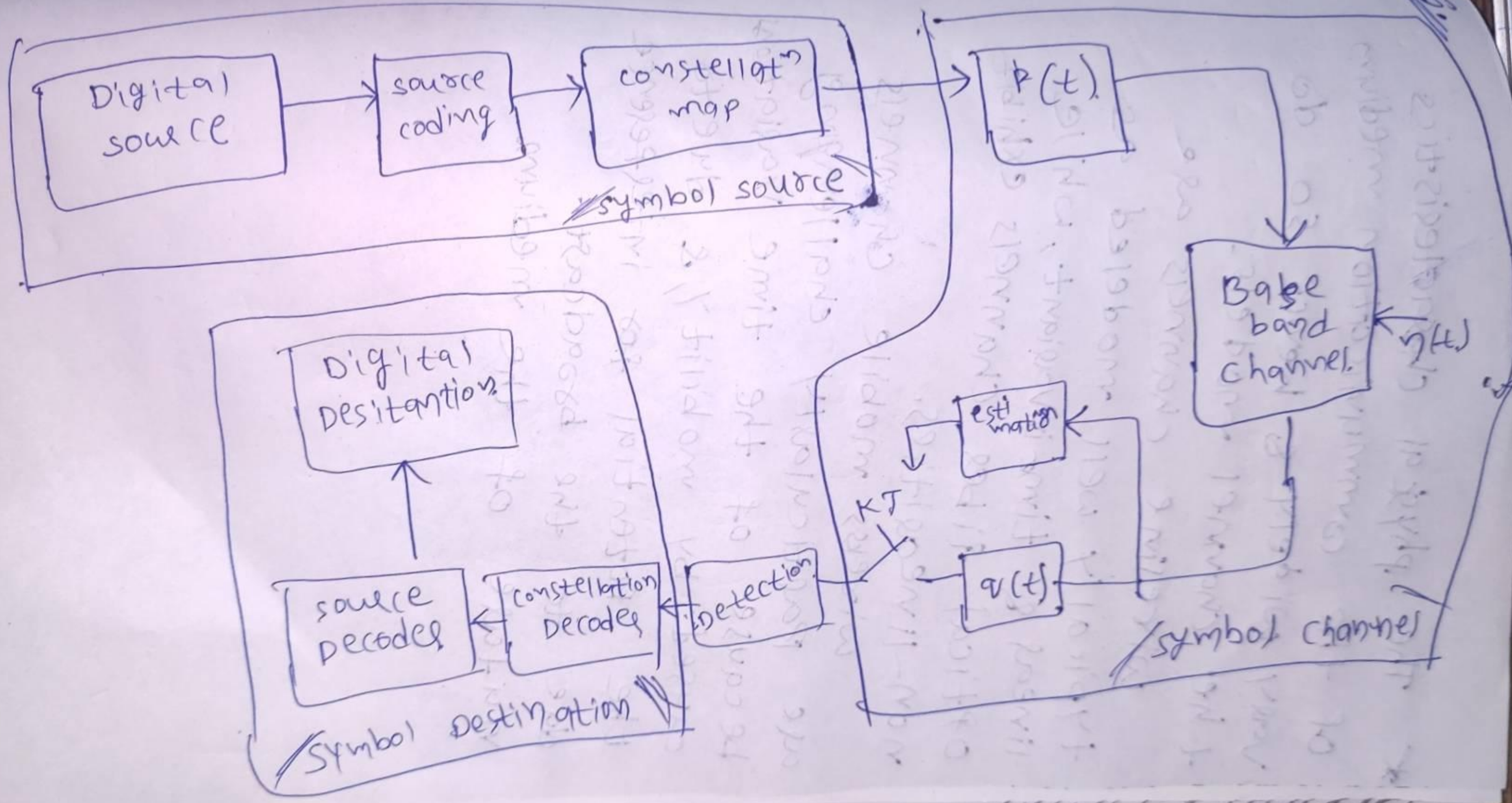


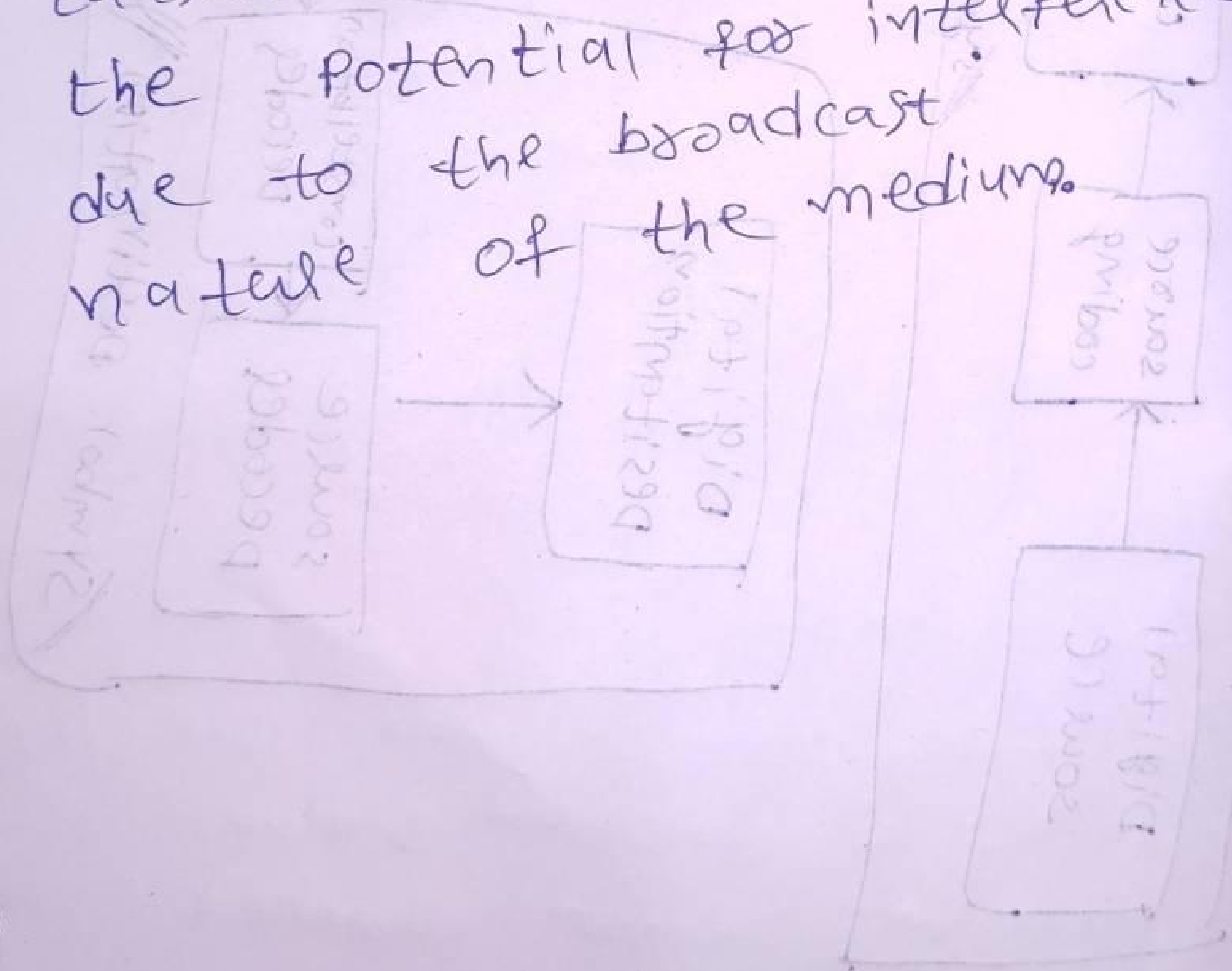
5.



* The physical characteristics of the communication medium vary widely & hence so do the channel models.

wireline channels are typically well modeled as linear & time-invariant, while optical fiber channels exhibit non-linearities.

wireless mobile channels are particularly challenging because of the time variations caused by mobility, & due to the potential for interference due to the broadcast nature of the medium.



* The purpose of communication technologies is to empower users to send messages to each other. Some sources of data are inherently digital in nature, i.e., their natural & native representation is in the form of bit sequences.

* To ensure that we can distinguish from noise, we will map bits to signals using a fixed set of discrete values.

* Clock & Data Recovery:-

Both the transmitter & receiver use an internal clock oscillator running at the sample rate to determine when to generate or acquire the next voltage sample.