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Publication Date

1998-10-01

CALIFORNIA PATH PROGRAM
INSTITUTE OF TRANSPORTATION STUDIES
UNIVERSITY OF CALIFORNIA, BERKELEY

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California PATH Working Paper
UCB-ITS-PWP-98-27

This work was performed as part of the California PATH Program of the University of California, in cooperation with the State of California Business, Transportation, and Housing Agency, Department of Transportation; and the United States Department Transportation, Federal Highway Administration.

Report for RTA 65V3 13-10

October 1998

ISSN 1055-1417

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Abstract

Spread spectrum radio technology, in addition to being widely used in military applications, holds enormous promise for commercial applications. The City of Los Angeles is investigating the use of spread spectrum radio networks *(SSRN) for traffic monitoring and* control. *The* University of *Southern California (USC) is an independent evaluator of the project. This report presents the results obtained by USC in the evaluation of the full deployment of 100 radios in the Los Angeles Department of Transportation (LADOT) SSRN project.*

Keywords: Spread Spectrum, Traffic Surveillance, Traffic Control

Executive Summary

The use of a spread spectrum radio network (SSRN) as an alternative to hard-wired communications between field equipment and the City of Los Angeles's Automated Traffic Surveillance and Control (ATSAC) system has been investigated. The aim of using SSRN is to reduce construction costs, construction time and future plant maintenance costs. Sponsors of the project include The Federal Highway Administration (FHWA), the City of Los Angeles (LA) and Caltrans. The contractors are JHK & Associates and Hughes. The University of Southern California (USC), being a California PATH partner, is the independent evaluator of the project, who is responsible for the design of the evaluation framework and the performance of the evaluation.

A field operational test (FOT) was conducted to test and evaluate the applicability of spread spectrum radio network communication in traffic control. Specific goals of the FOT include:

1. To implement the Spread Spectrum Radio Network (SSRN) for the Mar Vista area of Los Angeles for traffic signal interconnect,
2. To quantify the cost effectiveness, reliability, and maintainability of SSRN compared with conventional interconnection technologies,
3. To compare different communication channels and speeds with the existing ATSAC communication protocol,
4. To stimulate and support the development of the Intelligent Transportation Systems (ITS) products for the growing competitive market in the Transportation field.

An SSRN is composed of a number of cells, each of which has a headend radio and several remote radios. The implementation in this project is divided into two phases: the preliminary deployment, which consists of 17 traffic signals in two cells of the Mar Vista area of Los Angeles, and the full deployment, which consists of 100 traffic signals in the same area. Based on the Evaluation Plan formulated by USC and approved by all Evaluation Oversight Team (EOT) members, USC performed various evaluation tasks in both phases.

The findings of the evaluation tasks indicate that the overall performance of the system is satisfactory. We are therefore confident that spread spectrum technology is suitable for traffic control and monitoring applications. Compared to a hard-wired system, spread spectrum radio network has the added advantages of reduced construction time, lower construction and future plant maintenance costs.

1 Introduction

The City of Los Angeles has been seeking an alternative to hard-wired communications between field equipment (intersection controllers, changeable message signs, highway advisory radio, etc.) and the City's Automated Traffic Surveillance and Control (ATSAC) system. Different wireless communications alternatives are available, including narrow-band radio, microwave in a variety of bands, infrared transmission and spread spectrum radio. Given the limitations of the available spectrum, limited coverage requirements and the need for robust communications, spread spectrum transmission was proposed. Specifically, a store and forward packet radio network was proposed to meet the high channel efficiency, both in data density and channel access, and high reliability requirements.

The City of Los Angeles's ATSAC system is currently operational and controlling over 2000 intersections via hard-wired links. Nearly 2000 additional intersections need to be interconnected to the ATSAC system. The use of a spread spectrum radio network (SSRN) for traffic signal interconnect is aimed at reducing construction costs, construction time, and future plant maintenance costs. Basically, there are two types of communications between intersection controllers and the ATSAC center: (a) once-per-second communication, including the "Urban Traffic Control System" (UTCS) commands and response messages, and (b) auxiliary communication including upload/download messages and time broadcast messages. These are all short messages (less than 25 bytes).

A Spread Spectrum Radio Network (SSRN) is composed of a number of cells, each of which has a headend radio and several remote radios. These radios are connected together via radio links which are configured based on a tree architecture (see Figure 1). The headend radio is hard-wired to the control center and each remote radio is hard-wired to an intersection controller. Messages from an intersection controller are passed to its corresponding radio which are then relayed to the headend via other intermediate radios using the store and forward protocol. Under normal message traffic load consisting of both once-per-second and auxiliary communications, a cell can support 32 intersection controllers. Each cell can operate on one of the seven frequency bands starting at 902 MHz with 3 MHz spacing approximately. Normally, a cell is configured automatically for providing end-to-end wireless connectivity between the headend and every remote radio. Reconfiguration within a cell is triggered whenever one or more failed links are detected.

A field operational test (FOT) was conducted to study the feasibility of this radio network communication as a means of extending the monitoring as well as control of traffic signals in the City. Earlier, evaluation was performed on a preliminary deployment of 17 radios in two cells. The radio locations are depicted in Figure 2 and the results of the preliminary deployment are documented in [9]. As part of the full deployment, 100 traffic signals in the Mar Vista area of Los Angeles were integrated with the ATSAC system using this new radio network. These 100 intersections were grouped to form four cells - 26 in Cell 1, 27 in Cell 2,

22 in Cell 3 and 25 in Cell 4, which are shown in Figure 3[1].

The traffic signal information is transmitted between the ATSAC Control Center and the headends of each cell via hard-wired links.

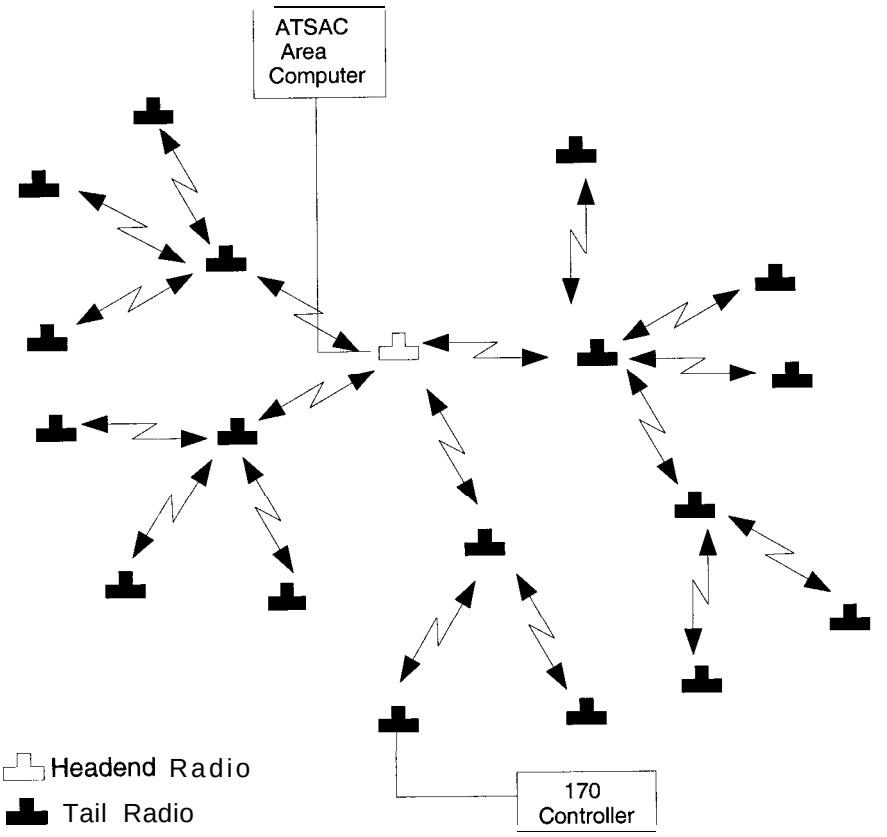

Figure 1: Radio connectivity in a cell

[1]In the figure, filled boxes are part of the full deployment whereas unfilled boxes are not.

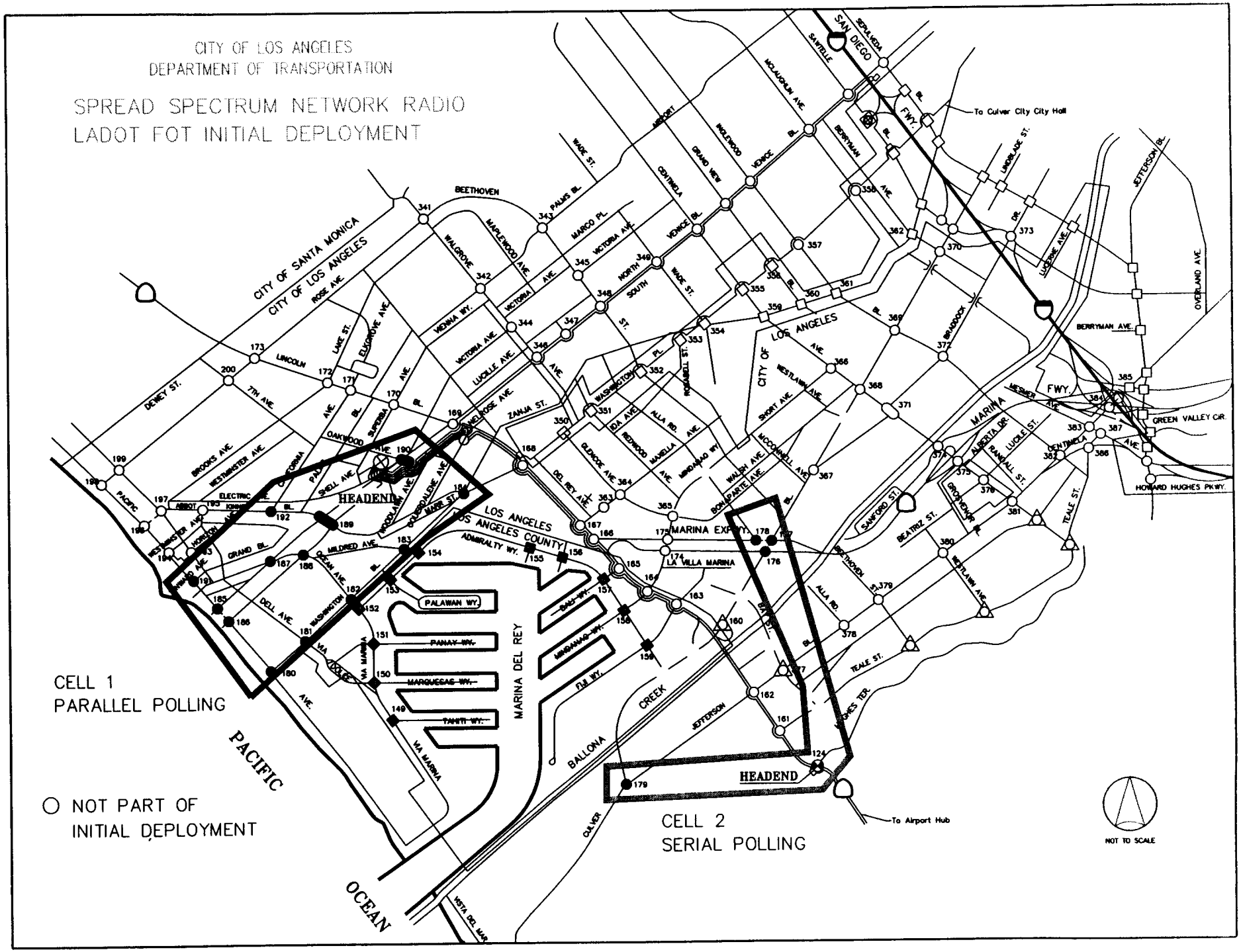

Figure 2: Area Map of the preliminary deployment

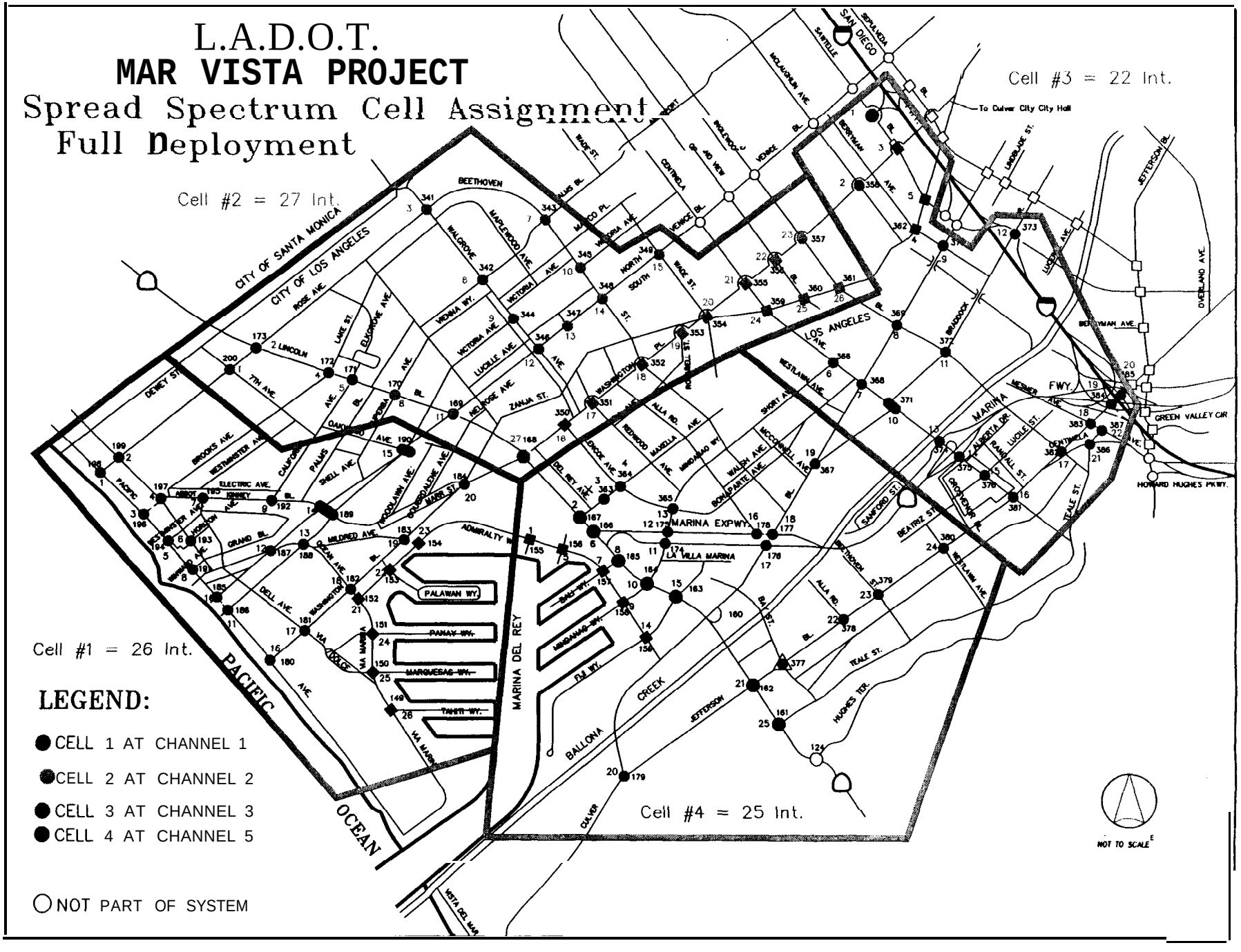

Figure 3: Area Map of the full deployment

The Federal Highway Administration (FHWA), the City of Los Angeles (LA) and Caltrans are sponsors of the project, while JHK & Associates and Hughes are the contractors. The University of Southern California (USC), as a California PATH partner, is the independent evaluator to perform the project evaluation. USC was responsible for the design of the evaluation framework and the performance of the evaluation.

