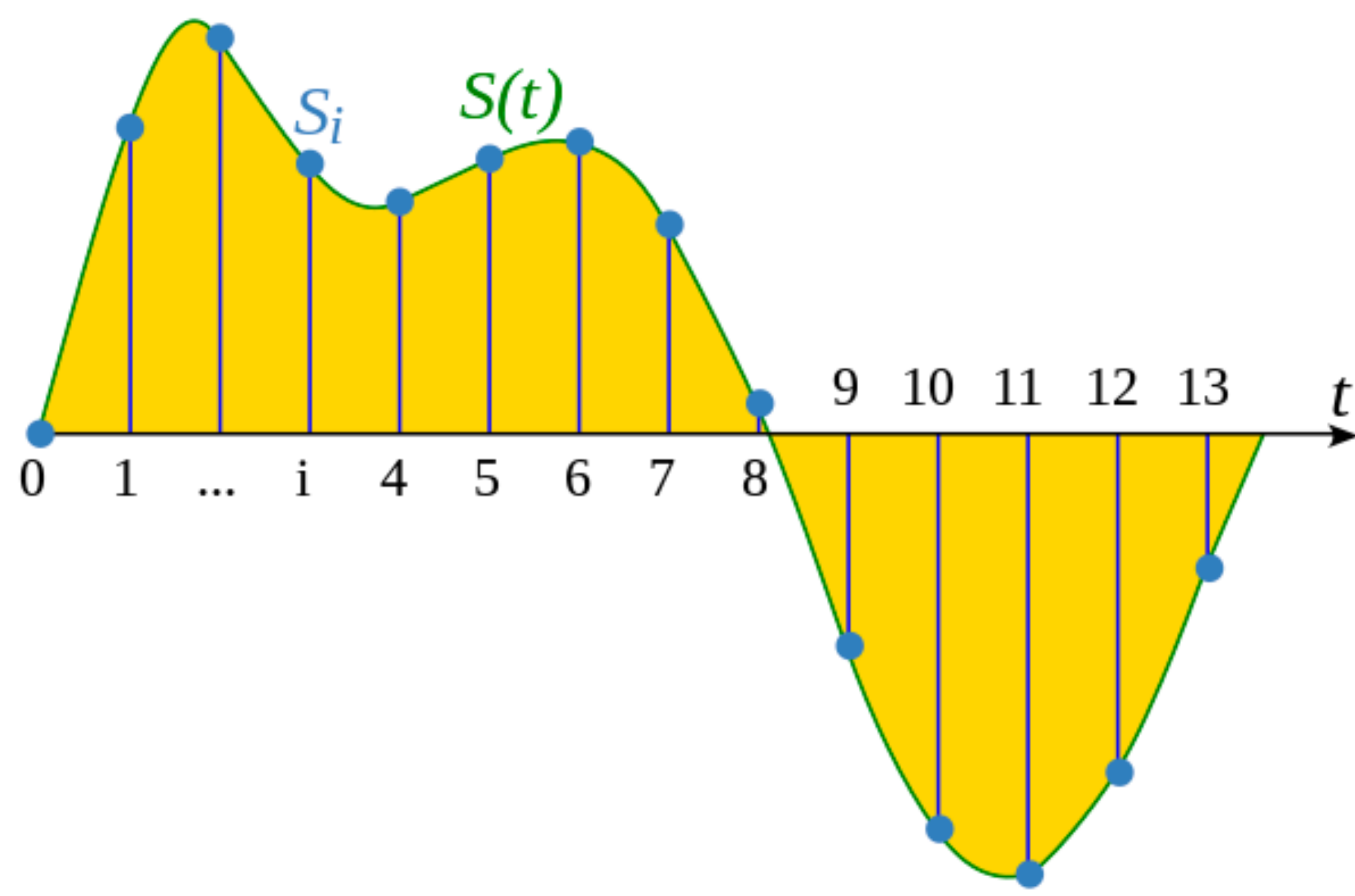


# Analog signal to digital signal: Sampling

- ▶ Sampling period =  $1/\text{sampling rate}$  (seconds)



# Signal sampling

- Typical sampling rates and samples

Sampling rate	Use cases
<b>8 kHz</b>	Telephone and encrypted walkie-talkie, wireless intercom and wireless microphone transmission
<b>16 kHz</b>	Used in most modern VoIP and VVoIP communication products. Wideband extension over standard telephone narrowband.
<b>22.05 kHz</b>	One half the sampling rate of audio CDs; used for lower-quality PCM and MPEG audio.
<b>44.1 kHz</b>	Audio CD, also most commonly used with MPEG-1 audio (VCD, SVCD, MP3).

[https://en.wikipedia.org/wiki/Sampling\\_\(signal\\_processing\)](https://en.wikipedia.org/wiki/Sampling_(signal_processing))