**ĐẠI HỌC QUỐC GIA TP HỒ CHÍ MINH**

**TRƯỜNG ĐẠI HỌC BÁCH KHOA**

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**THIẾT KẾ VÀ PHÁT TRIỂN ỨNG DỤNG IOT**

**BÀI TẬP VỀ NHÀ: COLLECT RSSI**

**LỚP L01 --- HK232**

NGÀY NỘP: 03/03/2024

Giảng viên hướng dẫn: Thầy Võ Quế Sơn

|  |  |
| --- | --- |
| **Sinh viên thực hiện** | **Mã số sinh viên** |
| Châu Ngọc Tình | 2110588 |

*Thành phố Hồ Chí Minh – 2024*

# Đề bài

[Collect RSSI from neighbor nodes and choose the neigbor with strongest RSSI](https://lms.hcmut.edu.vn/mod/assign/view.php?id=155791)

# Bài làm

Link project: [contiki\_wsn/project/rime\_broadcast\_rssi at develop · Hnit3003/contiki\_wsn](https://github.com/Hnit3003/contiki_wsn/tree/develop/project/rime_broadcast_rssi)

## Code

A screenshot of a computer program

Description automatically generated

## Kết quả trong mô phỏng bằng tool cooja

### Giao diện kết quả khi chạy

A screenshot of a graph

Description automatically generatedA screenshot of a computer program

Description automatically generatedA screenshot of a computer program

Description automatically generatedA screenshot of a computer

Description automatically generatedA screen shot of a computer

Description automatically generatedA screenshot of a computer program

Description automatically generatedA screenshot of a computer

Description automatically generatedA screenshot of a computer

Description automatically generated

### Dữ liệu được in ra từ cửa sổ Mote ouput

00:00.331 ID:8 Rime started with address 8.0

00:00.341 ID:8 MAC 08:00:00:00:00:00:00:00 Contiki-3.x-3345-g32b5b17f6 started. Node id is set to 8.

00:00.350 ID:8 nullsec CSMA ContikiMAC, channel check rate 8 Hz, radio channel 26

00:00.352 ID:8 Starting 'Broadcast example'

00:00.495 ID:2 Rime started with address 2.0

00:00.504 ID:2 MAC 02:00:00:00:00:00:00:00 Contiki-3.x-3345-g32b5b17f6 started. Node id is set to 2.

00:00.509 ID:6 Rime started with address 6.0

00:00.513 ID:2 nullsec CSMA ContikiMAC, channel check rate 8 Hz, radio channel 26

00:00.515 ID:2 Starting 'Broadcast example'

00:00.519 ID:6 MAC 06:00:00:00:00:00:00:00 Contiki-3.x-3345-g32b5b17f6 started. Node id is set to 6.

00:00.528 ID:6 nullsec CSMA ContikiMAC, channel check rate 8 Hz, radio channel 26

00:00.530 ID:6 Starting 'Broadcast example'

00:00.607 ID:4 Rime started with address 4.0

00:00.616 ID:4 MAC 04:00:00:00:00:00:00:00 Contiki-3.x-3345-g32b5b17f6 started. Node id is set to 4.

00:00.625 ID:4 nullsec CSMA ContikiMAC, channel check rate 8 Hz, radio channel 26

00:00.627 ID:4 Starting 'Broadcast example'

00:00.641 ID:1 Rime started with address 1.0

00:00.650 ID:1 MAC 01:00:00:00:00:00:00:00 Contiki-3.x-3345-g32b5b17f6 started. Node id is set to 1.

00:00.659 ID:1 nullsec CSMA ContikiMAC, channel check rate 8 Hz, radio channel 26

00:00.660 ID:7 Rime started with address 7.0

00:00.661 ID:1 Starting 'Broadcast example'

00:00.670 ID:7 MAC 07:00:00:00:00:00:00:00 Contiki-3.x-3345-g32b5b17f6 started. Node id is set to 7.

00:00.679 ID:7 nullsec CSMA ContikiMAC, channel check rate 8 Hz, radio channel 26

00:00.681 ID:7 Starting 'Broadcast example'

00:00.815 ID:10 Rime started with address 10.0

00:00.825 ID:10 MAC 0a:00:00:00:00:00:00:00 Contiki-3.x-3345-g32b5b17f6 started. Node id is set to 10.

00:00.834 ID:10 nullsec CSMA ContikiMAC, channel check rate 8 Hz, radio channel 26

00:00.836 ID:10 Starting 'Broadcast example'

00:00.967 ID:9 Rime started with address 9.0

00:00.974 ID:5 Rime started with address 5.0

00:00.976 ID:9 MAC 09:00:00:00:00:00:00:00 Contiki-3.x-3345-g32b5b17f6 started. Node id is set to 9.

00:00.983 ID:5 MAC 05:00:00:00:00:00:00:00 Contiki-3.x-3345-g32b5b17f6 started. Node id is set to 5.

00:00.986 ID:9 nullsec CSMA ContikiMAC, channel check rate 8 Hz, radio channel 26

00:00.988 ID:9 Starting 'Broadcast example'

00:00.992 ID:5 nullsec CSMA ContikiMAC, channel check rate 8 Hz, radio channel 26

00:00.994 ID:5 Starting 'Broadcast example'

00:01.158 ID:3 Rime started with address 3.0

00:01.167 ID:3 MAC 03:00:00:00:00:00:00:00 Contiki-3.x-3345-g32b5b17f6 started. Node id is set to 3.