The rest of this report is organized as follows. Section 2 gives an overview of the current system and describes the proposed spread spectrum radio interconnect system. Section 3 describes the evaluation tasks performed by USC and the results obtained therein. Finally, Section 4 concludes the report.

2 System Description

2.1 Spread Spectrum Modulation

Spread spectrum technology relies on processing an already modulated waveform so that the resulting waveform has certain desirable characteristics. These characteristics include :

- Greater tolerance to interference/jamming
- Multiple access by the usage of different *codes* as in Code Division Multiple Access (CDMA)

There are two kinds of spread spectrum modulation schemes [1, 5, 7] :

- direct sequence (DS)
- frequency hopping (FH)

Block diagrams for DS and FH systems are shown in Figures 4 and 5, respectively. As seen in the figures, DS systems use Amplitude Modulation (AM) schemes such as Binary Phase Shift Keying (BPSK) or Quadrature Phase Shift Keying (QPSK); while FH systems use Frequency Modulation (FM) schemes such as Binary Frequency Shift Keying (BFSK), Minimum Shift Keying (MSK) or m-ary Frequency Shift Keying (FSK) for the initial modulation. BPSK and BFSK are the most widely used modulation schemes in DS and FH systems, respectively [7].

In DS systems, the DS modulation occurs by multiplying the BPSK modulated signal with a high bit-rate pseudo-random noise (PN) sequence, $g(t)$ (which is also referred to as a code). Following the notation used in [7], let the bit rate of the input bit sequence $d(t)$ be f_b, and that of $g(t)$ be f_c. We refer to f_b as the *bit rate*, to f_c as the *chip rate* and to the ratio $f_c/f_b > 1$ as the *spreading factor* or the *processing gain.* The bandwidth of the

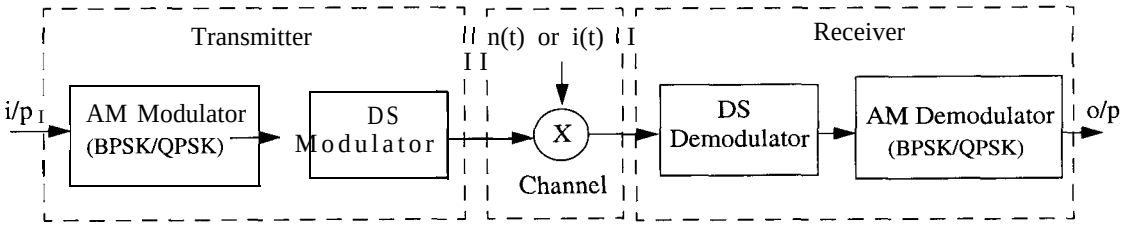

Figure 4: Direct sequence spread spectrum system

BPSK modulated signal is 2 x f_b, while that of the DS modulated signal is 2 x f_c. Hence, the bandwidth of the DS modulated signal is greater than that of the BPSK modulated signal by a value equal to the spreading factor. The total power of the two signals, however, is the same.

Such a spreading of the bandwidth does not produce any benefits when thermal noise is considered, but has significant advantages in the presence of interference. Let a single-tone signal with a power P_j and frequency equaling the center frequency of the DS spread spectrum signal be introduced into the system. It can be shown [7] that the effective jamming power of this signal on the spread spectrum signal is reduced by a factor equaling the processing gain, i.e., the effective jamming power equals $P_j/(f_c/f_b)$.

In FH systems, the available bandwidth is divided into a number of channels (typically 100 to 500). Time is slotted and in any time slot the BFSK modulation is onto the center frequency of a particular channel. The choice of channels for BFSK modulation in a time slot depends on a PN sequence. In other words, depending on the PN sequence, the frequency for BFSK modulation hops from one time slot to another. When the bit duration exceeds the time slot duration, the system is referred to as a fast FH system. Similarly, in a slow FH system, multiple bits occupy a time slot. An advantage of an FH system is that if the interference is present in a certain channel, the particular channel with the interference is encountered only for a certain fraction of the total time.

In this project, DS spread spectrum radio technology is employed, The primary modulation scheme is BPSK and the spreading factor is 15.

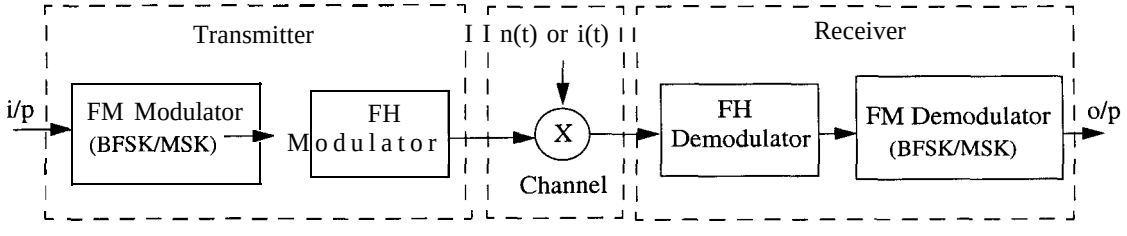

Figure 5: Frequency hopping spread spectrum system

2.2 ATSAC System

The Los Angeles Automated Traffic Surveillance and Control (ATSAC) system [6] was started in June 1984 in order to facilitate state-of-the-art monitoring and control of traffic intersections. The ATSAC system architecture is a hierarchical architecture and is illustrated in Figure 6 (redrawn from [6]). Since the uniform use of one controller type simplifies implementation, a *Type 170* controller is used at each traffic intersection. The 170 controller is responsible for monitoring (determines number of passing cars using loop detectors, determines status of signals etc.) as well as controlling (determines when signals need to be changed) traffic flow. Data to/from several controllers is multiplexed prior to being transmitted on a fiber-optic trunk. The remote mux connects to several 170 controllers while the local mux connects to several area computers. Each area computer has several (up to 16) front end processors or *peripheral processing units* (PPUs), each of which can handle up to 64 intersections. The data of several area computers is processed by a *supervisory computer* prior to being displayed.

An evaluation that was performed on the initial implementation of the ATSAC system in the Coliseum area concluded that the system had great benefits [6]:

- stops reduced by 35%
- intersection delay reduced by 20%
- overall travel time reduced by 13%
- air emissions reduced by 10%

2.3 System Operation and Design Issues

Prior to the proposed use of radio networks for traffic monitoring and control, communication between ATSAC (central) and several individual intersections existed by wireline. The use of radio networks changes the medium of communication from wireline to wireless. To ensure that the new wireless system will co-exist with the existing wireline system, it was decided that the wireless system be designed around the existing system so that any modifications to the existing system are kept to a minimum.

The radio interface is one of two kinds depending on the radio type :

- HE-PPU interface between a headend (HE) radio and the PPU
- REMOTE-170 interface between a slave (REMOTE) radio and the 170 controller

Each of these interfaces is an RS-232 interface and allows two-way communication.

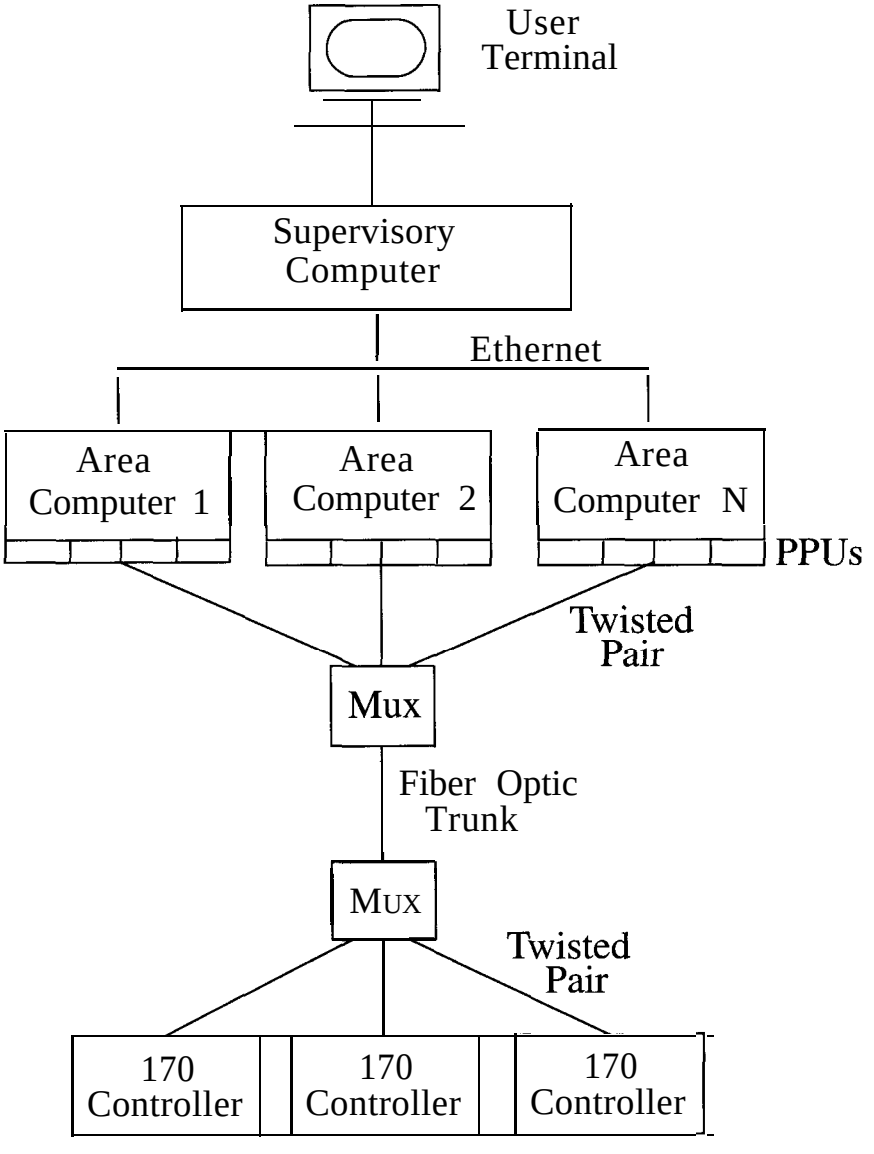

Figure 6: ATSAC system architecture

In the existing wireline system, a PPU can support up to 64 intersections. In order to keep this number unchanged, it was decided that a PPU would support two cells, each of which would contain not more than 32 radios. The existing PPUs are distinguished from the SSNR PPUs by their board *type* which is present in a configuration file that is read at system startup. The communication tasks that need to be loaded by the PPU depend on its type.

At the beginning of each polling cycle, the PPU initiates communication with the HE by transferring a *command block* to it. The command block contains the *command message packet* for each slave radio. The format of the command block and command message packet are indicated in Figures 7(a) and (b) respectively. The *command message* within each command message packet can be one of seven types :

- controller command
- upload
- download
- standby timing plan download
- standby event download
- clock update
- time broadcast

These message types have been chosen to be identical to those used in the existing wireline system so that the 170 controller interface need not be modified.

For a detailed description of the PPU and the various message formats, the reader is referred to [3].

2.4 Network Operation

Each cell has one headend and up to 31 remotes. Each radio in a cell needs to be configured with a unique address (in the cell) which is also the address of the host to which it attaches. When the headend is powered on, network configuration takes place to provide end-to-end connectivity between the headend and each remote that is powered on. A remote that is introduced into the system (by powering on) results in a network reconfiguration. Network reconfiguration also takes place when the quality of an end-to-end link falls below a threshold. If an alternative path exists to the remote, it is chosen; otherwise, the remote may leave the network until a good path is found.

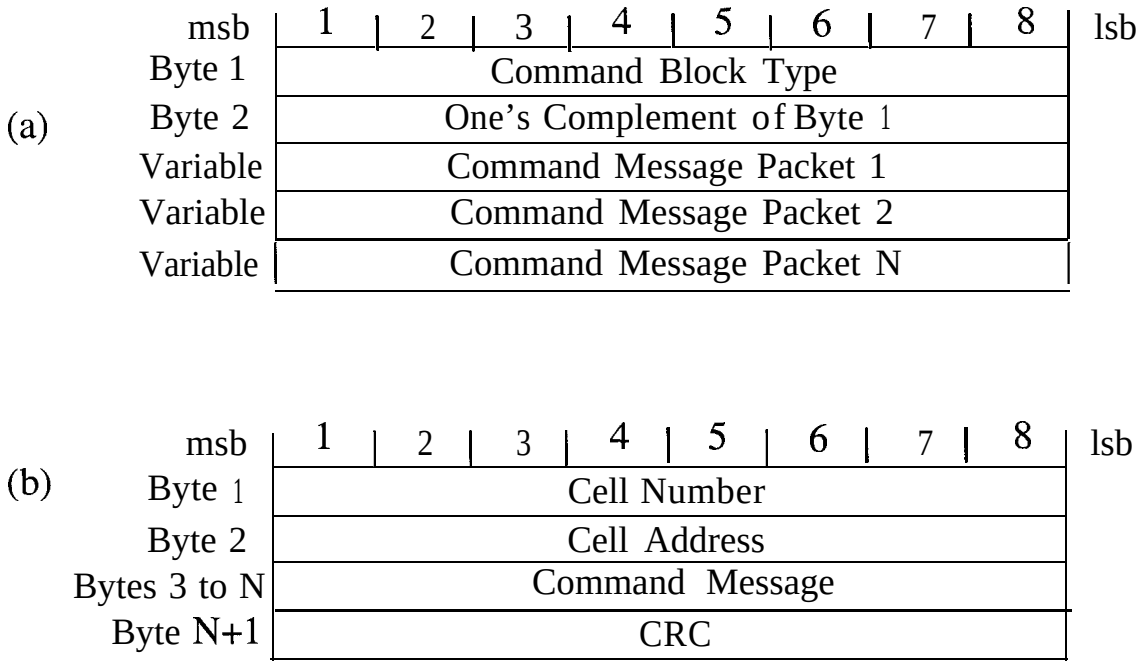

Figure 7: Format for (a) command block (b) command message packet

Every radio in the system uses the same PN code for DS modulation. Since radios in the same cell use the same frequency, simultaneous transmission by more than one radio would result in a collision. The multiple access scheme used by the radios in a cell is packet switched Time Division Multiple Access (TDMA).

