Notes sur la calibration

“It is suggested that channel 5 is used because the higher the frequency the easier it is to observe step changes in the output.” p.104 user manual

“Operating at a wider bandwidth increases range but also increases power consumption. The DW1000 has fine control of the TX pulse width allowing optimum control of transmitted spectrum bandwidth.” P.211 user manual

“In general to locate a mobile node measurements are needed to be referenced to a number of fixed known location “anchor” nodes. Typically a minimum of three anchor nodes are needed to locate a mobile node in two dimensions, while a minimum four non-coplanar anchors are needed to locate a mobile node in three dimensions. The spacing of anchors nodes in an installation has to be such that four anchors are always in communication range of the mobile tag no matter where it is within the operating space. The communication range is dependent on data rate and preamble length, the choice of which is influenced by the node density requirements and perhaps also power consumption.” P.214 user manual

“In free-space, line-of-sight (LOS), this may vary from 60 m at the 6.8 Mbps data rate to up to 250 m at the 110 kbps data rate.” P.211

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* for the purposes of this discussion this will be called FP\_POWER. Using these two calculations it may be possible to say whether the channel is line-of-sight (LOS) or non-line-of-sight signal (NLOS). As a rule of thumb, if the difference between RX\_POWER and FP\_POWER, i.e. RX\_POWER – FP\_POWER, is less than 6dB the channel is likely to be LOS, whilst if the difference is greater than 10dB the channel is likely to be NLOS. » p.45