00:01.176 ID:3 nullsec CSMA ContikiMAC, channel check rate 8 Hz, radio channel 26

00:01.178 ID:3 Starting 'Broadcast example'

00:05.099 ID:9 broadcast message sent: packet[1]

00:05.101 ID:9 Max RSSI mote: 11 : -120

00:05.131 ID:4 broadcast message received from 9.0 [1 times]: 'ID:9 packet[1]' RSSI: -76

00:05.155 ID:6 broadcast message received from 9.0 [1 times]: 'ID:9 packet[1]' RSSI: -73

00:05.180 ID:3 broadcast message received from 9.0 [1 times]: 'ID:9 packet[1]' RSSI: -68

00:05.182 ID:7 broadcast message received from 9.0 [1 times]: 'ID:9 packet[1]' RSSI: -22

00:05.245 ID:5 broadcast message received from 9.0 [1 times]: 'ID:9 packet[1]' RSSI: -59

00:05.699 ID:5 broadcast message sent: packet[1]

00:05.701 ID:5 Max RSSI mote: 9 : -59

00:05.726 ID:8 broadcast message received from 5.0 [1 times]: 'ID:5 packet[1]' RSSI: -70

00:05.740 ID:9 broadcast message received from 5.0 [1 times]: 'ID:5 packet[1]' RSSI: -59

00:05.754 ID:4 broadcast message received from 5.0 [1 times]: 'ID:5 packet[1]' RSSI: -52

00:05.767 ID:2 broadcast message received from 5.0 [1 times]: 'ID:5 packet[1]' RSSI: -74

00:05.781 ID:6 broadcast message received from 5.0 [1 times]: 'ID:5 packet[1]' RSSI: -39

00:05.789 ID:1 broadcast message received from 5.0 [1 times]: 'ID:5 packet[1]' RSSI: -87

00:05.798 ID:10 broadcast message sent: packet[1]

00:05.800 ID:10 Max RSSI mote: 11 : -120

00:05.805 ID:3 broadcast message received from 5.0 [1 times]: 'ID:5 packet[1]' RSSI: -29

00:05.808 ID:7 broadcast message received from 5.0 [1 times]: 'ID:5 packet[1]' RSSI: -59

00:05.853 ID:8 broadcast message received from 10.0 [1 times]: 'ID:10 packet[1]' RSSI: -84

00:05.880 ID:4 broadcast message received from 10.0 [1 times]: 'ID:10 packet[1]' RSSI: -67

00:05.892 ID:2 broadcast message received from 10.0 [1 times]: 'ID:10 packet[1]' RSSI: -74

00:05.913 ID:1 broadcast message received from 10.0 [1 times]: 'ID:10 packet[1]' RSSI: -20

00:05.960 ID:1 broadcast message sent: packet[1]

00:05.962 ID:1 Max RSSI mote: 10 : -20

00:05.995 ID:5 broadcast message received from 1.0 [1 times]: 'ID:1 packet[1]' RSSI: -87

00:06.003 ID:4 broadcast message received from 1.0 [1 times]: 'ID:1 packet[1]' RSSI: -58

00:06.014 ID:2 broadcast message received from 1.0 [1 times]: 'ID:1 packet[1]' RSSI: -77

00:06.086 ID:6 broadcast message sent: packet[1]

00:06.088 ID:6 Max RSSI mote: 5 : -39

00:06.088 ID:10 broadcast message received from 1.0 [1 times]: 'ID:1 packet[1]' RSSI: -20

00:06.113 ID:9 broadcast message received from 6.0 [1 times]: 'ID:6 packet[1]' RSSI: -73

00:06.118 ID:5 broadcast message received from 6.0 [1 times]: 'ID:6 packet[1]' RSSI: -39

00:06.126 ID:4 broadcast message received from 6.0 [1 times]: 'ID:6 packet[1]' RSSI: -80

00:06.143 ID:2 broadcast message received from 6.0 [1 times]: 'ID:6 packet[1]' RSSI: -73

00:06.179 ID:3 broadcast message received from 6.0 [1 times]: 'ID:6 packet[1]' RSSI: -20

00:06.182 ID:7 broadcast message received from 6.0 [1 times]: 'ID:6 packet[1]' RSSI: -67

00:06.228 ID:8 broadcast message received from 6.0 [1 times]: 'ID:6 packet[1]' RSSI: -64

00:06.665 ID:2 broadcast message sent: packet[1]

00:06.667 ID:2 Max RSSI mote: 6 : -73

00:06.711 ID:10 broadcast message received from 2.0 [1 times]: 'ID:2 packet[1]' RSSI: -74

00:06.728 ID:8 broadcast message received from 2.0 [1 times]: 'ID:2 packet[1]' RSSI: -21

00:06.747 ID:5 broadcast message received from 2.0 [1 times]: 'ID:2 packet[1]' RSSI: -74

00:06.755 ID:4 broadcast message received from 2.0 [1 times]: 'ID:2 packet[1]' RSSI: -85

00:06.782 ID:6 broadcast message received from 2.0 [1 times]: 'ID:2 packet[1]' RSSI: -73

00:06.788 ID:1 broadcast message received from 2.0 [1 times]: 'ID:2 packet[1]' RSSI: -77

00:06.804 ID:3 broadcast message received from 2.0 [1 times]: 'ID:2 packet[1]' RSSI: -70

00:07.089 ID:7 broadcast message sent: packet[1]

00:07.091 ID:7 Max RSSI mote: 9 : -22

00:07.113 ID:9 broadcast message received from 7.0 [1 times]: 'ID:7 packet[1]' RSSI: -22

00:07.121 ID:5 broadcast message received from 7.0 [1 times]: 'ID:7 packet[1]' RSSI: -59

00:07.129 ID:4 broadcast message received from 7.0 [1 times]: 'ID:7 packet[1]' RSSI: -83

