

Experiment No - 06.

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Name : Kajal Sunil Pagore

Rollno : 26 Div : B

Class : TE

Aim : Understanding and Connectivity of Raspberry - pi / Beagle board with, a zigbee module. write a network application for communications between two device using zigbee.

Theory :

Zigbee is a Communications used for the for the data transfer between the Controllers, Computers, system, really anything with a serial port. As it works with low power consumption, the transmission distances is limited it's limited 10-100 meter line of sight. zigBee device can, transmit data over long distances by passing data through a mesh network of intermediate device to reach more distance. zigBee is typically Used to low data rate application that require long battery life and secure networking. It main application are in the field of wireless sensor network based on industries as it.

the technology defines by the zigBee specifications is intended to be simpler and less expensive than other wireless networks. Here we make use of an interface of zigbee with Raspberry Pi2, for a proper wireless communications. Raspberry pi2 has got use USB ports, So it zigbee Dongle for this is better to use a want to check the communication between the two paired ZigBee module.

Python Script to perform Zigbee Communication -

```
import Serial.  
# Enable USB communication.  
ser = Serial.Serial('/dev/ttyUSB0',  
                    9600, TIMEOUT = 5)  
while True:  
    ser.write('Hello User \r\n')  
    # write a Data.  
    incoming = ser.readline().strip()  
    print 'Received Data:' + incoming,
```

Conclusion → Thus, we have done Zigbee Communication between two Raspberry Pi Devices.