We noted earlier that at the beginning of each polling cycle, the PPU initiates communication across the HE-PPU interface in order to transfer the command block to the HE. Upon receipt of the entire command block and after suitable error checking (using Cyclic Redundancy Check (CRC)), the HE commences the outbound RF transmission. The remotes that are in radio Line-of-Sight (LOS) with the HE receive packets addressed to all remotes (i.e., all packets transmitted by the HE). The remote retransmits packets addressed to all remotes that it supports. Upon receipt of the appropriate packet addressed to it and after error checking, the remote initiates communication across the REMOTE-170 interface in order to transfer the command message portion of the packet. After processing the received message, the 170 controller transfers the response message back to the remote. The remote passes this response message, along with any other responses that it needs to relay, to the radio that is its parent in the network topology. The response transfer from the HE to the PPU is initiated by the PPU at an appropriate time (even before all responses are received). The command/response timeline for an entire polling cycle is shown in Figure 8.

The Hughes SSNR allows for forward error correction (FEC) by providing it as a config-

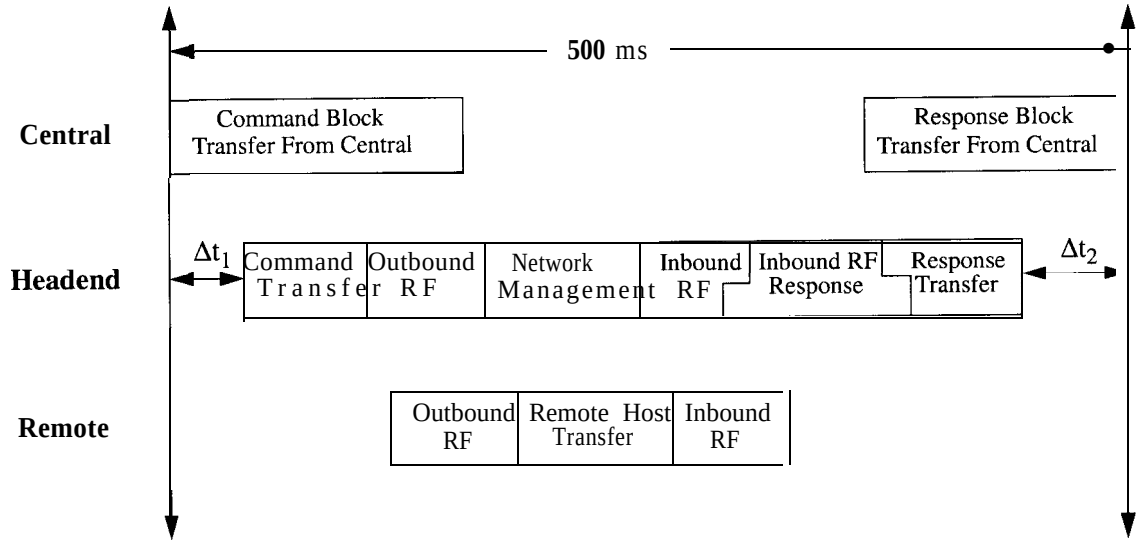

Figure 8: Command/Response Timeline

uration parameter. However, FEC is disabled in this project because of the large overheads (100% of the data) that are involved. Instead, error detection alone is used by employing CRCs and any detected erroneous packets are discarded.

The channel frequency for spread spectrum radio transmission was varied and the corresponding spectrum was observed. For each of the seven possible channels, the spectrum was plotted. Plots 6 through 12, included in Appendix A2, are for channels 1 through 7, respectively.

2.5 Cell Capacity

Since the number of available channels is limited (to seven, in our case), it is desirable to maximize the number of radios in a cell. Since the multiple access scheme within a cell is packet switched TDMA, at any time instant only one radio can transmit. This increases the duration of a Command-Response (CMD-RSP) cycle as the number of radios increases. Each CMD-RSP cycle needs to be completed within 500 ms. Consequently, all delays need to be investigated and minimized wherever possible. Below, we list factors that facilitate a reduction in delay.

- Increasing the baud rate of the remote host interface (between the radio and the 170 controller)
- Decreasing the number of radios performing relay (support) operations
- Minimizing overhead such as FEC

Baud rate	1200	4800	9600	19200
Delay (ms)	120	40	20	10

Table 1: Baud rate vs. delay for remote interface

Outbound (fixed)	Outbound (over the air)	Inbound (Fixed)	Inbound (Over the air)
198	50	188	83

Table 2: Other delays

The variation of the remote interface delay with baud rate is indicated in Table 1.

Assuming 32 radios/cell, 3 hops/radio and 20 relays/cell, all other delays (other than the remote interface delay) are indicated in Table 2 in units of milliseconds. These are in the absence of FEC. In the presence of FEC, the delays over the air (outbound and inbound) double. On summing all delays, it can be seen that the value hovers around 500 ms.

2.6 Hughes SSNR Characteristics

Some important radio characteristics of the Hughes spread spectrum network radio (SSNR) are tabulated in Table 3. The reader is referred to [2] for more information.

2.7 Effective system throughput

Let N denote the number of intersections in a cell. Ignoring all overhead, the system requires one Command (CMD) message to be sent to and one Response (RSP) message to be received from each intersection controller in the cell within a time duration of 500ms. The size of a CMD msg is 5 bytes and that of an RSP message is 8 bytes. Hence, the effective throughput of the system is $\frac{(5+8)\times N}{500} bytes/ms$ = 208 x N bps. For N = 32, this equals 6.656 kbps.

Frequency band	902-928 MHz
Primary modulation	BPSK
Secondary modulation	DS Spread Spectrum
Spreading factor	15:1
Output power	500 mW (27 dBm)
Antenna gain	3 dB (EIRP = 30 dBm)
Emissions	FCC part 15.427
Receiver sensitivity	-85 dBm @ 10^{-5} BER
Data rate	242 Kbps
License	None required per FCC part 15

Table 3: Hughes SSNR radio characteristics

3 System Evaluation

3.1 Evaluation Tasks

The goal of this Field Operation Test (FOT) is to test and evaluate the applicability of spread spectrum radio network communication in traffic control. More specifically, the goals of the FOT project are:

1. To implement the Spread Spectrum Radio Network (SSRN) for the Mar Vista area of Los Angeles for traffic signal interconnect,
2. To quantify the cost effectiveness, reliability, and maintainability of SSRN compared with conventional interconnection technologies,
3. To compare different communication channels and speeds with the existing ATSAC communication protocol,
4. To stimulate and support the development of the Intelligent Transportation Systems (ITS) products for the growing competitive market in the Transportation field.

Implementation of the FOT involved: (a) project management, (b) technical assistance, (c) architecture, design, and integration, (d) operations, and (e) evaluation. The University of Southern California (USC), as a California PATH partner, was chosen the independent evaluator to perform the project evaluation. USC was responsible for the design of the evaluation framework and the performance of the evaluation. In order to oversee the project evaluation process and provide support and guidance to the evaluator on the planning, design, and execution of the evaluation, an Evaluation Oversight Team (EOT) was formed.

This EOT, which was led by the Los Angeles Department of Transportation (LADOT), had representatives from each of the major partners in the FOT.

The Evaluation Plan [8] formulated by USC for the FOT project was submitted to and approved by all EOT members. This evaluation plan is the cornerstone document for the evaluation. In addition to providing a project overview, it describes the evaluation goals and objectives and the procedures for executing the evaluation. Furthermore, it also provides the evaluation methodology to define, collect, and process the necessary data to support the evaluation goals and objectives. The specific evaluation tasks that were performed are as follows. Detailed description of the tasks can be found in [8].

1.1 Line-of-Sight (LOS) testing and Radio Frequency (RF) background noise measurement

1.2 Link quality testing - Bit Error Rate (BER), Received Signal Strength Interference (RSSI), throughput

1.3 Effect of frequency on link quality

1.4 Effect of adjacent channel interference on link quality

1.5 Effect of co-channel interference on link quality

1.6 Effect of jamming on link quality

2.1 Multi-hop downlink quality testing

2.2 Multi-hop uplink quality testing

3.1 Ability to support once-per-second Urban Traffic Control System (UTCS) messages

3.2 Ability to support once-per-second response messages

3.3 Ability to support upload/download messages

3.4 Ability to support time broadcast messages

4.1 Reconfiguration statistics for single radio failure

4.2 Reconfiguration statistics for multiple radio failures

4.3 Ability to support once-per-second UTCS commands/response during reconfiguration

The only link-level test that was performed in the full-deployment was Test 1.2. Tests 1.1, 1.3, 1.4, 1.5 and 1.6 were not performed in the full deployment, since they were performed in the preliminary deployment and the outcome of these tests are not expected to change with the network size. For the results of these tests in the preliminary deployment, please refer to the preliminary report[9].

Radio	Test Frequency (MHz)	Coax length (feet)	Loss in Coax (dB)
Cell 2, Radio 0	916	55	1.5
Cell 2, Radio 1	916	65	1.2
Cell 2, Radio 6	140	90	1.8
Cell 2, Radio 6	916	90	2.6
Cell 2, Radio 7	140	145	2.2
Cell 2, Radio 7	916	145	3.9
Cell 2, Radio 9	916	70	1.9
Cell 2, Radio 13	916	80	2.3
Cell 1, Radio 2	916	65	2.3

Table 4: Loss in coax for remote antenna mounting

3.2 Radio Locations and installation

A site survey was conducted to determine the sites for the cells and the optimal antenna locations for each installation site based on the proximity to the cabinet of the Type-170 controller and the LOS characteristics with neighboring installations.

Prior to installation of radios in the field, an in-house test was conducted with each radio to verify correct functioning of each radio. Three different mounting options were available for radio installation - remote radio without junction box, remote radio with junction box, and remote antenna [4]. Depending on the particular radio location, one mounting option was preferred over the other two. In the remote antenna option, the antenna mounted atop a post is connected to the radio housed in the cabinet by a coax cable. While the radio mounted in a cabinet has the advantage of durability and ease of maintenance, signal loss occurs in the coax cable. Measurement results of this loss are tabulated in Table 4. The losses are less than 5dB in all cases, and do not lead to any technical difficulties. However, the loss may become significant for longer coax cable. Therefore, this factor should be taken into consideration in future system designs.

The lists of radio locations for the four cells are tabulated in Tables 5 to 8.

Cell address	Cross Streets	
1	Pacific Av	Rose Av
2	Main St	Rose Av
3	Brooks Av	Pacific Av
4	Abbot Kinney Bl, Brooks Av	Main St
5	Pacific Av	Westminster Av
6	Horizon Av	Main St
7	Abbot Kinney Bl	Westminster Av
8	Pacific Av	Windward Av
9	Abbot Kinney Bl	California Av
10	Pacific Av	N. Venice Bl
11	Pacific Av	S. Venice Bl
12	Ocean Av, Venice Way	N. Venice Bl
13	Ocean Av	S. Venice Bl
14	Abbot Kinney Bl	Venice Bl
15	Oakwood Av	Venice Bl
16	Pacific Av	Washington Bl
17	Dell Av, Via Dolce	Washington Bl
18	Ocean Av, Via Marina	Washington Bl
19	Mildred Av	Washington Bl
20	Abbot Kinney Bl	Washington Bl
21	Admiralty Way	Via Marina Way
22	Admiralty Way	Palawan Way
23	Admiralty Way	Pet Palawan Way & Romenade Way
24	Panay Way	Via Marina
25	Marquesas Way	Via Marina
26	Tahiti Way	Via Marina

Table 5: Cell 1 radio locations

Cell address	Cross Streets	
1	7th Av	Rose Av
2	Lincoln Bl	Rose Av
3	Rose Av	Walgrove Av
4	Brooks Av, Lake St	Lincoln Bl
5	California Av	Lincoln Bl
6	Palms Bl	Walgrove Av
7	Beethoven St	Palms Bl
8	Lincoln Bl	Superba Av
9	Victoria Av	Walgrove Av
10	Beethoven St	Victoria Av
11	Lincoln Bl	Venice Bl
12	Venice Bl	Walgrove Bl
13	Maplewood Av	Venice Bl
14	Beethoven St	Venice Bl
15	Venice Bl	Wade St
16	Glencoe Av	Washington Bl
17	Redwood Av	Washington Bl
18	Beethoven St	Washington Bl
19	Rosabell St	Washington Bl
20	Wade St, Washington Bl, Washington Pl	Zanja St
21	Centinela Av	Washington Pl
22	Grand View Bl	Washington Pl
23	Inglewood Bl	Washington Pl
24	Centinela Av	Washington Bl
25	Grand View Bl	Washington Bl
26	Inglewood Bl	Washington Bl
27	Lincoln Bl	Washington Bl

Table 6: Cell 2 radio locations

Cell address	Cross Streets	
1	Matteson Av, San Diego Fwy S/B Ramps	Sawtelle Bl
2	Mc Laughlin Av	Washington Pl
3	Sawtelle Bl	Washington Bl
4	Berryman Av	Washington Bl
5	Sawtelle Bl	Washington Pl
6	Centinela Av	Short Av
7	Centinela Av	Culver Bl
8	Culver Bl	Inglewood Bl
9	Berryman Av	Culver Bl
10	Braddock Dr	Centinela Av
11	Braddock Dr	Inglewood Bl
12	Braddock Dr	Sawtelle Bl
13	Centinela Av	Marina Fwy Westbound Ramps, Sanford St
14	Centinela Av	Marina Fwy (RTE 90) Eastbound
15	Centinela Av	Lucile St
16	Centinela Av	Jefferson Bl
17	Centinela Av, Inglewood Bl	Jefferson Bl
18	Jefferson Bl	Mesmer Av
19	Jefferson Bl	San Diego Fwy, Southbound Off Ramps
20	Jefferson Bl	San Diego Fwy, Northbound On Ramps
21	Centinela Av	Teale St
22	Mesmer Av	Teale St