00:07.157 ID:6 broadcast message received from 7.0 [1 times]: 'ID:7 packet[1]' RSSI: -67

00:07.179 ID:3 broadcast message received from 7.0 [1 times]: 'ID:7 packet[1]' RSSI: -64

00:07.611 ID:8 broadcast message sent: packet[1]

00:07.613 ID:8 Max RSSI mote: 2 : -21

00:07.641 ID:2 broadcast message received from 8.0 [1 times]: 'ID:8 packet[1]' RSSI: -21

00:07.657 ID:6 broadcast message received from 8.0 [1 times]: 'ID:8 packet[1]' RSSI: -64

00:07.663 ID:1 broadcast message received from 8.0 [1 times]: 'ID:8 packet[1]' RSSI: -86

00:07.679 ID:3 broadcast message received from 8.0 [1 times]: 'ID:8 packet[1]' RSSI: -63

00:07.712 ID:10 broadcast message received from 8.0 [1 times]: 'ID:8 packet[1]' RSSI: -84

00:07.745 ID:5 broadcast message received from 8.0 [1 times]: 'ID:8 packet[1]' RSSI: -70

00:07.753 ID:4 broadcast message received from 8.0 [1 times]: 'ID:8 packet[1]' RSSI: -88

00:08.180 ID:3 broadcast message sent: packet[1]

00:08.182 ID:3 Max RSSI mote: 6 : -20

00:08.229 ID:8 broadcast message received from 3.0 [1 times]: 'ID:3 packet[1]' RSSI: -63

00:08.240 ID:9 broadcast message received from 3.0 [1 times]: 'ID:3 packet[1]' RSSI: -68

00:08.246 ID:5 broadcast message received from 3.0 [1 times]: 'ID:3 packet[1]' RSSI: -29

00:08.254 ID:4 broadcast message received from 3.0 [1 times]: 'ID:3 packet[1]' RSSI: -70

00:08.267 ID:2 broadcast message received from 3.0 [1 times]: 'ID:3 packet[1]' RSSI: -70

00:08.281 ID:6 broadcast message received from 3.0 [1 times]: 'ID:3 packet[1]' RSSI: -20

00:08.309 ID:7 broadcast message received from 3.0 [1 times]: 'ID:3 packet[1]' RSSI: -64

00:08.481 ID:4 broadcast message sent: packet[1]

00:08.482 ID:4 Max RSSI mote: 5 : -52

00:08.516 ID:2 broadcast message received from 4.0 [1 times]: 'ID:4 packet[1]' RSSI: -85

00:08.532 ID:6 broadcast message received from 4.0 [1 times]: 'ID:4 packet[1]' RSSI: -80

00:08.538 ID:1 broadcast message received from 4.0 [1 times]: 'ID:4 packet[1]' RSSI: -58

00:08.554 ID:3 broadcast message received from 4.0 [1 times]: 'ID:4 packet[1]' RSSI: -70

00:08.557 ID:7 broadcast message received from 4.0 [1 times]: 'ID:4 packet[1]' RSSI: -83

00:08.587 ID:10 broadcast message received from 4.0 [1 times]: 'ID:4 packet[1]' RSSI: -67

00:08.603 ID:8 broadcast message received from 4.0 [1 times]: 'ID:4 packet[1]' RSSI: -88

00:08.614 ID:9 broadcast message received from 4.0 [1 times]: 'ID:4 packet[1]' RSSI: -76

00:08.620 ID:5 broadcast message received from 4.0 [1 times]: 'ID:4 packet[1]' RSSI: -52

00:09.567 ID:9 broadcast message sent: packet[2]

00:09.569 ID:9 Max RSSI mote: 7 : -22

00:09.621 ID:5 broadcast message received from 9.0 [2 times]: 'ID:9 packet[2]' RSSI: -59

00:09.629 ID:4 broadcast message received from 9.0 [2 times]: 'ID:9 packet[2]' RSSI: -76

00:09.656 ID:6 broadcast message received from 9.0 [2 times]: 'ID:9 packet[2]' RSSI: -73

00:09.679 ID:3 broadcast message received from 9.0 [2 times]: 'ID:9 packet[2]' RSSI: -68

00:09.681 ID:7 broadcast message received from 9.0 [2 times]: 'ID:9 packet[2]' RSSI: -22

00:10.313 ID:6 broadcast message sent: packet[2]

00:10.314 ID:6 Max RSSI mote: 3 : -20

00:10.353 ID:8 broadcast message received from 6.0 [2 times]: 'ID:6 packet[2]' RSSI: -64

00:10.363 ID:9 broadcast message received from 6.0 [2 times]: 'ID:6 packet[2]' RSSI: -73

00:10.369 ID:5 broadcast message received from 6.0 [2 times]: 'ID:6 packet[2]' RSSI: -39

00:10.377 ID:4 broadcast message received from 6.0 [2 times]: 'ID:6 packet[2]' RSSI: -80

00:10.391 ID:2 broadcast message received from 6.0 [2 times]: 'ID:6 packet[2]' RSSI: -73

00:10.429 ID:3 broadcast message received from 6.0 [2 times]: 'ID:6 packet[2]' RSSI: -20

00:10.432 ID:7 broadcast message received from 6.0 [2 times]: 'ID:6 packet[2]' RSSI: -67

00:11.116 ID:1 broadcast message sent: packet[2]

00:11.118 ID:1 Max RSSI mote: 10 : -20

00:11.142 ID:2 broadcast message received from 1.0 [2 times]: 'ID:1 packet[2]' RSSI: -77

00:11.211 ID:10 broadcast message received from 1.0 [2 times]: 'ID:1 packet[2]' RSSI: -20

