

Cartesian Style




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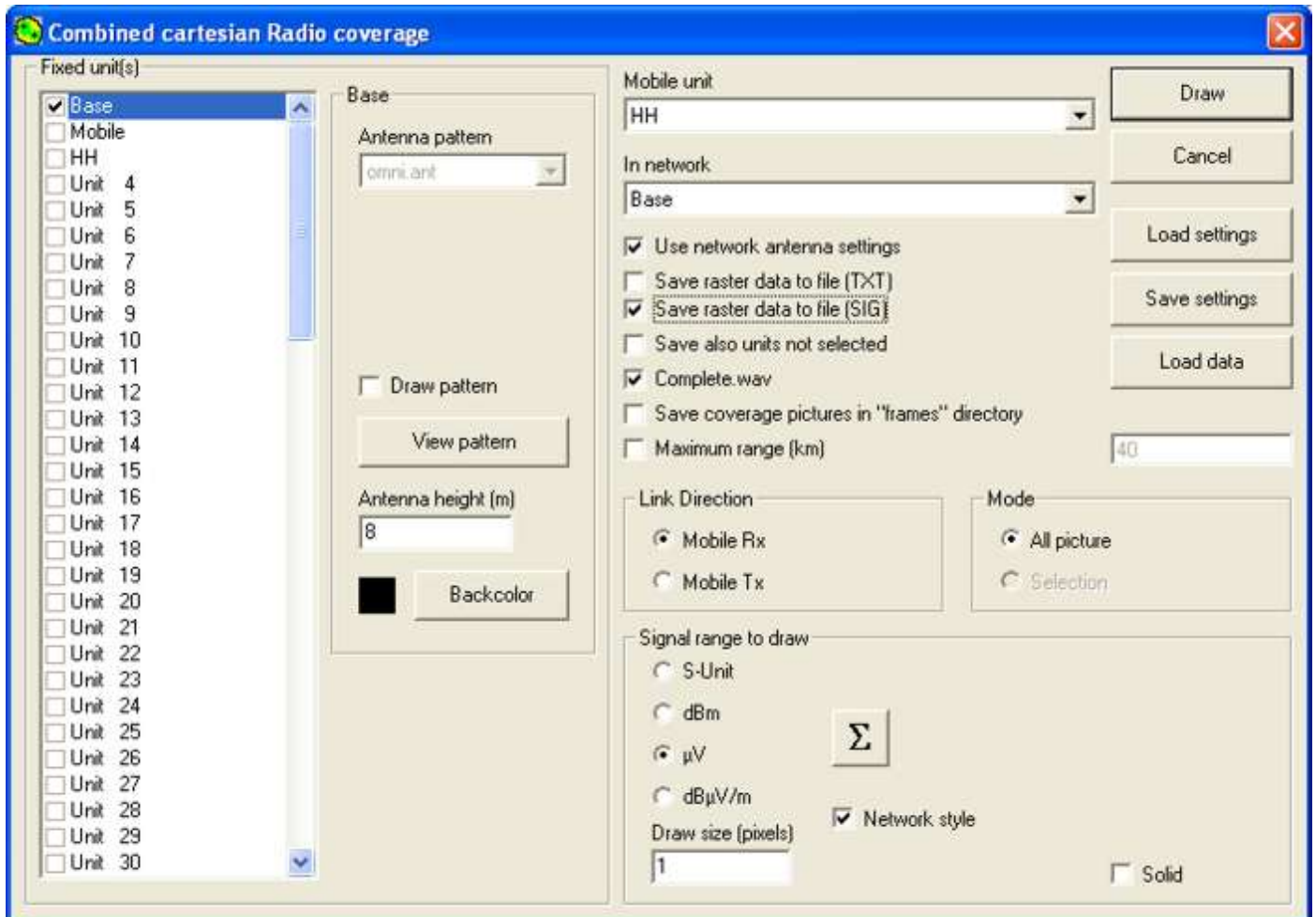
Opening the Combined Cartesian coverage pane using **F4**,

