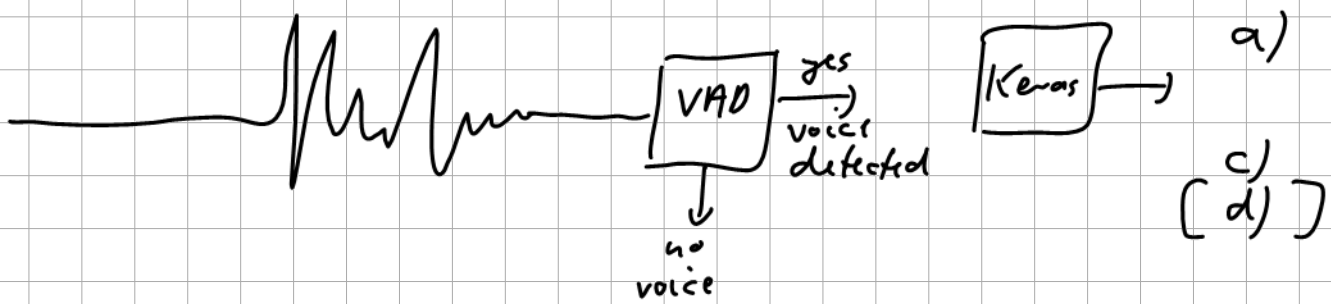
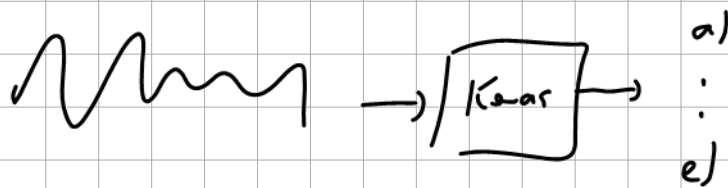
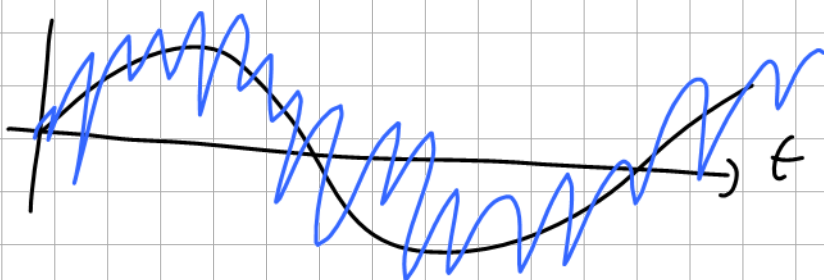
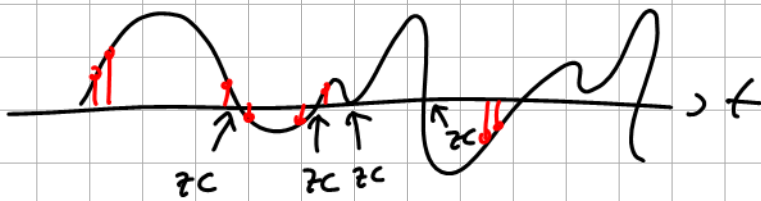


- ,left' a)
- ,right' b)
- ,stop' c)
- other speech d)
- no speech e)



z_{cv} - zero crossing rate



$$z_{cv} \Rightarrow 2f$$

$$z_{cv} \approx 2f$$

