00:11.228 ID:8 broadcast message received from 1.0 [1 times]: 'ID:1 packet[2]' RSSI: -86

00:11.247 ID:5 broadcast message received from 1.0 [2 times]: 'ID:1 packet[2]' RSSI: -87

00:11.255 ID:4 broadcast message received from 1.0 [2 times]: 'ID:1 packet[2]' RSSI: -58

00:11.681 ID:10 broadcast message sent: packet[2]

00:11.683 ID:10 Max RSSI mote: 1 : -20

00:11.727 ID:8 broadcast message received from 10.0 [2 times]: 'ID:10 packet[2]' RSSI: -84

00:11.754 ID:4 broadcast message received from 10.0 [2 times]: 'ID:10 packet[2]' RSSI: -67

00:11.765 ID:2 broadcast message received from 10.0 [2 times]: 'ID:10 packet[2]' RSSI: -74

00:11.787 ID:1 broadcast message received from 10.0 [2 times]: 'ID:10 packet[2]' RSSI: -20

00:12.511 ID:5 broadcast message sent: packet[2]

00:12.513 ID:5 Max RSSI mote: 3 : -29

00:12.537 ID:1 broadcast message received from 5.0 [2 times]: 'ID:5 packet[2]' RSSI: -87

00:12.554 ID:3 broadcast message received from 5.0 [2 times]: 'ID:5 packet[2]' RSSI: -29

00:12.557 ID:7 broadcast message received from 5.0 [2 times]: 'ID:5 packet[2]' RSSI: -59

00:12.603 ID:8 broadcast message received from 5.0 [2 times]: 'ID:5 packet[2]' RSSI: -70

00:12.614 ID:9 broadcast message received from 5.0 [2 times]: 'ID:5 packet[2]' RSSI: -59

00:12.628 ID:4 broadcast message received from 5.0 [2 times]: 'ID:5 packet[2]' RSSI: -52

00:12.642 ID:2 broadcast message received from 5.0 [2 times]: 'ID:5 packet[2]' RSSI: -74

00:12.655 ID:6 broadcast message received from 5.0 [2 times]: 'ID:5 packet[2]' RSSI: -39

00:12.729 ID:7 broadcast message sent: packet[2]

00:12.731 ID:7 Max RSSI mote: 9 : -22

00:12.753 ID:4 broadcast message received from 7.0 [2 times]: 'ID:7 packet[2]' RSSI: -83

00:12.780 ID:6 broadcast message received from 7.0 [2 times]: 'ID:7 packet[2]' RSSI: -67

00:12.805 ID:3 broadcast message received from 7.0 [2 times]: 'ID:7 packet[2]' RSSI: -64

00:12.863 ID:9 broadcast message received from 7.0 [2 times]: 'ID:7 packet[2]' RSSI: -22

00:12.871 ID:5 broadcast message received from 7.0 [2 times]: 'ID:7 packet[2]' RSSI: -59

00:13.236 ID:2 broadcast message sent: packet[2]

00:13.237 ID:2 Max RSSI mote: 8 : -21

00:13.281 ID:6 broadcast message received from 2.0 [2 times]: 'ID:2 packet[2]' RSSI: -73

00:13.287 ID:1 broadcast message received from 2.0 [2 times]: 'ID:2 packet[2]' RSSI: -77

00:13.303 ID:3 broadcast message received from 2.0 [2 times]: 'ID:2 packet[2]' RSSI: -70

00:13.336 ID:10 broadcast message received from 2.0 [2 times]: 'ID:2 packet[2]' RSSI: -74

00:13.353 ID:8 broadcast message received from 2.0 [2 times]: 'ID:2 packet[2]' RSSI: -21

00:13.369 ID:5 broadcast message received from 2.0 [2 times]: 'ID:2 packet[2]' RSSI: -74

00:13.380 ID:4 broadcast message received from 2.0 [2 times]: 'ID:2 packet[2]' RSSI: -85

00:13.879 ID:4 broadcast message sent: packet[2]

00:13.881 ID:4 Max RSSI mote: 5 : -52

00:13.905 ID:6 broadcast message received from 4.0 [2 times]: 'ID:4 packet[2]' RSSI: -80

00:13.913 ID:1 broadcast message received from 4.0 [2 times]: 'ID:4 packet[2]' RSSI: -58

00:13.930 ID:3 broadcast message received from 4.0 [2 times]: 'ID:4 packet[2]' RSSI: -70

00:13.933 ID:7 broadcast message received from 4.0 [2 times]: 'ID:4 packet[2]' RSSI: -83

00:13.963 ID:10 broadcast message received from 4.0 [2 times]: 'ID:4 packet[2]' RSSI: -67

00:13.979 ID:8 broadcast message received from 4.0 [2 times]: 'ID:4 packet[2]' RSSI: -88

00:13.987 ID:9 broadcast message received from 4.0 [2 times]: 'ID:4 packet[2]' RSSI: -76

00:13.993 ID:5 broadcast message received from 4.0 [2 times]: 'ID:4 packet[2]' RSSI: -52

00:14.017 ID:2 broadcast message received from 4.0 [2 times]: 'ID:4 packet[2]' RSSI: -85

00:14.666 ID:8 broadcast message sent: packet[2]

00:14.668 ID:8 Max RSSI mote: 2 : -21

00:14.711 ID:10 broadcast message received from 8.0 [2 times]: 'ID:8 packet[2]' RSSI: -84

00:14.744 ID:5 broadcast message received from 8.0 [2 times]: 'ID:8 packet[2]' RSSI: -70

00:14.753 ID:4 broadcast message received from 8.0 [2 times]: 'ID:8 packet[2]' RSSI: -88