'Tools/Radio coverage/Combined Cartesian,

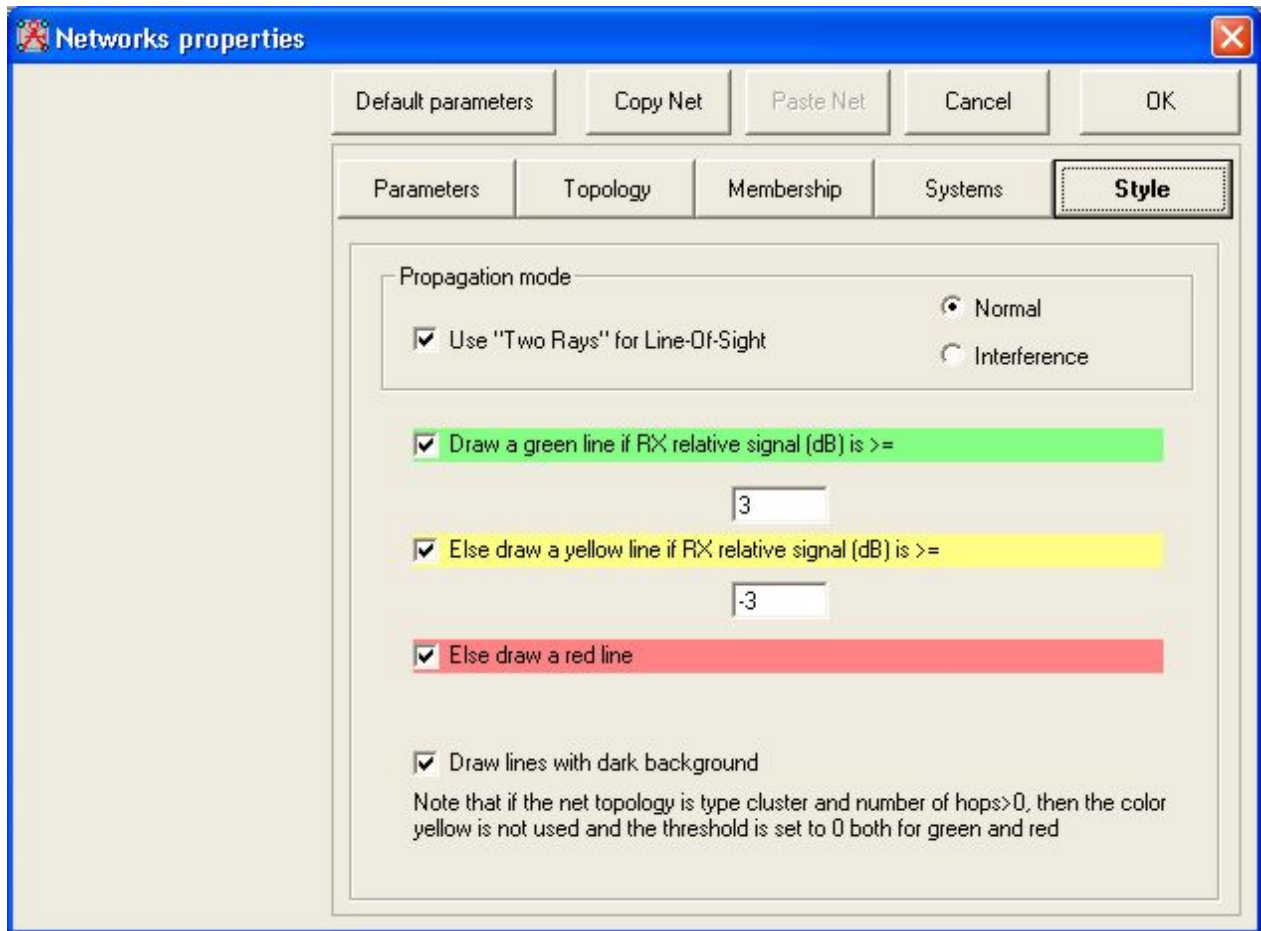


or by clicking on the  the icon,

the following pane will be displayed, where 'Network style' can be selected.

