## ABSTRACT

The communication system is important part in the game of Exhibition Race Wheeled Robot Soccer. The thing that important because the robot should be able to move together, alternately and independently. The communication system is all about the process of sending data from one robot to another robot using coach computer.

The communication system begins by received data from the coach computer to both robots have been fitted with wifi module that is connected to the router. Then, the data is processed using Arduino Mega2560. After that, the robot will detect the presence of the ball.

The protocol used in the communication system is a UDP protocol (User Datagram Protocol) because UDP has several characteristics that encourage communication wheeled robots on the race ESRB are connectionless, unreliable. Both of the characteristics has a faster connection, they do not require handshaking and UDP protocol provides a mechanism for send a message to a specific process.

Keywords: Exhibition Race Wheeled Robot Soccer, wifly module, Arduino Mega2560, router, UDP protocol