00:14.766 ID:2 broadcast message received from 8.0 [2 times]: 'ID:8 packet[2]' RSSI: -21

00:14.780 ID:6 broadcast message received from 8.0 [2 times]: 'ID:8 packet[2]' RSSI: -64

00:14.788 ID:1 broadcast message received from 8.0 [2 times]: 'ID:8 packet[2]' RSSI: -86

00:14.804 ID:3 broadcast message received from 8.0 [2 times]: 'ID:8 packet[2]' RSSI: -63

00:15.086 ID:6 broadcast message sent: packet[3]

00:15.088 ID:6 Max RSSI mote: 3 : -20

00:15.115 ID:9 broadcast message received from 6.0 [3 times]: 'ID:6 packet[3]' RSSI: -73

00:15.120 ID:5 broadcast message received from 6.0 [3 times]: 'ID:6 packet[3]' RSSI: -39

00:15.129 ID:4 broadcast message received from 6.0 [3 times]: 'ID:6 packet[3]' RSSI: -80

00:15.142 ID:2 broadcast message received from 6.0 [3 times]: 'ID:6 packet[3]' RSSI: -73

00:15.180 ID:7 broadcast message received from 6.0 [3 times]: 'ID:6 packet[3]' RSSI: -67

00:15.180 ID:3 broadcast message received from 6.0 [3 times]: 'ID:6 packet[3]' RSSI: -20

00:15.227 ID:8 broadcast message received from 6.0 [3 times]: 'ID:6 packet[3]' RSSI: -64

00:15.770 ID:9 broadcast message sent: packet[3]

00:15.772 ID:9 Max RSSI mote: 7 : -22

00:15.805 ID:3 broadcast message received from 9.0 [3 times]: 'ID:9 packet[3]' RSSI: -68

00:15.808 ID:7 broadcast message received from 9.0 [3 times]: 'ID:9 packet[3]' RSSI: -22

00:15.871 ID:5 broadcast message received from 9.0 [3 times]: 'ID:9 packet[3]' RSSI: -59

00:15.879 ID:4 broadcast message received from 9.0 [3 times]: 'ID:9 packet[3]' RSSI: -76

00:15.906 ID:6 broadcast message received from 9.0 [3 times]: 'ID:9 packet[3]' RSSI: -73

00:16.164 ID:3 broadcast message sent: packet[2]

00:16.166 ID:3 Max RSSI mote: 6 : -20

00:16.228 ID:8 broadcast message received from 3.0 [2 times]: 'ID:3 packet[2]' RSSI: -63

00:16.236 ID:9 broadcast message received from 3.0 [2 times]: 'ID:3 packet[2]' RSSI: -68

00:16.244 ID:5 broadcast message received from 3.0 [2 times]: 'ID:3 packet[2]' RSSI: -29

00:16.253 ID:4 broadcast message received from 3.0 [2 times]: 'ID:3 packet[2]' RSSI: -70

00:16.266 ID:2 broadcast message received from 3.0 [2 times]: 'ID:3 packet[2]' RSSI: -70

00:16.280 ID:6 broadcast message received from 3.0 [2 times]: 'ID:3 packet[2]' RSSI: -20

00:16.307 ID:7 broadcast message received from 3.0 [2 times]: 'ID:3 packet[2]' RSSI: -64

00:16.808 ID:5 broadcast message sent: packet[3]

00:16.810 ID:5 Max RSSI mote: 3 : -29

00:16.854 ID:8 broadcast message received from 5.0 [3 times]: 'ID:5 packet[3]' RSSI: -70

00:16.864 ID:9 broadcast message received from 5.0 [3 times]: 'ID:5 packet[3]' RSSI: -59

00:16.878 ID:4 broadcast message received from 5.0 [3 times]: 'ID:5 packet[3]' RSSI: -52

00:16.892 ID:2 broadcast message received from 5.0 [3 times]: 'ID:5 packet[3]' RSSI: -74

00:16.906 ID:6 broadcast message received from 5.0 [3 times]: 'ID:5 packet[3]' RSSI: -39

00:16.911 ID:1 broadcast message received from 5.0 [3 times]: 'ID:5 packet[3]' RSSI: -87

00:16.930 ID:3 broadcast message received from 5.0 [3 times]: 'ID:5 packet[3]' RSSI: -29

00:16.933 ID:7 broadcast message received from 5.0 [3 times]: 'ID:5 packet[3]' RSSI: -59

00:17.507 ID:1 broadcast message sent: packet[3]

00:17.509 ID:1 Max RSSI mote: 10 : -20

00:17.588 ID:10 broadcast message received from 1.0 [3 times]: 'ID:1 packet[3]' RSSI: -20

00:17.621 ID:5 broadcast message received from 1.0 [3 times]: 'ID:1 packet[3]' RSSI: -87

00:17.629 ID:4 broadcast message received from 1.0 [3 times]: 'ID:1 packet[3]' RSSI: -58

00:17.640 ID:2 broadcast message received from 1.0 [3 times]: 'ID:1 packet[3]' RSSI: -77

00:17.979 ID:7 broadcast message sent: packet[3]

00:17.981 ID:7 Max RSSI mote: 9 : -22

00:18.003 ID:4 broadcast message received from 7.0 [3 times]: 'ID:7 packet[3]' RSSI: -83

00:18.030 ID:6 broadcast message received from 7.0 [3 times]: 'ID:7 packet[3]' RSSI: -67

00:18.055 ID:3 broadcast message received from 7.0 [3 times]: 'ID:7 packet[3]' RSSI: -64