Table 7: Cell 3 radio locations

Cell address	Cross Streets	
1	Admiralty Way	Fire Station #110
2	Lincoln Bl, Marina Pointe Dr	Maxella Av
3	Maxella Av	Bet Del Rey Av & Glencoe Av
4	Glencoe Av	Maxella Av
5	Admiralty Way	Marina Del Rey (Bicycle Path)
6	Lincoln Bl	Marina Expressway
7	Admiralty Way	Bali Way
8	Bali Way	Lincoln Bl
9	Admiralty Way	Mindanao Way
10	Lincoln Bl	Mindanao Way
11	Mindanao Way	Eastbound RTE. 90 Fwy
12	Mindanao Way	Westbound RTE. 90 Fwy
13	Glencoe Av	Mindanao Way
14	Admiralty Way	Fiji Way
15	Fiji Way	Lincoln Bl
16	Alla Rd	Marina Fwy Westbound
17	Culver Bl	RTE. 90 Eastbound Rdwy
18	Culver Bl	RTE. 90 Westbound Rdwy
19	Braddock Dr	Culver Bl
20	Culver Bl	Jefferson Bl
21	Jefferson Bl	Lincoln Bl
22	Alla Rd	Jefferson Bl
23	Beethoven St	Jefferson Bl
24	Jefferson Bl	Westlawn Av
25	Lincoln Bl	Teale St

Table 8: Cell 4 radio locations

3.3 Tests 1.2 - 1.3 : Single-hop Link Quality with Ambient Noise

Several radio links (links between radio pairs) in each of the four cells were tested for link quality in the presence of ambient noise. The parameters that were measured were Bit Error Rate (BER), Received Signal Strength Indicator (RSSI) and byte throughput. The link quality was tested when transmission was on each of the seven channels. Some observations were made:

- Link quality was consistently poor when channel 7 (cf = 925 MHz) was used. This was attributed to the large radio activity in this band as seen in the ambient RF noise measurement earlier. Consequently, it was decided not to use this channel during actual operation.
- A strong correlation was observed between visual LOS and good link quality. Hence, in future deployment, greater effort will be made to achieve visual LOS. This may be done either by mounting the radios on taller masts erected specifically for this purpose or by strategically positioning the radios.
- When errors in a certain link increased at a certain time, errors in other links were also seen to increase at the same time. Hence, error increases were typically not limited to a particular link.
- Long-term throughput values are around 90%.

Appendix A tabulates link quality results obtained for several radio links.

Radios in Cell 2 gave low throughput during the period June 1997, when the tests were carried out. In particular, "one way communication" anomalies have been observed in which a radio link provides good communication quality in one direction, but not in the other. The problem turned out to be due to polarization and was solved by using a special kind of antenna, namely, the Yagi-Uda probe antenna. Now the link qualities in Cell 2 are comparable to those in the other cells. Details of this problem and its solution were documented by ATSAC.

3.4 Tests 2.1, 2.2, 3.1, 3.2 : Multi-hop Link Level Testing

The results shown so far only dealt with a pair of radios, i.e., with single hop links and no relaying. The throughput of multi-hop links was also assessed in all four cells and the results are tabulated in Tables 9 to 11.

Testing were carried out in Cells 1, 3 and 4[2]. The UTCS commands (CMD) and responses (RSP) are once every frame. Hence if there are N frames in the test period, an error-free case

[2]Testing on Cell 2 has been performed in the preliminary deployment[9]

Slave #	no. of Hops from Headend	Total no. of frames	CMD TX	CMD RX	RSP TX	RSP RX	Success rate (%)
1	2-3	600	576	564	504	485	81
2	2-3	960	960	944	944	903	98
7	1-2	600	589	584	585	559	93
8	2	960	960	913	913	904	94
9	1-2	960	902	870	876	769	80

Table 9: Multi-hop link throughput in Cell 1

Slave #	no. of Hops from Headend	Total no. of frames	CMD TX	CMD RX	RSP TX	RSP RX	Success rate (%)
6	4	960	960	959	960	950	99
7	3	960	960	956	956	946	99
10	2	960	957	957	957	943	98
13	2	960	956	958	958	942	98

Table 10: Multi-hop link throughput in Cell 3

would contain N *CMD TX (C*ommand Transmit) from the headend (HE) to each slave, N *CMD RX(* Command Receive) by each slave from the HE, N *RSP TX* (Response Transmit) by each slave back to the headend and N *RSP* RX (Response Receive) by the HE from each slave. The error rate in a downlink (from HE to remote) is seen to be comparable to that in an uplink (from remote to HE). In general, the ability to support once-per-second UTCS CMDs and RSPs are expected to be better for intersections that are closer to the HE (in terms of radio hops) than for those that are farther away. In the data collected, the success rate are high regardless of the distance from HE. A detailed listing of the data from which Tables 9 to 11 were constructed is included in Appendix B.

Appendix C includes plots indicating radio bit errors observed over two consecutive days. Based on several such plots taken over 24-hour periods, the average throughput of the system was seen to be around 90%. In other words, 10% of the time, once-per-second responses were not received at the central (or specifically, the Peripheral Processing Unit (PPU)) from an intersection. The performance is considered satisfactory although it can be further improved (see conclusion).

Slave #	no. of Hops from Headend	Total no. of frames	CMD TX	CMD RX	RSP TX	RSP RX	Success rate (%)
3	2	600	597	600	600	580	97
16	3	360	360	360	360	360	100
17	2	360	360	360	360	358	99
18	2	360	360	360	360	359	100
22	5	180	180	180	180	177	98
23	6	360	360	358	358	357	99

Table **11:** Multi-hop link throughput in Cell 4

3.5 Tests 3.3, 3.4 : Auxiliary Messages

All auxiliary messages are transmitted in the second half of every second, the first half being used for the once-per-second UTCS CMDs and RSPs. Since the transmission of the auxiliary messages is similar to that of the UTCS messages, error rates similar to the UTCS case are expected. Consequently, only the ability of the system to support these messages was performed.

An in-house test was conducted at ATSAC to verify the capability of the system to handle time broadcast messages. The timing of a remote was altered and a time broadcast message was transmitted to verify the remote's capability to receive it. The message was received without errors.

Download messages are transmitted from the HE to a remote in order to change the parameters of its associated controller. Upload messages are transmitted from a remote back to the HE and they include the status of the controller's parameters. The ability of the system to handle upload/download messages was verified.

3.6 Tests 4.1, 4.2, 4.3 : Network Reconfiguration

The purpose of this test was to assess the capability of the network to dynamically reconfigure itself in the presence of poor link qualities and failed nodes. Data logging was done using the Lager software developed by Hughes with the serial port of the PC connected to the diagnostic port of the radio.

A radio failure is simulated by powering off the appropriate remote. The number of reconfigurations immediately following the radio failure is noted. The radio that was taken off the network is then brought back into the network by powering it on. The number of reconfigurations following the radio entry into the network is noted. For the case of reconfiguration during multiple radio failures, two radios are powered off at the same time,

Cell	Total no. of frames measured	Reconfiguration Rate		
		no. per second	no. per minute	no. per hour
1	2520	0.059	3.55	213
3	4800	0.029	1.75	105
4	2263	0.037	2.21	133

Table 12: Average reconfiguration rate

and later brought back into the network by powering on at the same time.

A reconfiguration is said to have taken place when a radio drops out of the network or when a radio's support radio changes. To measure the number of reconfigurations, we count the number of DEL UPDT messages as logged by the software during the tests. DEL UPDT message refers to *Delete* Update, which is sent when a radio link is removed from the network. It is found that the number of DEL UPDT messages match well with the number of reconfigurations seen and hence in this report, we define the number of reconfigurations as the number of DEL UPDT messages.

Below, we summarize the results of the network reconfiguration during the three phases discussed above.

Test 4.3 **: Poor Link Quality :**

The number of DEL UPDT messages are counted for each of the tests. Noticing that two frames are transmitted in a second, the average reconfiguration rates can be calculated. The average reconfiguration rates in the four cells (except Cell 2, where test data are not available) are tabulated in Table 12. Although test data for Cell 2 are not available, it is believed that the performance will be similar to the other cells.

During reconfigurations, once per second message communication capability is not hindered.

Tests 4.1, 4.3 **: Single Radio Failure :**

Selective radios in different cells were brought down one at a time for 100 frames, and then up again. The number of DEL UPDT messages resulting due to this was noted for a period of around 200 frames. For Cells 1, 3 and 4, the average numbers of reconfigurations due to a failed radio were observed and the results tabulated in Table 13.

The reconfiguration rates are seen to be higher than those in the same cell when there is no artificial single radio failure. In general, the average reconfiguration time of existing links in the network due to a node failure is around five seconds, although there are exceptional cases where the reconfiguration takes longer time to complete. The result satisfies the performance threshold of five seconds as stated in the evaluation plan[8]. Failure of critical

Cell	no. of tests performed	Total no. of frames measured	Total no. of DEL UPDT messages	Reconfig. Rate (no. per sec)
1	5	1140	50	0.089
3	4	1500	39	0.052
4	9	2100	72	0.070

Table 13: Reconfiguration statistics for single radio failure

Cell	no. of tests performed	Total no. of frames measured	Total no. of DEL UPDT messages	Reconfig. Rate (no. per sec)
1	3	720	15	0.056
3	3	600	28	0.089
4	3	720	92	0.256

Table 14: Reconfiguration statistics for multiple radio failure

nodes, i.e., those that support multiple nodes, greatly affects the once-per-second message communication capability of the supported nodes. Future system designs should try to avoid such critical nodes.

Tests 4.2, 4.3 **: Multiple Radio Failure :**

In this test, selected radio pairs were brought down simultaneously for a period of 100 frames and then brought up again. The number of DEL UPDT messages during this test period (of around 200 frames) was noted. The results were tabulated in Table 14. As expected, the number of reconfigurations in this case is in general higher than in the case of a single radio failure. The average reconfiguration time required, however, did not differ significantly from the case of single radio failure.

4 Conclusions

This report described the evaluation task of the Los Angeles Spread Spectrum Radio Network Traffic Signal Interconnect project. The radios installed in the full deployment of the project are currently operational. The evaluation results obtained by USC were summarized.

The long-term throughput of the system is around 90%. This value is considered satisfactory, but could be further improved by the following:

1. The frequency band in which the system currently operates is 902-928 MHz, which is

an unlicensed band. Use of a band exclusive for this system should result in an increase in throughput values.

2. A high correlation was found between visual Line-of-Sight (LOS) and high throughput. Greater effort needs to be taken to achieve better LOS. This may be done by erecting tall posts specifically for the purpose of mounting radios atop them.

3. The spreading factor of the spread spectrum radio is 15. A greater spreading factor will result in better tolerance to interference and a consequent improvement of throughput.

The system operation was tested for robustness by inducing radio failures. Network reconfiguration time in the presence of radio failures was about five seconds, fulfilling the requirements stated in the evaluation plan.

In conclusion, the overall performance of the system is satisfactory. We are confident that spread spectrum technology is suitable for traffic control and monitoring applications. Comparing to a hard-wired system, spread spectrum radio network has the added advantages of reduced construction time, lower construction costs and future plant maintenance costs. For a detailed analysis of the cost and reliability aspects of the system, please refer to the evaluation carried out by Booz-Allen & Hamilton.

Acknowledgment

Other former and current USC people who have contributed to this project include Dr. Ahmed Abutaleb, Dr. Jiher Ju, Ka-Cheong Leung, Yaxin Cao, Prof. Vijay Kumar, Dr. Kuochun Lee, Dr. Chiu-Yeung Ngo and Dr. Xiaoxin Qiu. In addition, An Nguyen and Sean Skehan from LADOT, Jason Erickson from Hughes and Pheobe Cofer from JHK & Associates have been very helpful in our evaluation effort.

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APPENDIX A: LINK TEST RESULTS

The purpose of this test is to evaluate the link quality based on packet error rate (PER), bit error rate (BER), received signal strength indicator (RSSI) and throughput. The test was conducted for links (radio pairs) in each of the four cells using the *linktest* software provided by Hughes. While testing a link in a particular cell, the headend of that cell was powered off. All seven center frequencies were tested.

