Technologists are also not the enemy (though they might once have been)

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Unhelpful quotes

- “If you can't measure it, you can't manage it.” – Peter Drucker
- "All models are wrong, but some are useful”– George Box

We're ***not*** talking telephone numbers or listening

- QoS -> QoE -> SLAs :: Metrics
- Back in the day, 8Khz, 8 bit samples => 64Kbps "bandwidth"
- Delay bounded by echo canceller memory capacity, later justified by human factors on interaction in conversations

How many parameters to get wrong

- QoS: Capacity, Latency, Jitter, Wander, Loss (mean, variance/centile?)
- QoE: S/N, Entropy, but what about White (or Pink) Noise in silences?
- SLA: A weapon for the provider to beat themselves over the head?

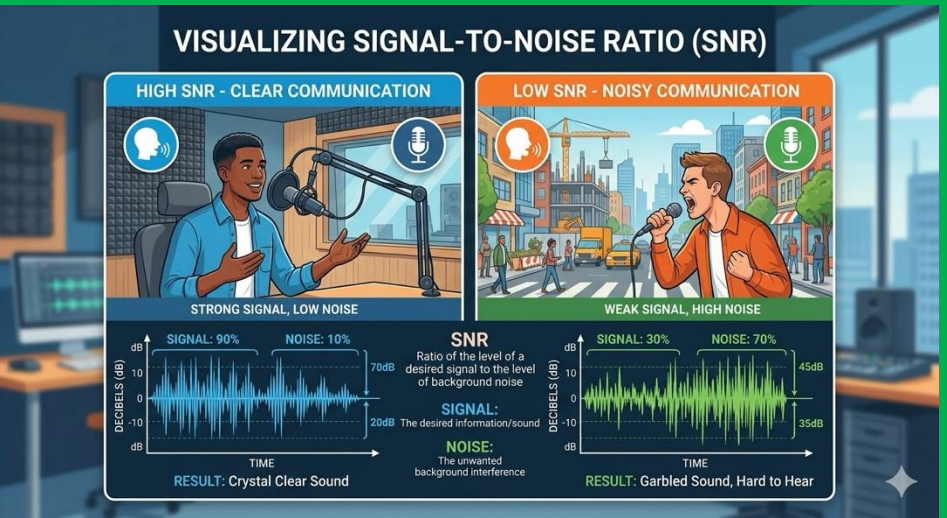
What can you do about it anyhow

- User has no real say – can't even measure easily
- User doesn't care ***why*** they are still stuck on the train.
- Is there a point (where the technologists are not wrong)?
- Redress, not excuses…

Technology role in performance parameters

- Fault detection, root cause analysis
- Aggregate performance, provider-provider level billing
- Long term evolution (SD>HD>SHD>AR/VR etc) feasibility
- Scale out net&services&end *technical* capability ahead users?

Questions?


VISUALIZING SIGNAL-TO-NOISE RATIO (SNR)
HIGH SNR - CLEAR COMMUNICATION
LOW SNR - NOISY COMMUNICATION
STRONG SIGNAL, LOW NOISE
WEAK SIGNAL, HIGH NOISE
SIGNAL: 90%
NOISE: 10%
70dB
20dB
DECIBELS (dB)
TIME
RESULT: Crystal Clear Sound
SNR
Ratio of the level of a desired signal to the level of background noise
SIGNAL:
The desired information/sound
NOISE:
The unwanted background interference
SIGNAL: 30%
NOISE: 70%
45dB
35dB
RESULT: Garbled Sound, Hard to Hear