00:18.115 ID:9 broadcast message received from 7.0 [3 times]: 'ID:7 packet[3]' RSSI: -22

00:18.118 ID:5 broadcast message received from 7.0 [3 times]: 'ID:7 packet[3]' RSSI: -59

00:18.361 ID:10 broadcast message sent: packet[3]

00:18.362 ID:10 Max RSSI mote: 1 : -20

00:18.392 ID:2 broadcast message received from 10.0 [3 times]: 'ID:10 packet[3]' RSSI: -74

00:18.412 ID:1 broadcast message received from 10.0 [3 times]: 'ID:10 packet[3]' RSSI: -20

00:18.477 ID:8 broadcast message received from 10.0 [3 times]: 'ID:10 packet[3]' RSSI: -84

00:18.505 ID:4 broadcast message received from 10.0 [3 times]: 'ID:10 packet[3]' RSSI: -67

00:19.836 ID:6 broadcast message sent: packet[4]

00:19.838 ID:6 Max RSSI mote: 3 : -20

00:19.865 ID:9 broadcast message received from 6.0 [4 times]: 'ID:6 packet[4]' RSSI: -73

00:19.870 ID:5 broadcast message received from 6.0 [4 times]: 'ID:6 packet[4]' RSSI: -39

00:19.879 ID:4 broadcast message received from 6.0 [4 times]: 'ID:6 packet[4]' RSSI: -80

00:19.892 ID:2 broadcast message received from 6.0 [4 times]: 'ID:6 packet[4]' RSSI: -73

00:19.930 ID:7 broadcast message received from 6.0 [4 times]: 'ID:6 packet[4]' RSSI: -67

00:19.930 ID:3 broadcast message received from 6.0 [4 times]: 'ID:6 packet[4]' RSSI: -20

00:19.977 ID:8 broadcast message received from 6.0 [4 times]: 'ID:6 packet[4]' RSSI: -64

00:20.103 ID:2 broadcast message sent: packet[3]

00:20.104 ID:2 Max RSSI mote: 8 : -21

00:20.129 ID:4 broadcast message received from 2.0 [3 times]: 'ID:2 packet[3]' RSSI: -85

00:20.156 ID:6 broadcast message received from 2.0 [3 times]: 'ID:2 packet[3]' RSSI: -73

00:20.162 ID:1 broadcast message received from 2.0 [3 times]: 'ID:2 packet[3]' RSSI: -77

00:20.178 ID:3 broadcast message received from 2.0 [3 times]: 'ID:2 packet[3]' RSSI: -70

00:20.211 ID:10 broadcast message received from 2.0 [3 times]: 'ID:2 packet[3]' RSSI: -74

00:20.227 ID:8 broadcast message received from 2.0 [3 times]: 'ID:2 packet[3]' RSSI: -21

00:20.247 ID:5 broadcast message received from 2.0 [3 times]: 'ID:2 packet[3]' RSSI: -74

00:20.357 ID:9 broadcast message sent: packet[4]

00:20.359 ID:9 Max RSSI mote: 7 : -22

00:20.392 ID:8 broadcast message sent: packet[3]

00:20.394 ID:8 Max RSSI mote: 2 : -21

00:20.405 ID:6 broadcast message received from 9.0 [4 times]: 'ID:9 packet[4]' RSSI: -73

00:20.507 ID:4 broadcast message received from 8.0 [3 times]: 'ID:8 packet[3]' RSSI: -88

00:20.518 ID:2 broadcast message received from 8.0 [3 times]: 'ID:8 packet[3]' RSSI: -21

00:20.531 ID:6 broadcast message received from 8.0 [3 times]: 'ID:8 packet[3]' RSSI: -64

00:20.537 ID:1 broadcast message received from 8.0 [3 times]: 'ID:8 packet[3]' RSSI: -86

00:21.614 ID:5 broadcast message sent: packet[4]

00:21.616 ID:5 Max RSSI mote: 3 : -29

00:21.640 ID:2 broadcast message received from 5.0 [4 times]: 'ID:5 packet[4]' RSSI: -74

00:21.656 ID:6 broadcast message received from 5.0 [4 times]: 'ID:5 packet[4]' RSSI: -39

00:21.662 ID:1 broadcast message received from 5.0 [4 times]: 'ID:5 packet[4]' RSSI: -87

00:21.678 ID:3 broadcast message received from 5.0 [4 times]: 'ID:5 packet[4]' RSSI: -29

00:21.681 ID:7 broadcast message received from 5.0 [4 times]: 'ID:5 packet[4]' RSSI: -59

00:21.699 ID:4 broadcast message sent: packet[3]

00:21.701 ID:4 Max RSSI mote: 5 : -52

00:21.728 ID:8 broadcast message received from 5.0 [4 times]: 'ID:5 packet[4]' RSSI: -70

00:21.738 ID:9 broadcast message received from 5.0 [4 times]: 'ID:5 packet[4]' RSSI: -59

00:21.752 ID:4 broadcast message received from 5.0 [4 times]: 'ID:5 packet[4]' RSSI: -52

00:21.854 ID:8 broadcast message received from 4.0 [3 times]: 'ID:4 packet[3]' RSSI: -88

00:21.862 ID:9 broadcast message received from 4.0 [3 times]: 'ID:4 packet[3]' RSSI: -76

00:21.868 ID:5 broadcast message received from 4.0 [3 times]: 'ID:4 packet[3]' RSSI: -52

00:21.892 ID:2 broadcast message received from 4.0 [3 times]: 'ID:4 packet[3]' RSSI: -85

00:21.906 ID:6 broadcast message received from 4.0 [3 times]: 'ID:4 packet[3]' RSSI: -80