Results - Cell 1

(1) #2 (Tx) and #1 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	201	100.0%	0.00e+00	0.00e+00
#2 (909 MHz)	200	100.0%	0.00e+00	0.00e+00
#3 (912 MHz)	195	100.0%	0.00e+00	0.00e+00
#4 (915 MHz)	199	100.0%	0.00e+00	0.00e+00
#5 (918 MHz)	199	100.0%	0.00e+00	0.00e+00
#6 (921 MHz)	199	100.0%	0.00e+00	0.00e+00
#7 (924 MHz)	199	100.0%	0.00e+00	0.00e+00

(2) #1 (Tx) and #2 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	184	97.9%	0.00e+00	2.14e-02
#2 (909 MHz)	181	98.5%	1.58e-04	1.53e-02
#3 (912 MHz)	178	95.7%	0.00e+00	4.26e-02
#4 (915 MHz)	181	97.9%	0.00e+00	2.14e-02
#5 (918 MHz)	185	100.0%	0.00e+00	0.00e+00
#6 (921 MHz)	185	99.8%	0.00e+00	1.96e-03
#7 (924 MHz)	185	100.0%	0.00e+00	0.00e+00

(3) #4 (Tx) and #1 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	181	100.0%	0.00e+00	0.00e+00
#2 (909 MHz)	175	99.8%	3.27e-07	1.96e-03
#3 (912 MHz)	65	24.6%	3.74e-02	7.63e-01
#4 (915 MHz)	69	22.3%	3.44e-02	7.84e-01
#5 (918 MHz)	80	10.9%	1.73e-02	8.93e-01
#6 (921 MHz)	19	0.8%	0.00e+00	9.92e-01
#7 (924 MHz)	3	0.0%	0.00e+00	1.00e+00

(4) #1 (Tx) and #4 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	159	100.0%	0.00e+00	0.00e+00
#2 (909 MHz)	156	98.2%	9.75e-07	1.76e-02
#3 (912 MHz)	77	5.8%	1.24e-02	9.44e-01
#4 (915 MHz)	51	0.7%	0.00e+00	9.93e-01
#5 (918 MHz)	42	0.6%	0.00e+00	9.94e-01
#6 (921 MHz)	12	0.4%	0.00e+00	9.96e-01
#7 (924 MHz)	0	0.0%	0.00e+00	1.00e+00

(5) #3 (Tx) and #1 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	3	0.1%	0.00e+00	9.99e-01
#2 (909 MHz)	28	0.2%	0.00e+00	9.98e-01
#3 (912 MHz)	0	0.0%	0.00e+00	1.00e+00
#4 (915 MHz)	0	0.0%	0.00e+00	1.00e+00
#5 (918 MHz)	0	0.0%	0.00e+00	1.00e+00
#6 (921 MHz)	0	0.0%	0.00e+00	1.00e+00
#7 (924 MHz)	0	0.0%	0.00e+00	1.00e+00

(6) #1 (Tx) and #3 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	126	100.0%	0.00e+00	0.00e+00
#2 (909 MHz)	105	37.2%	7.09e-04	6.29e-01
#3 (912 MHz)	90			
#4 (915 MHz)	111	100.0%	0.00e+00	0.00e+00
#5 (918 MHz)	119	99.6%	0.00e+00	3.92e-03
#6 (921 MHz)	116	100.0%	4.58e-06	4.58e-06
#7 (924 MHz)	109	65.7%	2.76e-02	3.61e-01

Results - Cell 2

(1) #14 (Tx) and #15 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	145	73.6%	8.44e-04	2.65e-01
#2 (912 MHz)	171	100.0%	4.25e-06	4.25e-06
#3 (912 MHz)	166	95.9%	0.00e+00	4.12e-02
#4 (915 MHz)	172	100.0%	0.00e+00	0.00e+00
#5 (918 MHz)	129	75.4%	1.37e-03	2.47e-01
#6 (921 MHz)	164	96.3%	0.00e+00	3.73e-02
#7 (924 MHz)	55	32.7%	1.23e-02	6.77e-01

(2) #15 (Tx) and #14 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	147	39.2%	3.65e-04	6.08e-01
#2 (912 MHz)	175	99.8%	3.28e-06	1.96e-03
#3 (912 MHz)	175	100.0%	0.00e+00	0.00e+00
#4 (915 MHz)	176	100.0%	0.00e+00	0.00e+00
#5 (918 MHz)	175	100.0%	0.00e+00	0.00e+00
#6 (921 MHz)	173	100.0%	0.00e+00	0.00e+00
#7 (924 MHz)	159	92.3%	2.79e-03	7.99e-02

(3) #14 (Tx) and #10 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	184	85.5%	5.89e-04	1.46e-01
#2 (912 MHz)	201	99.8%	0.00e+00	1.96e-03
#3 (912 MHz)	201	100.0%	0.00e+00	0.00e+00
#4 (915 MHz)	200	100.0%	0.00e+00	0.00e+00
#5 (918 MHz)	168	88.2%	4.19e-06	1.18e-01
#6 (921 MHz)	200	100.0%	0.00e+00	0.00e+00
#7 (924 MHz)	198	99.4%	0.00e+00	5.88e-03

(4) #10 (Tx) and #14 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	134	57.8%	2.44e-04	4.22e-01
#2 (912 MHz)	178	100.0%	0.00e+00	0.00e+00
#3 (912 MHz)	0	0.0%	0.00e+00	1.00e+00
#4 (915 MHz)	178	100.0%	0.00e+00	0.00e+00
#5 (918 MHz)	141	74.4%	9.80e-07	2.56e-01
#6 (921 MHz)	175	100.0%	0.00e+00	0.00e+00
#7 (924 MHz)	169	99.0%	0.00e+00	9.80e-03

(5) #14 (Tx) and #7 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	115	8.1%	1.92e-03	9.19e-01
#2 (912 MHz)	125	70.0%	2.33e-02	3.14e-01
#3 (912 MHz)	130	91.5%	2.66e-03	8.73e-02
#4 (915 MHz)	117	73.1%	1.70e-02	2.81e-01
#5 (918 MHz)	119	35.7%	1.10e-03	6.43e-01
#6 (921 MHz)	126	90.3%	3.16e-03	1.00e-01
#7 (924 MHz)	0	0.0%	0.00e+00	1.00e+00

(6) #7 (Tx) and #14 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	104	0.7%	0.00e+00	9.93e-01
#2 (912 MHz)	0	0.0%	0.00e+00	1.00e+00
#3 (912 MHz)	14	0.1%	0.00e+00	9.99e-01
#4 (915 MHz)	0	0.0%	0.00e+00	1.00e+00
#5 (918 MHz)	0	0.0%	0.00e+00	1.00e+00
#6 (921 MHz)	0	0.0%	0.00e+00	1.00e+00
#7 (924 MHz)	0	0.0%	0.00e+00	1.00e+00

(7) #14 (Tx) and #6 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	113	41.9%	7.78e-04	5.81e-01
#2 (912 MHz)	150	95.8%	3.23e-03	4.46e-02
#3 (912 MHz)	151	99.8%	1.31e-06	1.96e-03
#4 (915 MHz)	147	99.6%	9.80e-07	3.95e-03
#5 (918 MHz)	118	68.5%	3.58e-04	3.15e-01
#6 (921 MHz)	140	99.8%	0.00e+00	1.97e-03
#7 (924 MHz)	144	11.1%	1.16e-02	8.91e-01

(8) #6 (Tx) and #14 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	142	43.4%	2.89e-04	5.66e-01
#2 (912 MHz)	106	24.4%	3.48e-03	7.57e-01
#3 (912 MHz)	153	100.0%	6.54e-07	6.54e-07
#4 (915 MHz)	149	99.8%	1.90e-05	1.98e-03
#5 (918 MHz)	136	61.5%	4.21e-02	4.09e-01
#6 (921 MHz)	124	67.0%	1.55e-02	3.38e-01
#7 (924 MHz)	0	0.0%	0.00e+00	1.00e+00

(9) #14 (Tx) and #3 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	121	28.2%	1.64e-02	7.22e-01
#2 (912 MHz)	104	20.9%	3.10e-02	7.97e-01
#3 (912 MHz)	0	0.0%	0.00e+00	1.00e+00
#4 (915 MHz)	119	97.7%	2.29e-06	2.34e-02
#5 (918 MHz)	104	81.5%	7.42e-03	1.91e-01
#6 (921 MHz)	108	65.3%	1.23e-02	3.55e-01
#7 (924 MHz)	15	12.9%	4.79e-04	8.71e-01

(10) #3 (Tx) and #14 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	92	0.7%	0.00e+00	9.93e-01
#2 (912 MHz)	0	0.0%	0.00e+00	1.00e+00
#3 (912 MHz)	0	0.0%	0.00e+00	1.00e+00
#4 (915 MHz)	0	0.0%	0.00e+00	1.00e+00
#5 (918 MHz)	0	0.0%	0.00e+00	1.00e+00
#6 (921 MHz)	0	0.0%	0.00e+00	1.00e+00
#7 (924 MHz)	0	0.0%	0.00e+00	1.00e+00

(11) #14 (Tx) and #9 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	143	42.6%	2.43e-03	5.74e-01
#2 (912 MHz)	130	25.1%	4.80e-02	7.62e-01
#3 (912 MHz)	140	91.6%	0.00e+00	8.43e-02
#4 (915 MHz)	151	99.4%	1.62e-04	6.04e-03
#5 (918 MHz)	143	96.0%	1.05e-02	4.98e-02
#6 (921 MHz)	146	98.5%	2.46e-03	1.73e-02
#7 (924 MHz)	5	1.2%	3.28e-04	9.88e-01

(12) #9 (Tx) and #14 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	143	36.0%	9.91e-03	6.42e-01
#2 (912 MHz)	78	7.2%	1.70e-02	9.32e-01
#3 (912 MHz)	131	84.6%	1.00e-02	1.63e-01
#4 (915 MHz)	124	62.6%	1.83e-02	3.85e-01
#5 (918 MHz)	72	2.5%	2.24e-02	9.76e-01
#6 (921 MHz)	85	12.8%	9.79e-03	8.75e-01
#7 (924 MHz)	0	0.0%	0.00e+00	1.00e+00

(13) #14 (Tx) and #12 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	157	37.7%	5.32e-06	6.23e-01
#2 (912 MHz)	39	0.0%	0.00e+00	1.00e+00
#3 (912 MHz)	181	100.0%	0.00e+00	0.00e+00
#4 (915 MHz)	90	50.5%	0.00e+00	4.95e-01
#5 (918 MHz)	14	0.7%	0.00e+00	9.93e-01
#6 (921 MHz)	1	1.0%	0.00e+00	9.90e-01
#7 (924 MHz)	1	0.6%	0.00e+00	9.94e-01

(14) #12 (Tx) and #14 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	151	45.2%	1.30e-04	5.48e-01
#2 (912 MHz)	163	100.0%	0.00e+00	0.00e+00
#3 (912 MHz)	165	98.4%	3.35e-06	1.61e-02
#4 (915 MHz)	160	100.0%	3.27e-06	3.27e-06
#5 (918 MHz)	2	0.0%	0.00e+00	1.00e+00
#6 (921 MHz)	0	0.0%	0.00e+00	1.00e+00
#7 (924 MHz)	2	0.0%	0.00e+00	1.00e+00

Results - Cell 3

(1) #9 (Tx) and #1 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	0	0.0%	0.00e+00	1.00e+00
#2 (909 MHz)	0	0.0%	0.00e+00	1.00e+00
#3 (912 MHz)	0	0.0%	0.00e+00	1.00e+00
#4 (915 MHz)	0	0.0%	0.00e+00	1.00e+00
#5 (918 MHz)	0	0.0%	0.00e+00	1.00e+00
#6 (921 MHz)	0	0.0%	0.00e+00	1.00e+00
#7 (924 MHz)	0	0.0%	0.00e+00	1.00e+00

(2) #1 (Tx) and #9 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	146	93.4%	5.68e-04	6.61e-02
#2 (909 MHz)	5	0.8%	0.00e+00	9.92e-01
#3 (912 MHz)	142	92.5%	1.01e-03	7.63e-02
#4 (915 MHz)	137	95.5%	3.65e-04	4.50e-02
#5 (918 MHz)	137	40.8%	2.92e-03	5.93e-01
#6 (921 MHz)	123	70.3%	4.07e-02	3.25e-01
#7 (924 MHz)	0	0.0%	0.00e+00	1.00e+00

(3) #9 (Tx) and #5 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	0	0.0%	0.00e+00	1.00e+00
#2 (909 MHz)	0	0.0%	0.00e+00	1.00e+00
#3 (912 MHz)	0	0.0%	0.00e+00	1.00e+00
#4 (915 MHz)	0	0.0%	0.00e+00	1.00e+00
#5 (918 MHz)	0	0.0%	0.00e+00	1.00e+00
#6 (921 MHz)	0	0.0%	0.00e+00	1.00e+00
#7 (924 MHz)	0	0.0%	0.00e+00	1.00e+00

(4) #5 (Tx) and #9 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	11	0.0%	0.00e+00	1.00e+00
#2 (909 MHz)	0	0.0%	0.00e+00	1.00e+00
#3 (912 MHz)	0	0.0%	0.00e+00	1.00e+00
#4 (915 MHz)	35	0.6%	0.00e+00	9.94e-01
#5 (918 MHz)	103	0.6%	0.00e+00	9.94e-01
#6 (921 MHz)	0	0.0%	0.00e+00	1.00e+00
#7 (924 MHz)	0	0.0%	0.00e+00	1.00e+00

(5) #9 (Tx) and #3 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	120	15.0%	2.26e-02	8.57e-01
#2 (909 MHz)	92	4.4%	1.83e-04	9.56e-01
#3 (912 MHz)	96	12.2%	1.15e-01	8.92e-01
#4 (915 MHz)	0	0.0%	0.00e+00	1.00e+00
#5 (918 MHz)	80	59.6%	5.47e-02	4.36e-01
#6 (921 MHz)	1	0.2%	8.33e-04	9.98e-01
#7 (924 MHz)	0	0.0%	0.00e+00	1.00e+00

(6) #3 (Tx) and #9 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	0	0.0%	0.00e+00	1.00e+00
#2 (909 MHz)	0	0.0%	0.00e+00	1.00e+00
#3 (912 MHz)	0	0.0%	0.00e+00	1.00e+00
#4 (915 MHz)	0	0.0%	0.00e+00	1.00e+00
#5 (918 MHz)	116	0.9%	0.00e+00	9.91e-01
#6 (921 MHz)	0	0.0%	0.00e+00	1.00e+00
#7 (924 MHz)	0	0.0%	0.00e+00	1.00e+00

(7) #9 (Tx) and #2 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	0	0.0%	0.00e+00	1.00e+00
#2 (909 MHz)	0	0.0%	0.00e+00	1.00e+00
#3 (912 MHz)	0	0.0%	0.00e+00	1.00e+00
#4 (915 MHz)	0	0.0%	0.00e+00	1.00e+00
#5 (918 MHz)	0	0.0%	0.00e+00	1.00e+00
#6 (921 MHz)	1	0.0%	0.00e+00	1.00e+00
#7 (924 MHz)	0	0.0%	0.00e+00	1.00e+00

(8) #2 (Tx) and #9 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	108	54.1%	3.80e-02	4.78e-01
#2 (909 MHz)	0	0.0%	0.00e+00	1.00e+00
#3 (912 MHz)	3	1.0%	2.22e-04	9.90e-01
#4 (915 MHz)	23	0.5%	1.67e-04	9.95e-01
#5 (918 MHz)	107	0.5%	0.00e+00	9.95e-01
#6 (921 MHz)	3	0.0%	0.00e+00	1.00e+00
#7 (924 MHz)	0	0.0%	0.00e+00	1.00e+00

(9) #4 (Tx) and #1 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	0	0.0%	0.00e+00	1.00e+00
#2 (909 MHz)	0	0.0%	0.00e+00	1.00e+00
#3 (912 MHz)	0	0.0%	0.00e+00	1.00e+00
#4 (915 MHz)	0	0.0%	0.00e+00	1.00e+00
#5 (918 MHz)	0	0.0%	0.00e+00	1.00e+00
#6 (921 MHz)	0	0.0%	0.00e+00	1.00e+00
#7 (924 MHz)	0	0.0%	0.00e+00	1.00e+00

