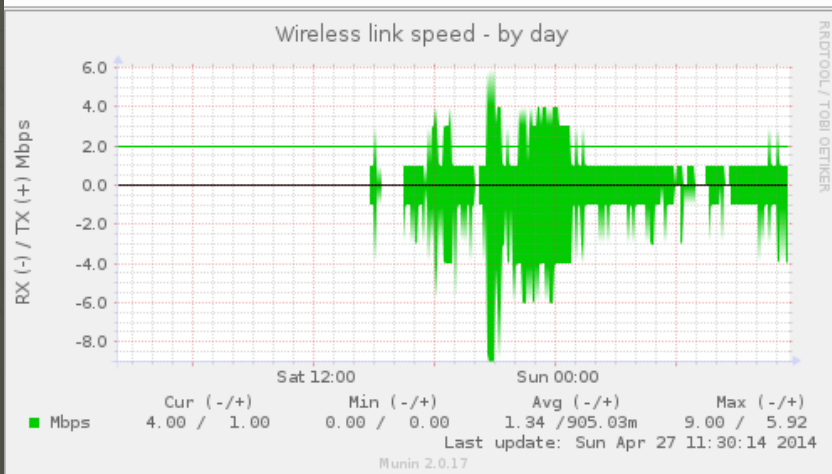
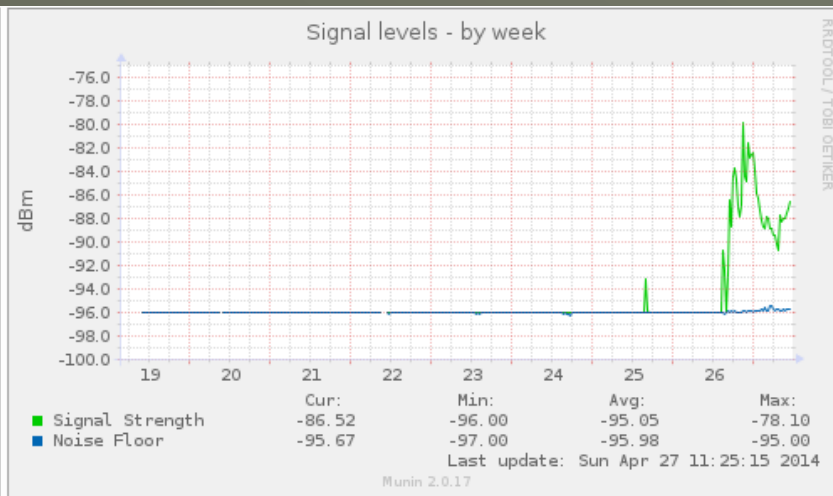
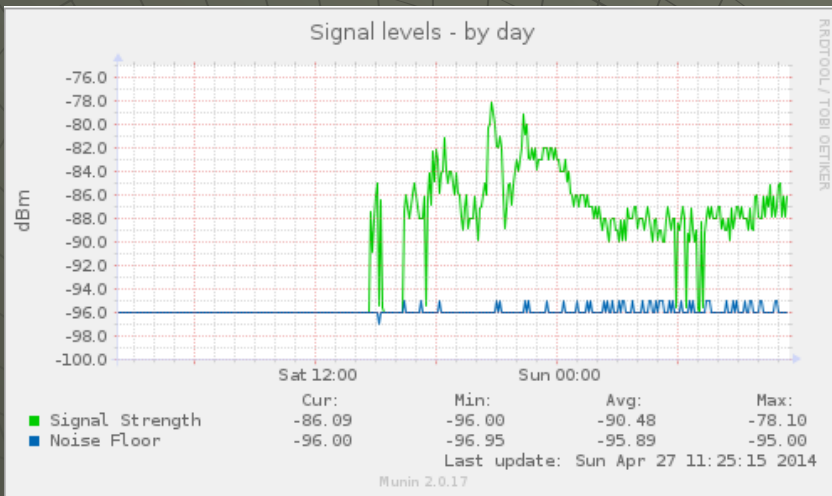
# Le suivi des liaisons