00:21.911 ID:1 broadcast message received from 4.0 [3 times]: 'ID:4 packet[3]' RSSI: -58

00:21.931 ID:7 broadcast message received from 4.0 [3 times]: 'ID:4 packet[3]' RSSI: -83

00:21.931 ID:3 broadcast message received from 4.0 [3 times]: 'ID:4 packet[3]' RSSI: -70

00:21.961 ID:10 broadcast message received from 4.0 [3 times]: 'ID:4 packet[3]' RSSI: -67

00:22.531 ID:1 broadcast message sent: packet[4]

00:22.533 ID:1 Max RSSI mote: 10 : -20

00:22.587 ID:10 broadcast message received from 1.0 [4 times]: 'ID:1 packet[4]' RSSI: -20

00:22.604 ID:8 broadcast message received from 1.0 [2 times]: 'ID:1 packet[4]' RSSI: -86

00:22.618 ID:5 broadcast message received from 1.0 [4 times]: 'ID:1 packet[4]' RSSI: -87

00:22.629 ID:4 broadcast message received from 1.0 [4 times]: 'ID:1 packet[4]' RSSI: -58

00:22.642 ID:2 broadcast message received from 1.0 [4 times]: 'ID:1 packet[4]' RSSI: -77

00:22.675 ID:7 broadcast message sent: packet[4]

00:22.677 ID:7 Max RSSI mote: 9 : -22

00:22.737 ID:9 broadcast message received from 7.0 [4 times]: 'ID:7 packet[4]' RSSI: -22

00:22.743 ID:5 broadcast message received from 7.0 [4 times]: 'ID:7 packet[4]' RSSI: -59

00:22.754 ID:4 broadcast message received from 7.0 [4 times]: 'ID:7 packet[4]' RSSI: -83

00:22.781 ID:6 broadcast message received from 7.0 [4 times]: 'ID:7 packet[4]' RSSI: -67

00:22.805 ID:3 broadcast message received from 7.0 [4 times]: 'ID:7 packet[4]' RSSI: -64

00:22.892 ID:10 broadcast message sent: packet[4]

00:22.894 ID:10 Max RSSI mote: 1 : -20

00:22.978 ID:8 broadcast message received from 10.0 [4 times]: 'ID:10 packet[4]' RSSI: -84

00:23.003 ID:4 broadcast message received from 10.0 [4 times]: 'ID:10 packet[4]' RSSI: -67

00:23.017 ID:2 broadcast message received from 10.0 [4 times]: 'ID:10 packet[4]' RSSI: -74

00:23.038 ID:1 broadcast message received from 10.0 [4 times]: 'ID:10 packet[4]' RSSI: -20

00:23.508 ID:3 broadcast message sent: packet[3]

00:23.510 ID:3 Max RSSI mote: 6 : -20

00:23.532 ID:6 broadcast message received from 3.0 [3 times]: 'ID:3 packet[3]' RSSI: -20

00:23.556 ID:7 broadcast message received from 3.0 [3 times]: 'ID:3 packet[3]' RSSI: -64

00:23.603 ID:8 broadcast message received from 3.0 [3 times]: 'ID:3 packet[3]' RSSI: -63

00:23.614 ID:9 broadcast message received from 3.0 [3 times]: 'ID:3 packet[3]' RSSI: -68

00:23.619 ID:5 broadcast message received from 3.0 [3 times]: 'ID:3 packet[3]' RSSI: -29

00:23.628 ID:4 broadcast message received from 3.0 [3 times]: 'ID:3 packet[3]' RSSI: -70

00:23.641 ID:2 broadcast message received from 3.0 [3 times]: 'ID:3 packet[3]' RSSI: -70

00:24.669 ID:9 broadcast message sent: packet[5]

00:24.670 ID:9 Max RSSI mote: 7 : -22

00:24.744 ID:5 broadcast message received from 9.0 [4 times]: 'ID:9 packet[5]' RSSI: -59

00:24.753 ID:4 broadcast message received from 9.0 [4 times]: 'ID:9 packet[5]' RSSI: -76

00:24.780 ID:6 broadcast message received from 9.0 [5 times]: 'ID:9 packet[5]' RSSI: -73

00:24.805 ID:3 broadcast message received from 9.0 [4 times]: 'ID:9 packet[5]' RSSI: -68

00:24.807 ID:7 broadcast message received from 9.0 [4 times]: 'ID:9 packet[5]' RSSI: -22

00:25.033 ID:8 broadcast message sent: packet[4]

00:25.035 ID:8 Max RSSI mote: 2 : -21

00:25.071 ID:2 broadcast message sent: packet[4]

00:25.073 ID:2 Max RSSI mote: 8 : -21

00:25.086 ID:10 broadcast message received from 8.0 [3 times]: 'ID:8 packet[4]' RSSI: -84

00:25.120 ID:5 broadcast message received from 8.0 [3 times]: 'ID:8 packet[4]' RSSI: -70

00:25.128 ID:4 broadcast message received from 8.0 [4 times]: 'ID:8 packet[4]' RSSI: -88

00:25.139 ID:2 broadcast message received from 8.0 [4 times]: 'ID:8 packet[4]' RSSI: -21

00:25.155 ID:6 broadcast message received from 8.0 [4 times]: 'ID:8 packet[4]' RSSI: -64

00:25.163 ID:1 broadcast message received from 8.0 [4 times]: 'ID:8 packet[4]' RSSI: -86

00:25.177 ID:3 broadcast message received from 8.0 [3 times]: 'ID:8 packet[4]' RSSI: -63

00:25.406 ID:6 broadcast message received from 2.0 [4 times]: 'ID:2 packet[4]' RSSI: -73