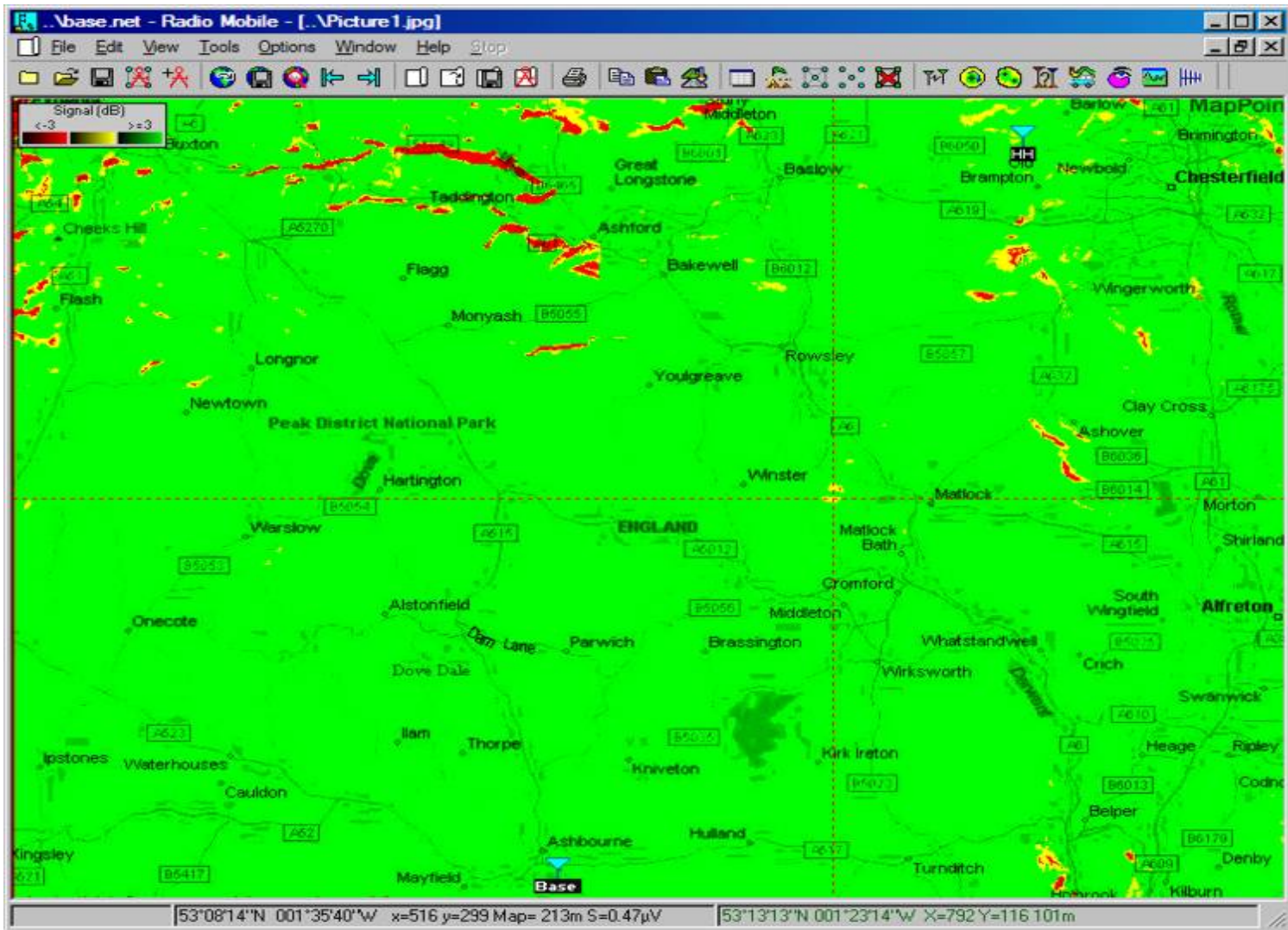


The 'Signal range to draw' selection boxes have been removed, as a 'Network Style' plot generates a coverage plot with signal levels displayed by the colours according to the limits shown on the Network Properties 'Style' tab.