## ◆ F6KBS-F6CNB la première semaine...



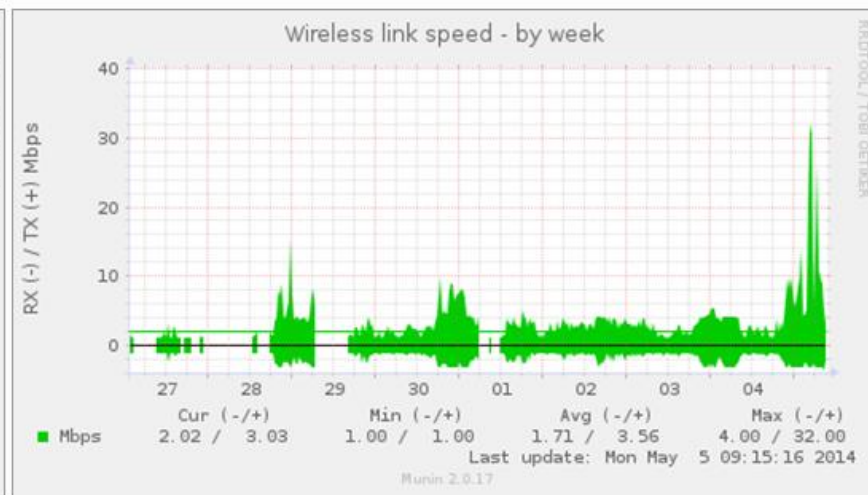
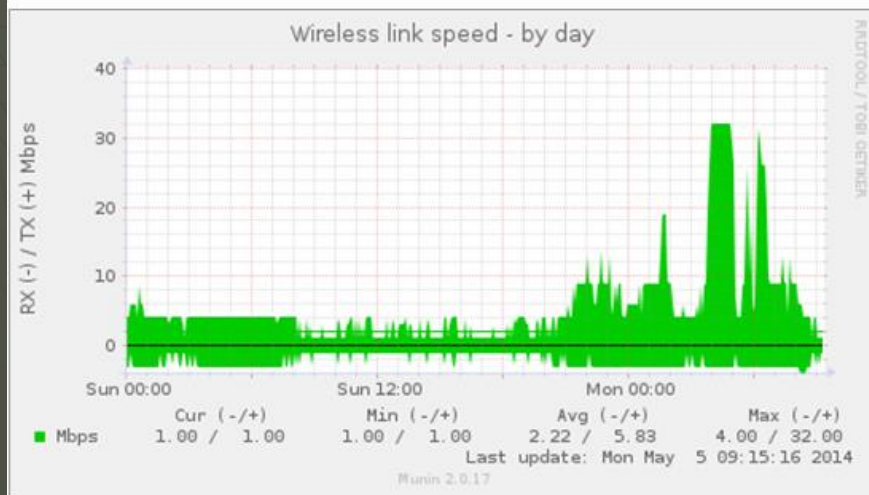
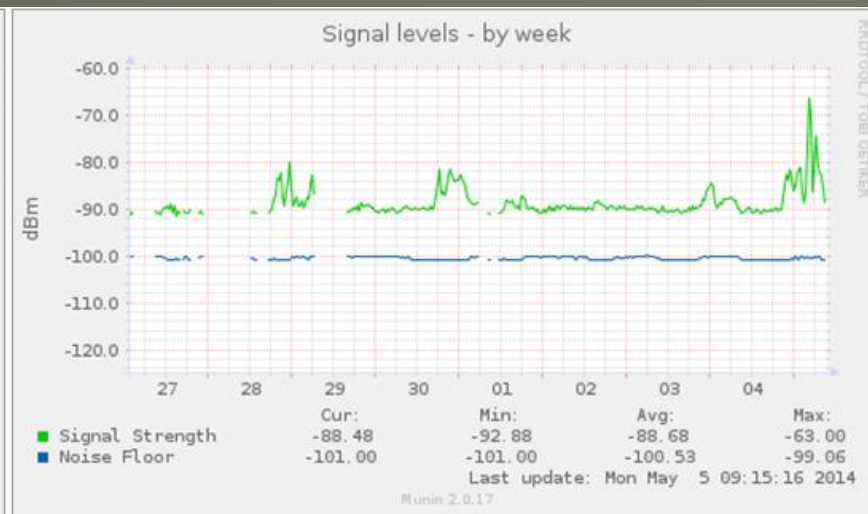
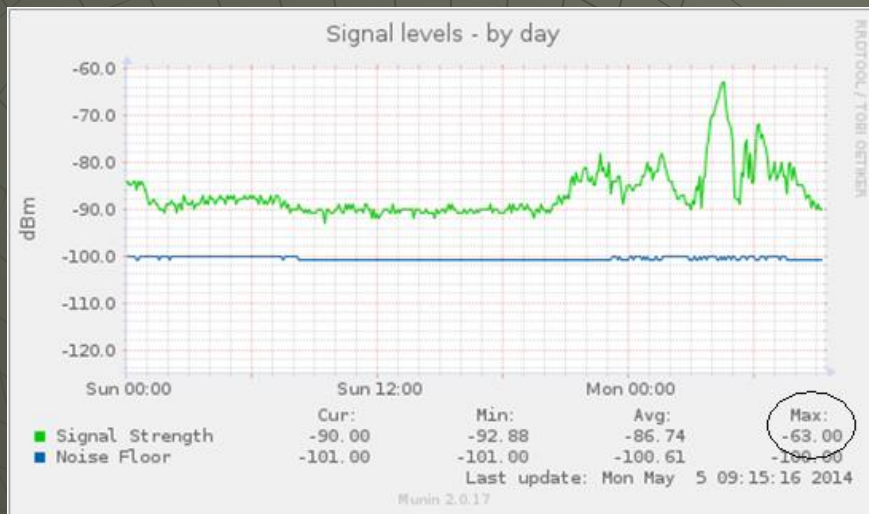
# Le suivi des liaisons

## ◆ F6KBS-F6KKR la première semaine...



# Le suivi des liaisons

## ◆ F6KBS-F6KKR la deuxième semaine !



# Et l'esprit OM ?