(10) #1 (Tx) and #4 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	112	11.7%	6.86e-02	8.91e-01
#2 (909 MHz)	0	0.0%	0.00e+00	1.00e+00
#3 (912 MHz)	53	1.0%	0.00e+00	9.90e-01
#4 (915 MHz)	64	0.2%	0.00e+00	9.98e-01
#5 (918 MHz)	15	0.1%	0.00e+00	9.99e-01
#6 (921 MHz)	2	0.0%	0.00e+00	1.00e+00
#7 (924 MHz)	0	0.0%	0.00e+00	1.00e+00

(11) #4 (Tx) and #5 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	31	0.2%	0.00e+00	9.98e-01
#2 (909 MHz)	0	0.0%	0.00e+00	1.00e+00
#3 (912 MHz)	0	0.0%	0.00e+00	1.00e+00
#4 (915 MHz)	0	0.0%	0.00e+00	1.00e+00
#5 (918 MHz)	0	0.0%	0.00e+00	1.00e+00
#6 (921 MHz)	0	0.0%	0.00e+00	1.00e+00
#7 (924 MHz)	0	0.0%	0.00e+00	1.00e+00

(12) #5 (Tx) and #4 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	110	23.3%	2.71e-02	7.76e-01
#2 (909 MHz)	0	0.0%	0.00e+00	1.00e+00
#3 (912 MHz)	7	0.0%	0.00e+00	1.00e+00
#4 (915 MHz)	0	0.0%	0.00e+00	1.00e+00
#5 (918 MHz)	60	2.0%	2.93e-02	9.79e-01
#6 (921 MHz)	42	0.4%	0.00e+00	9.96e-01
#7 (924 MHz)	0	0.0%	0.00e+00	1.00e+00

(13) #5 (Tx) and #3 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	141	100.0%	0.00e+00	0.00e+00
#2 (909 MHz)	130	97.9%	0.00e+00	2.14e-02
#3 (912 MHz)	127	95.5%	0.00e+00	4.46e-02
#4 (915 MHz)	121	97.9%	0.00e+00	2.14e-02
#5 (918 MHz)	123	100.0%	0.00e+00	0.00e+00
#6 (921 MHz)	119	97.9%	0.00e+00	2.14e-02
#7 (924 MHz)	127	100.0%	0.00e+00	0.00e+00

(14) #3 (Tx) and #5 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	4	0.0%	0.00e+00	1.00e+00
#2 (909 MHz)	0	0.0%	0.00e+00	1.00e+00
#3 (912 MHz)	2	0.0%	0.00e+00	1.00e+00
#4 (915 MHz)	0	0.0%	0.00e+00	1.00e+00
#5 (918 MHz)	0	0.0%	0.00e+00	1.00e+00
#6 (921 MHz)	0	0.0%	0.00e+00	1.00e+00
#7 (924 MHz)	0	0.0%	0.00e+00	1.00e+00

(15) #4 (Tx) and #2 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	1	0.0%	0.00e+00	1.00e+00
#2 (909 MHz)	0	0.0%	0.00e+00	1.00e+00
#3 (912 MHz)	0	0.0%	0.00e+00	1.00e+00
#4 (915 MHz)	14	0.6%	0.00e+00	9.94e-01
#5 (918 MHz)	0	0.0%	0.00e+00	1.00e+00
#6 (921 MHz)	0	0.0%	0.00e+00	1.00e+00
#7 (924 MHz)	0	0.0%	0.00e+00	1.00e+00

(16) #2 (Tx) and #4 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	123	18.6%	7.87e-02	8.24e-01
#2 (909 MHz)	0	0.0%	0.00e+00	1.00e+00
#3 (912 MHz)	15	0.0%	0.00e+00	1.00e+00
#4 (915 MHz)	0	0.0%	0.00e+00	1.00e+00
#5 (918 MHz)	6	0.0%	0.00e+00	1.00e+00
#6 (921 MHz)	13	0.1%	0.00e+00	9.99e-01
#7 (924 MHz)	0	0.0%	0.00e+00	1.00e+00

(17) #22 (Tx) and #21 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	204	99.8%	0.00e+00	1.96e-03
#2 (909 MHz)	201	100.0%	0.00e+00	0.00e+00
#3 (912 MHz)	201	100.0%	0.00e+00	0.00e+00
#4 (915 MHz)	201	100.0%	0.00e+00	0.00e+00
#5 (918 MHz)	177	57.1%	4.06e-04	4.29e-01
#6 (921 MHz)	198	99.8%	9.53e-06	1.97e-03
#7 (924 MHz)	199	100.0%	0.00e+00	0.00e+00

(18) #21 (Tx) and #22 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	190	99.6%	0.00e+00	
#2 (909 MHz)	184	97.7%	1.48e-04	
#3 (912 MHz)	189	99.8%	1.97e-06	
#4 (915 MHz)	185	98.4%	1.01e-04	
#5 (918 MHz)	188	100.0%	5.20e-05	
#6 (921 MHz)	182	99.2%	0.00e+00	
#7 (924 MHz)	180	99.4%	9.90e-07	

(19) #22 (Tx) and #17 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	153	88.2%	1.93e-02	1.34e-01
#2 (909 MHz)	98	1.8%	0.00e+00	9.82e-01
#3 (912 MHz)	0	0.0%	0.00e+00	1.00e+00
#4 (915 MHz)	0	0.0%	0.00e+00	1.00e+00
#5 (918 MHz)	0	0.0%	0.00e+00	1.00e+00
#6 (921 MHz)	0	0.0%	0.00e+00	1.00e+00
#7 (924 MHz)	0	0.0%	0.00e+00	1.00e+00

(20) #17 (Tx) and #22 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	105	52.7%	2.94e-02	4.87e-01
#2 (909 MHz)	147	93.3%	5.59e-04	6.73e-02
#3 (912 MHz)	23	1.6%	4.43e-03	9.84e-01
#4 (915 MHz)	0	0.0%	0.00e+00	1.00e+00
#5 (918 MHz)	42	0.1%	0.00e+00	9.99e-01
#6 (921 MHz)	0	0.0%	0.00e+00	1.00e+00
#7 (924 MHz)	0	0.0%	0.00e+00	1.00e+00

(21) #22 (Tx) and #19 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	196	99.0%	1.35e-05	9.82e-03
#2 (909 MHz)	188	100.0%	0.00e+00	0.00e+00
#3 (912 MHz)	131	68.2%	7.00e-04	3.18e-01
#4 (915 MHz)	190	98.6%	0.00e+00	1.37e-02
#5 (918 MHz)	156	99.8%	0.00e+00	1.96e-03
#6 (921 MHz)	170	89.0%	0.00e+00	1.10e-01
#7 (924 MHz)	118	62.6%	3.78e-03	3.76e-01

(22) #19 (Tx) and #22 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	189	100.0%	2.94e-06	2.94e-06
#2 (909 MHz)	177	99.8%	0.00e+00	1.96e-03
#3 (912 MHz)	123	64.5%	1.33e-04	3.55e-01
#4 (915 MHz)	183	99.4%	0.00e+00	5.88e-03
#5 (918 MHz)	138	66.7%	6.54e-07	3.33e-01
#6 (921 MHz)	167	92.7%	1.16e-03	7.42e-02
#7 (924 MHz)	78	42.0%	1.99e-02	5.87e-01

(23) #22 (Tx) and #20 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	154	95.7%	1.07e-03	4.40e-02
#2 (909 MHz)	91	54.2%	6.60e-03	4.60e-01
#3 (912 MHz)	89	52.3%	4.88e-03	4.80e-01
#4 (915 MHz)	57	39.1%	2.85e-03	6.10e-01
#5 (918 MHz)	68	31.4%	5.63e-04	6.86e-01
#6 (921 MHz)	10	2.6%	1.08e-03	9.74e-01
#7 (924 MHz)	13	4.3%	5.59e-02	9.62e-01

(24) #20 (Tx) and #22 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	159	99.6%	1.64e-06	3.92e-03
#2 (909 MHz)	145	91.8%	2.18e-03	8.41e-02
#3 (912 MHz)	148	95.7%	6.07e-04	4.40e-02
#4 (915 MHz)	118	70.8%	7.42e-03	2.97e-01
#5 (918 MHz)	142	98.0%	1.24e-03	2.12e-02
#6 (921 MHz)	95	39.5%	2.08e-02	6.13e-01
#7 (924 MHz)	24	3.6%	4.35e-04	9.64e-01

(25) #18 (Tx) and #22 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	193	100.0%	0.00e+00	0.00e+00
#2 (909 MHz)	183	100.0%	0.00e+00	0.00e+00
#3 (912 MHz)	189	100.0%	0.00e+00	0.00e+00
#4 (915 MHz)	189	100.0%	0.00e+00	0.00e+00
#5 (918 MHz)	189	100.0%	0.00e+00	0.00e+00
#6 (921 MHz)	189	100.0%	0.00e+00	0.00e+00
#7 (924 MHz)	184	97.9%	0.00e+00	2.14e-02

(26) #22 (Tx) and #18 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	197	100.0%	0.00e+00	0.00e+00
#2 (909 MHz)	194	100.0%	0.00e+00	0.00e+00
#3 (912 MHz)	193	99.8%	0.00e+00	1.96e-03
#4 (915 MHz)	193	100.0%	0.00e+00	0.00e+00
#5 (918 MHz)	191	99.0%	3.32e-06	9.74e-03
#6 (921 MHz)	187	97.1%	0.00e+00	2.94e-02
#7 (924 MHz)	193	99.6%	0.00e+00	3.92e-03

(27) #3 (Tx) and #21 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	200	100.0%	0.00e+00	0.00e+00
#2 (909 MHz)	193	97.7%	0.00e+00	2.34e-02
#3 (912 MHz)	191	96.9%	0.00e+00	3.12e-02
#4 (915 MHz)	143	71.3%	0.00e+00	2.87e-01
#5 (918 MHz)	141	35.0%	3.46e-03	6.51e-01
#6 (921 MHz)	142	77.6%	5.39e-06	2.24e-01
#7 (924 MHz)	169	91.6%	1.34e-06	8.37e-02

(28) #21 (Tx) and #3 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	192	100.0%	0.00e+00	0.00e+00
#2 (909 MHz)	188	100.0%	0.00e+00	0.00e+00
#3 (912 MHz)	186	99.6%	0.00e+00	3.92e-03
#4 (915 MHz)	183	99.6%	0.00e+00	3.92e-03
#5 (918 MHz)	137	61.5%	1.37e-03	3.86e-01
#6 (921 MHz)	172	99.8%	9.86e-07	1.96e-03
#7 (924 MHz)	0	0.0%	0.00e+00	1.00e+00

(29) #18 (Tx) and #17 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	202	100.0%	0.00e+00	0.00e+00
#2 (909 MHz)	195	100.0%	0.00e+00	0.00e+00
#3 (912 MHz)	197	100.0%	0.00e+00	0.00e+00
#4 (915 MHz)	197	100.0%	0.00e+00	0.00e+00
#5 (918 MHz)	195	100.0%	2.76e-05	2.76e-05
#6 (921 MHz)	194	100.0%	0.00e+00	0.00e+00
#7 (924 MHz)	185	96.0%	2.36e-03	4.23e-02

(30) #17 (Tx) and #18 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	195	99.8%	0.00e+00	1.96e-03
#2 (909 MHz)	192	100.0%	0.00e+00	0.00e+00
#3 (912 MHz)	189	99.0%	0.00e+00	9.78e-03
#4 (915 MHz)	189	99.0%	0.00e+00	9.80e-03
#5 (918 MHz)	181	95.3%	0.00e+00	4.69e-02
#6 (921 MHz)	189	99.8%	0.00e+00	1.96e-03
#7 (924 MHz)	108	58.1%	1.54e-03	4.20e-01

(31) #18 (Tx) and #19 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	179	87.1%	1.66e-03	1.30e-01
#2 (909 MHz)	123	58.3%	1.36e-02	4.26e-01
#3 (912 MHz)	194	99.4%	3.97e-06	5.89e-03
#4 (915 MHz)	197	100.0%	0.00e+00	0.00e+00
#5 (918 MHz)	192	100.0%	0.00e+00	0.00e+00
#6 (921 MHz)	196	99.8%	2.30e-06	1.96e-03
#7 (924 MHz)	194	95.5%	0.00e+00	4.51e-02

(32) #19 (Tx) and #18 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	180	92.8%	4.85e-05	7.23e-02
#2 (909 MHz)	58	21.5%	1.18e-02	7.87e-01
#3 (912 MHz)	189	98.0%	0.00e+00	1.96e-02
#4 (915 MHz)	182	93.6%	0.00e+00	6.36e-02
#5 (918 MHz)	175	88.1%	6.22e-05	1.19e-01
#6 (921 MHz)	191	99.6%	3.31e-07	3.92e-03
#7 (924 MHz)	160	82.2%	0.00e+00	1.78e-01

(33) #18 (Tx) and #20 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	158	85.8%	2.86e-03	1.44e-01
#2 (909 MHz)	121	67.7%	1.07e-03	3.24e-01
#3 (912 MHz)	157	95.5%	3.75e-04	4.56e-02
#4 (915 MHz)	148	84.0%	4.59e-03	1.63e-01
#5 (918 MHz)	111	62.7%	4.87e-04	3.73e-01
#6 (921 MHz)	148	81.2%	1.19e-03	1.89e-01
#7 (924 MHz)	128	71.6%	5.01e-03	2.88e-01

(34) #20 (Tx) and #18 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	188	97.5%	2.45e-06	2.55e-02
#2 (909 MHz)	138	65.1%	5.12e-03	3.52e-01
#3 (912 MHz)	182	98.3%	7.82e-04	1.77e-02
#4 (915 MHz)	117	50.5%	9.65e-06	4.95e-01
#5 (918 MHz)	170	88.6%	6.74e-04	1.14e-01
#6 (921 MHz)	180	95.7%	7.31e-07	4.31e-02
#7 (924 MHz)	106	58.2%	1.09e-04	4.18e-01

(35) #6 (Tx) and #18 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	0	0.0%	0.00e+00	1.00e+00
#2 (909 MHz)	0	0.0%	0.00e+00	1.00e+00
#3 (912 MHz)	0	0.0%	0.00e+00	1.00e+00
#4 (915 MHz)	20	0.0%	0.00e+00	1.00e+00
#5 (918 MHz)	1	0.0%	0.00e+00	1.00e+00
#6 (921 MHz)	0	0.0%	0.00e+00	1.00e+00
#7 (924 MHz)	0	0.0%	0.00e+00	1.00e+00