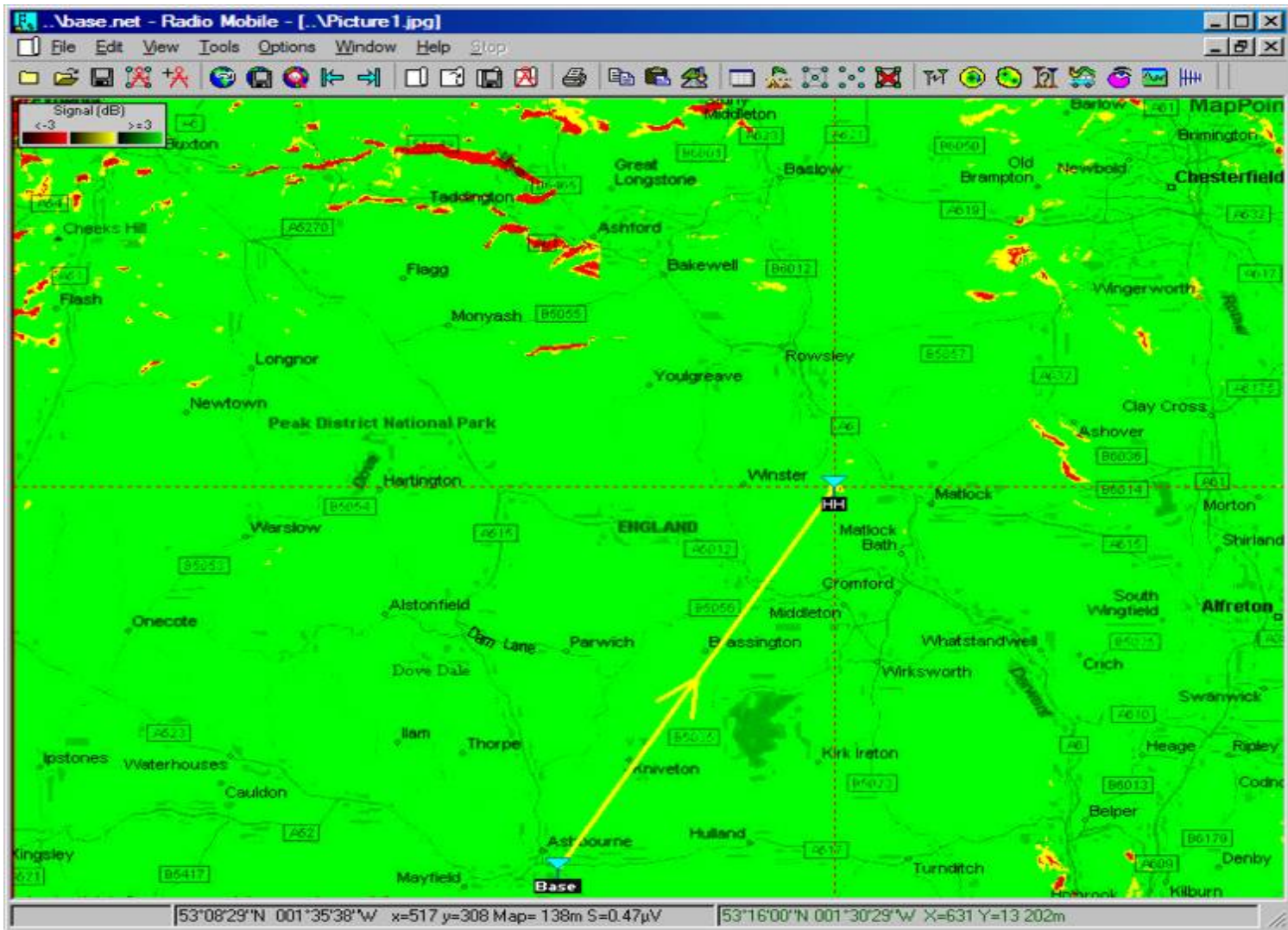
In this case a Green area show signals \geq to 3dB above the mobile receiver threshold, with Yellow displayed for the region between +3dB and -3dB, and Red for signals $<$ -3dB.

