

1-channel

2-channel

4-channel

8-channel

16-channel

Original

Implant simulations by Arthur Boothroyd, based on the work of Robert Shannon.

Total bandwidth is 0 to 6000 Hz.

All within-channel frequency resolution is removed. The amplitude envelope in each band is preserved but it is imposed on a band of noise. This band covers the same frequency range as the band of speech from which the envelope was extracted.

This is not “what speech sounds like to an implant user”. The simulation does, however, give an impression of the intelligibility of speech with the kind of dramatic reduction of spectral information produced by a cochlear implant.