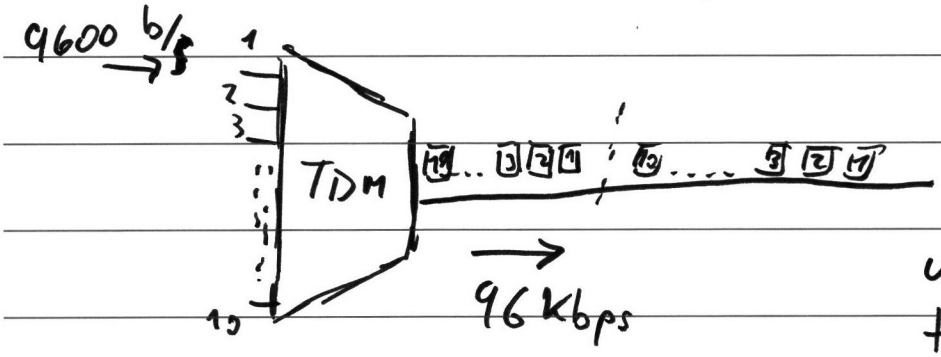
1. TDM system

1B = 1 byte

1b = 1 bit

* synch TDM, Line: 9600 bps



utilización: 50%

throughput: 48 Kbps

$$T_{Rate} = 9600 \frac{bits}{sec} \times 10 = 96 \text{ Kbps}$$

$$= 12 \text{ KBps}$$

2. Statistical TDM

line utilización = 0.8, line busy: 50%

$\rho = 0.8$, $\alpha = 0.5$, $R = 9600$ b/s, $I = 10$

$$\rho = \frac{\alpha \cdot I \cdot R}{M} \Rightarrow M = \frac{\alpha \cdot I \cdot R}{\rho}$$

$$M = 0.5 \times 10 \times 9600 \frac{b}{s} \times \frac{1}{0.8} = 60 \text{ Kbps}$$