00:25.412 ID:1 broadcast message received from 2.0 [4 times]: 'ID:2 packet[4]' RSSI: -77

00:25.428 ID:3 broadcast message received from 2.0 [4 times]: 'ID:2 packet[4]' RSSI: -70

00:25.461 ID:10 broadcast message received from 2.0 [4 times]: 'ID:2 packet[4]' RSSI: -74

00:25.478 ID:8 broadcast message received from 2.0 [4 times]: 'ID:2 packet[4]' RSSI: -21

00:25.497 ID:5 broadcast message received from 2.0 [4 times]: 'ID:2 packet[4]' RSSI: -74

00:25.505 ID:4 broadcast message received from 2.0 [4 times]: 'ID:2 packet[4]' RSSI: -85

00:25.769 ID:5 broadcast message sent: packet[5]

00:25.771 ID:5 Max RSSI mote: 3 : -29

00:25.804 ID:3 broadcast message received from 5.0 [5 times]: 'ID:5 packet[5]' RSSI: -29

00:25.806 ID:7 broadcast message received from 5.0 [5 times]: 'ID:5 packet[5]' RSSI: -59

00:25.853 ID:8 broadcast message received from 5.0 [5 times]: 'ID:5 packet[5]' RSSI: -70

00:25.861 ID:9 broadcast message received from 5.0 [5 times]: 'ID:5 packet[5]' RSSI: -59

00:25.878 ID:4 broadcast message received from 5.0 [5 times]: 'ID:5 packet[5]' RSSI: -52

00:25.891 ID:2 broadcast message received from 5.0 [5 times]: 'ID:5 packet[5]' RSSI: -74

00:25.905 ID:6 broadcast message received from 5.0 [5 times]: 'ID:5 packet[5]' RSSI: -39

00:25.913 ID:1 broadcast message received from 5.0 [5 times]: 'ID:5 packet[5]' RSSI: -87

00:26.031 ID:6 broadcast message sent: packet[5]

00:26.033 ID:6 Max RSSI mote: 3 : -20

00:26.055 ID:3 broadcast message received from 6.0 [5 times]: 'ID:6 packet[5]' RSSI: -20

00:26.058 ID:7 broadcast message received from 6.0 [5 times]: 'ID:6 packet[5]' RSSI: -67

00:26.104 ID:8 broadcast message received from 6.0 [5 times]: 'ID:6 packet[5]' RSSI: -64

00:26.112 ID:9 broadcast message received from 6.0 [5 times]: 'ID:6 packet[5]' RSSI: -73

00:26.118 ID:5 broadcast message received from 6.0 [5 times]: 'ID:6 packet[5]' RSSI: -39

00:26.126 ID:4 broadcast message received from 6.0 [5 times]: 'ID:6 packet[5]' RSSI: -80

00:26.142 ID:2 broadcast message received from 6.0 [5 times]: 'ID:6 packet[5]' RSSI: -73

00:26.531 ID:1 broadcast message sent: packet[5]

00:26.533 ID:1 Max RSSI mote: 10 : -20

00:26.559 ID:4 broadcast message sent: packet[4]

00:26.560 ID:4 Max RSSI mote: 5 : -52

00:26.587 ID:10 broadcast message received from 1.0 [5 times]: 'ID:1 packet[5]' RSSI: -20

00:26.604 ID:8 broadcast message received from 1.0 [3 times]: 'ID:1 packet[5]' RSSI: -86

00:26.618 ID:5 broadcast message received from 1.0 [5 times]: 'ID:1 packet[5]' RSSI: -87

00:26.629 ID:4 broadcast message received from 1.0 [5 times]: 'ID:1 packet[5]' RSSI: -58

00:26.642 ID:2 broadcast message received from 1.0 [5 times]: 'ID:1 packet[5]' RSSI: -77

00:26.909 ID:7 broadcast message sent: packet[5]

00:26.911 ID:7 Max RSSI mote: 9 : -22

00:26.990 ID:9 broadcast message received from 7.0 [5 times]: 'ID:7 packet[5]' RSSI: -22

00:26.994 ID:5 broadcast message received from 7.0 [5 times]: 'ID:7 packet[5]' RSSI: -59

00:27.004 ID:4 broadcast message received from 7.0 [5 times]: 'ID:7 packet[5]' RSSI: -83

00:27.028 ID:6 broadcast message received from 7.0 [5 times]: 'ID:7 packet[5]' RSSI: -67

00:27.055 ID:3 broadcast message received from 7.0 [5 times]: 'ID:7 packet[5]' RSSI: -64

00:27.161 ID:1 broadcast message received from 4.0 [4 times]: 'ID:4 packet[4]' RSSI: -58

00:27.180 ID:3 broadcast message received from 4.0 [4 times]: 'ID:4 packet[4]' RSSI: -70

00:27.183 ID:7 broadcast message received from 4.0 [4 times]: 'ID:4 packet[4]' RSSI: -83

00:27.213 ID:10 broadcast message received from 4.0 [4 times]: 'ID:4 packet[4]' RSSI: -67

00:27.227 ID:8 broadcast message received from 4.0 [4 times]: 'ID:4 packet[4]' RSSI: -88

00:27.238 ID:9 broadcast message received from 4.0 [4 times]: 'ID:4 packet[4]' RSSI: -76

00:27.246 ID:5 broadcast message received from 4.0 [4 times]: 'ID:4 packet[4]' RSSI: -52

00:27.265 ID:2 broadcast message received from 4.0 [4 times]: 'ID:4 packet[4]' RSSI: -85

00:27.282 ID:6 broadcast message received from 4.0 [4 times]: 'ID:4 packet[4]' RSSI: -80