Performing the plot on my Base Network using Base as the fixed Unit and the HH radio as the mobile, generates the screen below, showing areas where communication is not possible:



As the 'SIG' box was checked, a signal file has also been generated for this plot, using the selected μV as the displayed unit. The cross wire cursor has been placed in the small yellow $\pm 3\text{dB}$ area, and a signal level of $S=0.47\mu\text{V}$ is indicated in the centre of the bottom data area.

Opening Unit Properties, selecting the HH Unit and placing it at the cursor then produces:

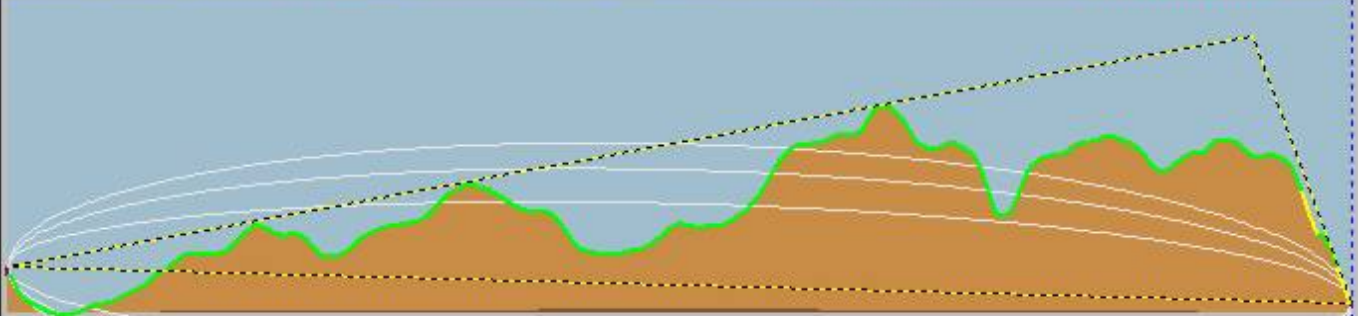


and on opening the Radio Link pane using **F2** - or Tools/Radio Link, the signal path is shown in Yellow corresponding to the Style setting, with the Radio Link pane indicating a Received signal level of $0.47\mu\text{V}$, which is -0.6dB relative to the receiver threshold.

Radio Link

Edit View Swap

Azimuth=31.2°	Elev. angle=-0.370°	Obstruction at 16.03km	Worst Fresnel=-4.0F1	Distance=16.83km
PathLoss=168.1dB	E field=4.8dB μ V/m	Rx level=-113.6dBm	Rx level=0.47 μ V	Rx Relative=-0.6dB



Transmitter

S3

Base

Role: Command

Tx system name: Base

Tx power: 50 W 46.99 dBm

Line loss: 0.5 dB

Antenna gain: 6 dBi 3.85 dBd +

Radiated power: EIRP=177.41 W ERP=108.18 W

Antenna height (m): 8 - + Undo

Receiver

S6

HH

Role: Subordinate

Rx system name: HH-2m

Required E Field: 5.42 dB μ V/m

Antenna gain: 2 dBi -0.15 dBd +

Line loss: 0 dB

Rx sensitivity: 0.5 μ V -113.02 dBm

Antenna height (m): 1.8 - + Undo

Net

Base

Frequency (MHz)

Minimum: 144 Maximum: 146

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