(36) #18 (Tx) and #6 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	0	0.0%	0.00e+00	1.00e+00
#2 (909 MHz)	0	0.0%	0.00e+00	1.00e+00
#3 (912 MHz)	0	0.0%	0.00e+00	1.00e+00
#4 (915 MHz)	0	0.0%	0.00e+00	1.00e+00
#5 (918 MHz)	102	3.9%	0.00e+00	9.61e-01
#6 (921 MHz)	126	1.5%	0.00e+00	9.85e-01
#7 (924 MHz)	0	0.0%	0.00e+00	1.00e+00

(37) #7 (Tx) and #18 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	0	0.0%	0.00e+00	1.00e+00
#2 (909 MHz)	0	0.0%	0.00e+00	1.00e+00
#3 (912 MHz)	0	0.0%	0.00e+00	1.00e+00
#4 (915 MHz)	19	0.4%	0.00e+00	9.96e-01
#5 (918 MHz)	0	0.0%	0.00e+00	1.00e+00
#6 (921 MHz)	0	0.0%	0.00e+00	1.00e+00
#7 (924 MHz)	0	0.0%	0.00e+00	1.00e+00

(38) #18 (Tx) and #7 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	0	0.0%	0.00e+00	1.00e+00
#2 (909 MHz)	0	0.0%	0.00e+00	1.00e+00
#3 (912 MHz)	0	0.0%	0.00e+00	1.00e+00
#4 (915 MHz)	0	0.0%	0.00e+00	1.00e+00
#5 (918 MHz)	203	2.3%	0.00e+00	9.77e-01
#6 (921 MHz)	48	0.5%	0.00e+00	9.95e-01
#7 (924 MHz)	0	0.0%	0.00e+00	1.00e+00

(39) #8 (Tx) and #18 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	7	0.0%	0.00e+00	1.00e+00
#2 (909 MHz)	0	0.0%	0.00e+00	1.00e+00
#3 (912 MHz)	0	0.0%	0.00e+00	1.00e+00
#4 (915 MHz)	0	0.0%	0.00e+00	1.00e+00
#5 (918 MHz)	34	2.0%	0.00e+00	9.80e-01
#6 (921 MHz)	0	0.0%	0.00e+00	1.00e+00
#7 (924 MHz)	0	0.0%	0.00e+00	1.00e+00

(40) #18 (Tx) and #8 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	0	0.0%	0.00e+00	1.00e+00
#2 (909 MHz)	0	0.0%	0.00e+00	1.00e+00
#3 (912 MHz)	0	0.0%	0.00e+00	1.00e+00
#4 (915 MHz)	0	0.0%	0.00e+00	1.00e+00
#5 (918 MHz)	162	0.8%	0.00e+00	9.92e-01
#6 (921 MHz)	46	0.4%	0.00e+00	9.96e-01
#7 (924 MHz)	0	0.0%	0.00e+00	1.00e+00

(41) #9 (Tx) and #18 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	153	81.0%	7.17e-03	1.95e-01
#2 (909 MHz)	55	5.7%	5.66e-03	9.43e-01
#3 (912 MHz)	73	2.9%	0.00e+00	9.71e-01
#4 (915 MHz)	0	0.0%	0.00e+00	1.00e+00
#5 (918 MHz)	6	0.0%	0.00e+00	1.00e+00
#6 (921 MHz)	40	2.1%	2.29e-03	9.79e-01
#7 (924 MHz)	0	0.0%	0.00e+00	1.00e+00

(42) #18 (Tx) and #9 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	159	99.8%	1.63e-06	1.96e-03
#2 (909 MHz)	14	1.5%	0.00e+00	9.85e-01
#3 (912 MHz)	129	95.2%	6.27e-04	4.81e-02
#4 (915 MHz)	136	97.1%	3.71e-04	2.98e-02
#5 (918 MHz)	140	39.2%	1.20e-03	6.08e-01
#6 (921 MHz)	113	68.9%	3.84e-02	3.38e-01
#7 (924 MHz)	0	0.0%	0.00e+00	1.00e+00

(43) #6 (Tx) and #18 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	18	0.1%	0.00e+00	9.99e-01
#2 (909 MHz)	4	0.0%	0.00e+00	1.00e+00
#3 (912 MHz)	58	8.8%	1.41e-02	9.13e-01
#4 (915 MHz)	1	0.0%	0.00e+00	1.00e+00
#5 (918 MHz)	0	0.0%	0.00e+00	1.00e+00
#6 (921 MHz)	2	0.0%	0.00e+00	1.00e+00
#7 (924 MHz)	0	0.0%	0.00e+00	1.00e+00

(44) #18 (Tx) and #6 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	148	98.7%	1.54e-05	1.31e-02
#2 (909 MHz)	69	0.4%	0.00e+00	9.96e-01
#3 (912 MHz)	145	97.7%	1.49e-03	2.40e-02
#4 (915 MHz)	127	72.4%	4.46e-02	3.06e-01
#5 (918 MHz)	128	18.4%	3.46e-02	8.22e-01
#6 (921 MHz)	135	18.2%	7.23e-02	8.30e-01
#7 (924 MHz)	0	0.0%	0.00e+00	1.00e+00

(45) #7 (Tx) and #18 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	0	0.0%	0.00e+00	1.00e+00
#2 (909 MHz)	0	0.0%	0.00e+00	1.00e+00
#3 (912 MHz)	0	0.0%	0.00e+00	1.00e+00
#4 (915 MHz)	0	0.0%	0.00e+00	1.00e+00
#5 (918 MHz)	198	1.2%	0.00e+00	9.88e-01
#6 (921 MHz)	0	0.0%	0.00e+00	1.00e+00
#7 (924 MHz)	0	0.0%	0.00e+00	1.00e+00

(46) #18 (Tx) and #7 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	0	0.0%	0.00e+00	1.00e+00
#2 (909 MHz)	0	0.0%	0.00e+00	1.00e+00
#3 (912 MHz)	0	0.0%	0.00e+00	1.00e+00
#4 (915 MHz)	0	0.0%	0.00e+00	1.00e+00
#5 (918 MHz)	0	0.0%	0.00e+00	1.00e+00
#6 (921 MHz)	0	0.0%	0.00e+00	1.00e+00
#7 (924 MHz)	0	0.0%	0.00e+00	1.00e+00

(47) #8 (Tx) and #18 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	10	0.0%	0.00e+00	1.00e+00
#2 (909 MHz)	0	0.0%	0.00e+00	1.00e+00
#3 (912 MHz)	0	0.0%	0.00e+00	1.00e+00
#4 (915 MHz)	0	0.0%	0.00e+00	1.00e+00
#5 (918 MHz)	2	0.0%	0.00e+00	1.00e+00
#6 (921 MHz)	0	0.0%	0.00e+00	1.00e+00
#7 (924 MHz)	0	0.0%	0.00e+00	1.00e+00

(48) #18 (Tx) and #8 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	45	1.0%	0.00e+00	9.90e-01
#2 (909 MHz)	0	0.0%	0.00e+00	1.00e+00
#3 (912 MHz)	0	0.0%	0.00e+00	1.00e+00
#4 (915 MHz)	0	0.0%	0.00e+00	1.00e+00
#5 (918 MHz)	169	0.8%	0.00e+00	9.92e-01
#6 (921 MHz)	2	0.0%	0.00e+00	1.00e+00
#7 (924 MHz)	0	0.0%	0.00e+00	1.00e+00

(49) #11 (Tx) and #18 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	0	0.0%	0.00e+00	1.00e+00
#2 (909 MHz)	0	0.0%	0.00e+00	1.00e+00
#3 (912 MHz)	0	0.0%	0.00e+00	1.00e+00
#4 (915 MHz)	0	0.0%	0.00e+00	1.00e+00
#5 (918 MHz)	0	0.0%	0.00e+00	1.00e+00
#6 (921 MHz)	0	0.0%	0.00e+00	1.00e+00
#7 (924 MHz)	0	0.0%	0.00e+00	1.00e+00

(50) #1 (Tx) and #9 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	0	0.0%	0.00e+00	1.00e+00
#2 (909 MHz)	0	0.0%	0.00e+00	1.00e+00
#3 (912 MHz)	0	0.0%	0.00e+00	1.00e+00
#4 (915 MHz)	0	0.0%	0.00e+00	1.00e+00
#5 (918 MHz)	85	0.5%	0.00e+00	9.95e-01
#6 (921 MHz)	0	0.0%	0.00e+00	1.00e+00
#7 (924 MHz)	0	0.0%	0.00e+00	1.00e+00

(51) #5 (Tx) and #18 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	0	0.0%	0.00e+00	1.00e+00
#2 (909 MHz)	0	0.0%	0.00e+00	1.00e+00
#3 (912 MHz)	0	0.0%	0.00e+00	1.00e+00
#4 (915 MHz)	0	0.0%	0.00e+00	1.00e+00
#5 (918 MHz)	0	0.0%	0.00e+00	1.00e+00
#6 (921 MHz)	2	0.0%	0.00e+00	1.00e+00
#7 (924 MHz)	0	0.0%	0.00e+00	1.00e+00

(52) #18 (Tx) and #5 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	0	0.0%	0.00e+00	1.00e+00
#2 (909 MHz)	0	0.0%	0.00e+00	1.00e+00
#3 (912 MHz)	0	0.0%	0.00e+00	1.00e+00
#4 (915 MHz)	0	0.0%	0.00e+00	1.00e+00
#5 (918 MHz)	0	0.0%	0.00e+00	1.00e+00
#6 (921 MHz)	7	0.0%	0.00e+00	1.00e+00
#7 (924 MHz)	0	0.0%	0.00e+00	1.00e+00

(53) #8 (Tx) and #4 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	92	16.5%	1.03e-01	8.54e-01
#2 (912 MHz)	0	0.0%	0.00e+00	1.00e+00
#3 (912 MHz)	95	0.8%	0.00e+00	9.92e-01
#4 (915 MHz)	54	0.5%	0.00e+00	9.95e-01
#5 (918 MHz)	69	2.9%	8.23e-03	9.71e-01
#6 (921 MHz)	73	8.7%	1.17e-02	9.14e-01
#7 (924 MHz)	0	0.0%	0.00e+00	1.00e+00

(54) #4 (Tx) and #8 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	113	19.5%	3.12c-02	8.14e-01
#2 (912 MHz)	5	0.0%	0.00e+00	1.00e+00
#3 (912 MHz)	72	0.2%	0.00e+00	9.98e-01
#4 (915 MHz)	54	0.7%	0.00e+00	9.93e-01
#5 (918 MHz)	139	53.8%	3.44e-02	4.77e-01
#6 (921 MHz)	87	1.0%	0.00e+00	9.90e-01
#7 (924 MHz)	0	0.0%	0.00e+00	1.00e+00

(55) #8 (Tx) and #3 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	0	0.0%	0.00e+00	1.00e+00
#2 (912 MHz)	0	0.0%	0.00e+00	1.00e+00
#3 (912 MHz)	0	0.0%	0.00e+00	1.00e+00
#4 (915 MHz)	0	0.0%	0.00e+00	1.00e+00
#5 (918 MHz)	0	0.0%	0.00e+00	1.00e+00
#6 (921 MHz)	0	0.0%	0.00e+00	1.00e+00
#7 (924 MHz)	0	0.0%	0.00e+00	1.00e+00

(56) #3 (Tx) and #8 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	0	0.0%	0.00e+00	1.00e+00
#2 (912 MHz)	0	0.0%	0.00e+00	1.00e+00
#3 (912 MHz)	0	0.0%	0.00e+00	1.00e+00
#4 (915 MHz)	0	0.0%	0.00e+00	1.00e+00
#5 (918 MHz)	0	0.0%	0.00e+00	1.00e+00
#6 (921 MHz)	0	0.0%	0.00e+00	1.00e+00
#7 (924 MHz)	0	0.0%	0.00e+00	1.00e+00

(57) #8 (Tx) and #5 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	0	0.0%	0.00e+00	1.00e+00
#2 (912 MHz)	0	0.0%	0.00e+00	1.00e+00
#3 (912 MHz)	0	0.0%	0.00e+00	1.00e+00
#4 (915 MHz)	0	0.0%	0.00e+00	1.00e+00
#5 (918 MHz)	0	0.0%	0.00e+00	1.00e+00
#6 (921 MHz)	0	0.0%	0.00e+00	1.00e+00
#7 (924 MHz)	0	0.0%	0.00e+00	1.00e+00

(58) #5 (Tx) and #8 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	0	0.0%	0.00e+00	1.00e+00
#2 (912 MHz)	0	0.0%	0.00e+00	1.00e+00
#3 (912 MHz)	0	0.0%	0.00e+00	1.00e+00
#4 (915 MHz)	0	0.0%	0.00e+00	1.00e+00
#5 (918 MHz)	0	0.0%	0.00e+00	1.00e+00
#6 (921 MHz)	0	0.0%	0.00e+00	1.00e+00
#7 (924 MHz)	0	0.0%	0.00e+00	1.00e+00

(59) #8 (Tx) and #1 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	0	0.0%	0.00e+00	1.00e+00
#2 (912 MHz)	0	0.0%	0.00e+00	1.00e+00
#3 (912 MHz)	0	0.0%	0.00e+00	1.00e+00
#4 (915 MHz)	0	0.0%	0.00e+00	1.00e+00
#5 (918 MHz)	0	0.0%	0.00e+00	1.00e+00
#6 (921 MHz)	0	0.0%	0.00e+00	1.00e+00
#7 (924 MHz)	0	0.0%	0.00e+00	1.00e+00

(60) #1 (Tx) and #8 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	0	0.0%	0.00e+00	1.00e+00
#2 (912 MHz)	0	0.0%	0.00e+00	1.00e+00
#3 (912 MHz)	0	0.0%	0.00e+00	1.00e+00
#4 (915 MHz)	0	0.0%	0.00e+00	1.00e+00
#5 (918 MHz)	0	0.0%	0.00e+00	1.00e+00
#6 (921 MHz)	0	0.0%	0.00e+00	1.00e+00
#7 (924 MHz)	0	0.0%	0.00e+00	1.00e+00

(61) #11 (Tx) and #4 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	127	55.6%	3.66e-02	4.62e-01
#2 (912 MHz)	0	0.0%	0.00e+00	1.00e+00
#3 (912 MHz)	127	12.4%	2.34e-02	8.80e-01
#4 (915 MHz)	104	3.9%	4.17e-05	9.61e-01
#5 (918 MHz)	109	2.9%	3.55e-02	9.72e-01
#6 (921 MHz)	5	0.1%	0.00e+00	9.99e-01
#7 (924 MHz)	0	0.0%	0.00e+00	1.00e+00

