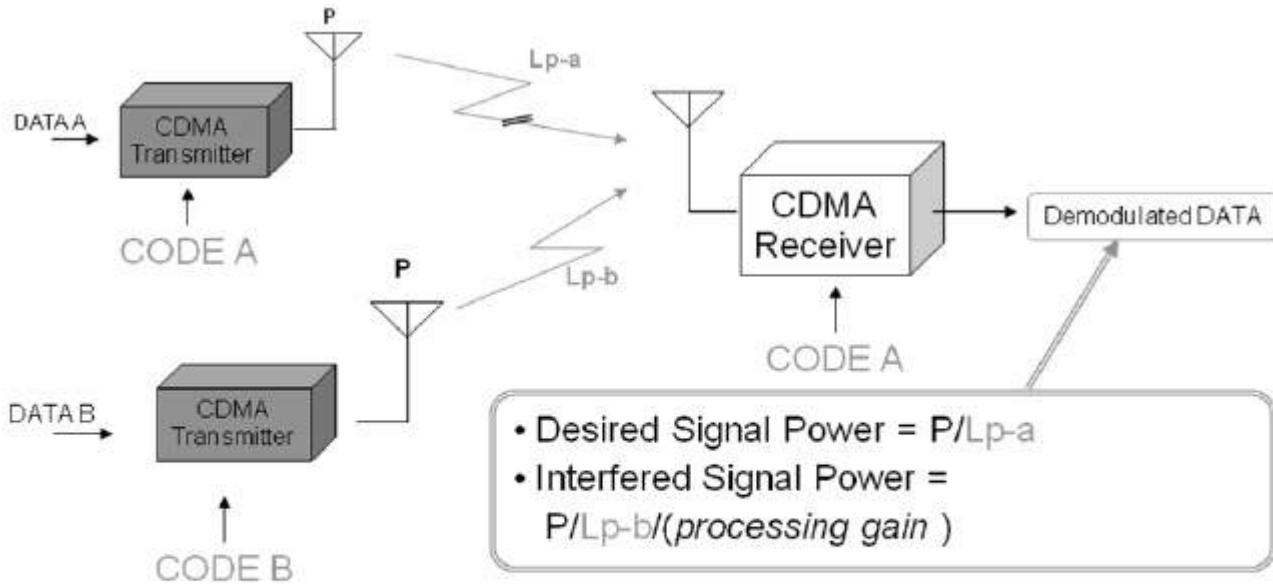


# CDMA - NEAR-FAR PROBLEM

Near-far problem is one of the major problems that hurts mobile communications badly. In a CDMA system, mutual interference will determine the majority of SN ratio of each user.

## How Near-Far Problem Affects Communication?

The following illustration shows how near-far problem affects communication.



When user B is close to the receiver and user A is far from the receiver,  
Lp-a could be much bigger than Lp-b.  
In this case, desired signal power is smaller than the interfered power.

As shown in the illustration, user A is far away from the receiver and user B is close to the receiver, there will be big difference between desired signal power and interfered signal power. Desired signal power will be much higher than the interfered signal power and hence SN ratio of user A will be smaller and communication quality of user A will be severely degraded.