In this video, we discussed the **M/M/C/C system**, whose model was introduced in the previous video. We have found the formula expressing the probability of blocking, which is known as **Erlang B**formula. For obtaining the formula we have:

1. Found the **steady state probabilities**
2. In particular, we considered π_C which is the probability that the system has C clients
3. Applied **PASTA property** to conclude that the probability that an arriving client finds the system busy is the same as the probability of the system being busy. Thus, Erlang B formula is equal to $\pi_{C.}$

This famous formula is given by the following expression:

$$E_B(\rho, C) = \frac{\rho^C / C!}{\sum_{i=0}^{C} \rho^i / i!}$$
