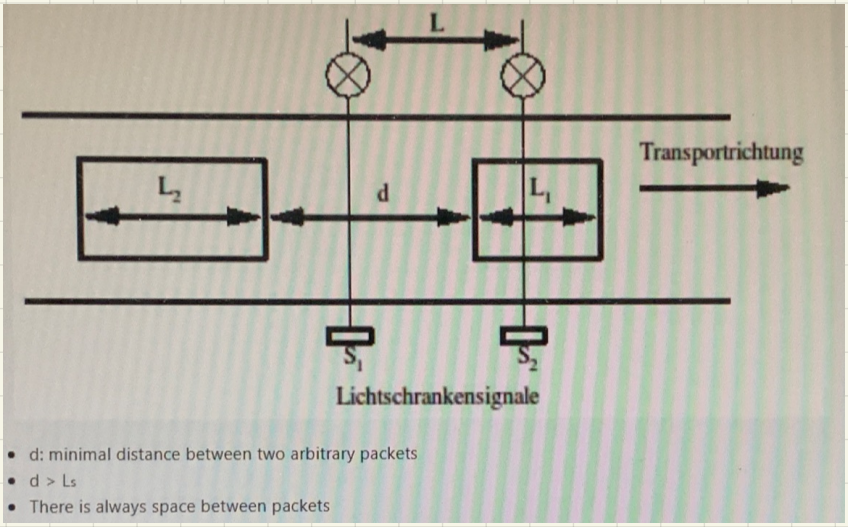

- When we receive the signal at S_1 is 1, we start to check if the packet is longer or shorter

- At first, after the signal S_1 is 1, the conveyor belt continue to roll until we receive the signal S_2 is 1. We have 2 cases at the time that signal S_2 change 0 to 1:

  . Case 1: $S_1 = 0$, $S_2 = 1$

  We set output "shorter", and let them on "shorter conveyor"

  . Case 2: $S_1 = 1$, $S_2 = 1$

  We set output "longer", and let them on "longer conveyor"

- After setting output, we wait until S_2 sets 0. It's ouvious that S_1 sets 0, because the packet rolled out

- Thank to distance between two packets $d > L$, we can repeat this process continuously without any error to sort packet