(62) #4 (Tx) and #11 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	144	79.3%	1.15e-02	2.16e-01
#2 (912 MHz)	0	0.0%	0.00e+00	1.00e+00
#3 (912 MHz)	136	80.5%	1.67e-02	2.08e-01
#4 (915 MHz)	58	3.7%	4.42e-03	9.63e-01
#5 (918 MHz)	113	13.3%	3.25e-02	8.71e-01
#6 (921 MHz)	54	5.1%	3.22e-02	9.51e-01
#7 (924 MHz)	0	0.0%	0.00e+00	1.00e+00

(63) #11 (Tx) and #3 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	0	0.0%	0.00e+00	1.00e+00
#2 (912 MHz)	0	0.0%	0.00e+00	1.00e+00
#3 (912 MHz)	0	0.0%	0.00e+00	1.00e+00
#4 (915 MHz)	0	0.0%	0.00e+00	1.00e+00
#5 (918 MHz)	0	0.0%	0.00e+00	1.00e+00
#6 (921 MHz)	0	0.0%	0.00e+00	1.00e+00
#7 (924 MHz)	0	0.0%	0.00e+00	1.00e+00

(64) #3 (Tx) and #11 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	0	0.0%	0.00e+00	1.00e+00
#2 (912 MHz)	0	0.0%	0.00e+00	1.00e+00
#3 (912 MHz)	0	0.0%	0.00e+00	1.00e+00
#4 (915 MHz)	0	0.0%	0.00e+00	1.00e+00
#5 (918 MHz)	0	0.0%	0.00e+00	1.00e+00
#6 (921 MHz)	0	0.0%	0.00e+00	1.00e+00
#7 (924 MHz)	0	0.0%	0.00e+00	1.00e+00

(65) #11 (Tx) and #5 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	0	0.0%	0.00e+00	1.00e+00
#2 (912 MHz)	0	0.0%	0.00e+00	1.00e+00
#3 (912 MHz)	0	0.0%	0.00e+00	1.00e+00
#4 (915 MHz)	0	0.0%	0.00e+00	1.00e+00
#5 (918 MHz)	0	0.0%	0.00e+00	1.00e+00
#6 (921 MHz)	0	0.0%	0.00e+00	1.00e+00
#7 (924 MHz)	0	0.0%	0.00e+00	1.00e+00

(66) #5 (Tx) and #11 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	0	0.0%	0.00e+00	1.00e+00
#2 (912 MHz)	0	0.0%	0.00e+00	1.00e+00
#3 (912 MHz)	0	0.0%	0.00e+00	1.00e+00
#4 (915 MHz)	0	0.0%	0.00e+00	1.00e+00
#5 (918 MHz)	0	0.0%	0.00e+00	1.00e+00
#6 (921 MHz)	0	0.0%	0.00e+00	1.00e+00
#7 (924 MHz)	0	0.0%	0.00e+00	1.00e+00

(67) #11 (Tx) and #1 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	0	0.0%	0.00e+00	1.00e+00
#2 (912 MHz)	0	0.0%	0.00e+00	1.00e+00
#3 (912 MHz)	0	0.0%	0.00e+00	1.00e+00
#4 (915 MHz)	0	0.0%	0.00e+00	1.00e+00
#5 (918 MHz)	0	0.0%	0.00e+00	1.00e+00
#6 (921 MHz)	0	0.0%	0.00e+00	1.00e+00
#7 (924 MHz)	0	0.0%	0.00e+00	1.00e+00

(68) #1 (Tx) and #11 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	0	0.0%	0.00e+00	1.00e+00
#2 (912 MHz)	0	0.0%	0.00e+00	1.00e+00
#3 (912 MHz)	0	0.0%	0.00e+00	1.00e+00
#4 (915 MHz)	0	0.0%	0.00e+00	1.00e+00
#5 (918 MHz)	0	0.0%	0.00e+00	1.00e+00
#6 (921 MHz)	0	0.0%	0.00e+00	1.00e+00
#7 (924 MHz)	0	0.0%	0.00e+00	1.00e+00

Results - Cell 4

(1) #10 (Tx) and #15 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	198	100.0%	0.00e+00	0.00e+00
#2 (912 MHz)	194	99.8%	0.00e+00	1.96e-03
#3 (912 MHz)	195	100.0%	0.00e+00	0.00e+00
#4 (915 MHz)	194	100.0%	0.00e+00	0.00e+00
#5 (918 MHz)	195	100.0%	0.00e+00	0.00e+00
#6 (921 MHz)	193	100.0%	0.00e+00	0.00e+00
#7 (924 MHz)	194	100.0%	0.00e+00	0.00e+00

(2) #15 (Tx) and #10 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	200	99.8%	0.00e+00	1.96e-03
#2 (912 MHz)	187	95.9%	6.47e-06	4.12e-02
#3 (912 MHz)	196	100.0%	0.00e+00	0.00e+00
#4 (915 MHz)	134	66.9%	0.00e+00	3.31e-01
#5 (918 MHz)	173	87.1%	3.45e-07	1.29e-01
#6 (921 MHz)	162	56.0%	0.00e+00	4.40e-01
#7 (924 MHz)	4	2.2%	0.00e+00	9.78e-01

(3) #21 (Tx) and #15 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	153	62.8%	3.47e-02	3.94e-01
#2 (912 MHz)	70	0.4%	0.00e+00	9.96e-01
#3 (912 MHz)	105	1.1%	0.00e+00	9.89e-01
#4 (915 MHz)	1	0.0%	0.00e+00	1.00e+00
#5 (918 MHz)	78	8.3%	1.77e-02	9.21e-01
#6 (921 MHz)	11	0.1%	0.00e+00	9.99e-01
#7 (924 MHz)	0	0.0%	0.00e+00	1.00e+00

(4) #15 (Tx) and #21 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	132	53.4%	1.75e-04	4.66e-01
#2 (912 MHz)	125	53.7%	1.86e-02	4.73e-01
#3 (912 MHz)	148	38.8%	7.16e-05	6.12e-01
#4 (915 MHz)	157	100.0%	8.50e-06	8.50e-06
#5 (918 MHz)	157	100.0%	0.00e+00	0.00e+00
#6 (921 MHz)	153	99.0%	1.54e-03	1.13e-02
#7 (924 MHz)	40	0.3%	2.47e-04	9.97e-01

(5) #23 (Tx) and #15 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MIIz)	0	0.0%	0.00e+00	1.00e+00
#2 (912 MHz)	0	0.0%	0.00e+00	1.00e+00
#3 (912 MHz)	0	0.0%	0.00e+00	1.00e+00
#4 (915 MHz)	0	0.0%	0.00e+00	1.00e+00
#5 (918 MHz)	0	0.0%	0.00e+00	1.00e+00
#6 (921 MHz)	0	0.0%	0.00e+00	1.00e+00
#7 (924 MHz)	0	0.0%	0.00e+00	1.00e+00

(6) #15 (Tx) and #23 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	0	0.0%	0.00e+00	1.00e+00
#2 (912 MHz)	176	0.9%	0.00e+00	9.91e-01
#3 (912 MHz)	0	0.0%	0.00e+00	1.00e+00
#4 (915 MHz)	0	0.0%	0.00e+00	1.00e+00
#5 (918 MHz)	0	0.0%	0.00e+00	1.00e+00
#6 (921 MHz)	0	0.0%	0.00e+00	1.00e+00
#7 (924 MHz)	0	0.0%	0.00e+00	1.00e+00

(7) #24 (Tx) and #15 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	0	0.0%	0.00e+00	1.00e+00
#2 (912 MHz)	0	0.0%	0.00e+00	1.00e+00
#3 (912 MHz)	0	0.0%	0.00e+00	1.00e+00
#4 (915 MHz)	0	0.0%	0.00e+00	1.00e+00
#5 (918 MHz)	0	0.0%	0.00e+00	1.00e+00
#6 (921 MHz)	0	0.0%	0.00e+00	1.00e+00
#7 (924 MHz)	0	0.0%	0.00e+00	1.00e+00

(8) #15 (Tx) and #24 (Rx)

Frequency #	Average Link Quality			
	RSSI	Byte Throughput	BER (received bytes)	BER (total bytes)
#1 (906 MHz)	0	0.0%	0.00e+00	1.00e+00
#2 (912 MHz)	0	0.0%	0.00e+00	1.00e+00
#3 (912 MHz)	128	7.3%	0.00e+00	9.27e-01
#4 (915 MHz)	0	0.0%	0.00e+00	1.00e+00
#5 (918 MHz)	0	0.0%	0.00e+00	1.00e+00
#6 (921 MHz)	0	0.0%	0.00e+00	1.00e+00
#7 (924 MHz)	0	0.0%	0.00e+00	1.00e+00

APPENDIX B : MULTI-HOP LINK RESULTS

Each file has a heading that denotes the pair of radios at which data was collected simultaneously off the diagnostic port using *lager* software. One of the radios at which data is collected is always the headend (radio #0). The columns denote the radio number (#0 through #13) and the rows denote the message type. The numbers indicate cumulative statistics for each set of 60 frames.

(Cell 1) HE & Radio #1: Data collected at HE

** Data from file 10291330.log

==== Start Frame 51600, Total Elapsed Frames 60 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	60	60	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	45	53	56	53	56	55	57	60	59	60	59	60	50	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	60	60	60	57	60	55	60	60	60	60	60	60
RSP RX	60	58	60	57	59	50	56	60	60	54	58	60
DEL UD	0	0	0	0	0	1	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	1	0	0	0	0	0	0

==== Start Frame 51660, Total Elapsed Frames 120 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	60	60	60	51	60	60	60	60	60	60	60	60	60	60
RSP RX	57	59	59	43	58	56	58	59	57	60	59	60	47	60
DEL UD	0	0	0	1	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	1	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	60	58	60	60	60	57	57	58	60	55	57	57
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 51720, Total Elapsed Frames 180 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	60	60	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	50	54	59	58	60	56	57	59	59	60	60	60	49	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	60	59	59	60	55	47	56	57	60	53	56	56
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 51780, Total Elapsed Frames 240 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	60	60	60	60	60	60	60	60	60	60	60	60	58	60
RSP RX	51	55	58	58	59	57	57	60	60	59	60	59	43	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	1	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	1	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	60	60	60	60	60	60	60	60	59	60	60	60
RSP RX	60	60	59	60	54	60	58	59	60	59	59	59
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

(Cell 1) HE & Radio #1: Data collected at Radio #1

** Data from file 10291333.log

==== Start Frame 51600, Total Elapsed Frames 60 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	57	55	0	0	0	0	55	6	55	0	0	0	60	0
RSP TX	57	57	57	60	58	0	57	3	57	60	8	1	50	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	0	4	60	0	0	1	60	60	0	60	60	60
RSP TX	0	4	60	0	0	0	56	60	0	54	58	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 51660, Total Elapsed Frames 120 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	59	59	0	37	0	0	59	3	59	0	0	0	59	0
RSP TX	59	60	59	51	60	0	59	0	59	59	4	0	46	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	1	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	0	0	60	0	0	0	60	60	0	60	59	59
RSP TX	0	0	59	0	0	0	56	57	0	54	56	56
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 51720, Total Elapsed Frames 180 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	56	55	0	56	0	0	56	3	56	0	0	0	60	0
RSP TX	56	55	58	60	60	0	55	0	55	60	0	0	48	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	0	0	60	0	0	0	60	60	0	60	60	60
RSP TX	0	0	59	0	0	0	56	57	0	53	56	56
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 51780, Total Elapsed Frames 240 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	60	59	0	52	0	0	60	0	59	0	0	0	39	0
RSP TX	60	59	58	60	60	0	58	1	58	60	2	0	24	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	0	0	60	0	0	0	60	60	0	60	60	60
RSP TX	0	0	60	0	0	0	59	60	0	60	60	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 51840, Total Elapsed Frames 300 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	51	60	60	60	60	60	60	60	59	60	60	60	60	60
RSP RX	31	41	60	51	60	60	59	60	48	60	60	60	53	59
DEL UD	1	0	0	0	0	0	0	0	1	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	1	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	60	60	60	60	60	59	60	59	60	60	60	60
RSP RX	60	60	60	52	58	59	58	60	60	60	60	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 51900, Total Elapsed Frames 360 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	60	60	60	51	60	60	60	60	60	60	59	60	58	60
RSP RX	58	44	59	36	57	57	59	59	59	60	59	60	46	60
DEL UD	0	0	0	1	0	0	0	0	0	0	0	0	1	0
ENT RQ	0	0	0	1	0	0	0	0	0	0	0	0	1	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	60	60	60	54	60	44	60	60	60	60	60	60
RSP RX	60	57	60	45	60	33	55	60	60	59	60	60
DEL UD	0	0	0	1	0	1	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	6	0	0	0	0	0	0

==== Start Frame 51960, Total Elapsed Frames 420 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	53	60	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	38	45	57	47	60	58	57	58	56	60	59	59	60	60
DEL UD	1	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	60	60	60	60	60	59	59	59	60	58	58	59
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 52020, Total Elapsed Frames 480 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	52	44	51	42	60	60	49	60	53	60	60	60	60	60
RSP RX	38	29	37	26	53	57	37	60	38	60	60	60	59	59
DEL UD	1	2	1	2	0	0	1	0	1	0	0	0	0	0
ENT RQ	0	0	1	1	0	0	0	0	1	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	60	50	60	60	60	49	57	60	60	58	59	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 51840, Total Elapsed Frames 300 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	43	49	0	0	0	0	50	0	23	0	0	0	0	0
RSP TX	44	41	53	60	60	0	51	0	23	60	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	1	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	0	0	60	0	0	0	60	60	0	60	60	60
RSP TX	0	0	59	0	0	0	57	59	0	59	59	59
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 51900, Total Elapsed Frames 360 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	59	59	0	12	0	0	59	0	59	0	0	0	0	0
RSP TX	59	46	59	51	58	0	59	0	59	60	4	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	1	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	0	0	60	0	0	0	60	60	0	60	60	60
RSP TX	0	0	60	0	0	0	54	60	0	59	60	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 51960, Total Elapsed Frames 420 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	48	53	0	24	0	0	53	0	53	0	0	0	0	0
RSP TX	49	47	52	60	60	0	51	0	50	60	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	1	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	0	0	60	0	0	0	60	60	0	60	60	60
RSP TX	0	0	60	0	0	0	59	59	0	58	58	59
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 52020, Total Elapsed Frames 480 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	50	42	0	30	0	0	49	1	50	0	0	0	0	0
RSP TX	51	40	50	42	58	0	49	1	41	60	1	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	1	2	1	2	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	0	0	60	0	0	0	60	60	0	60	60	60
RSP TX	0	0	60	0	0	0	57	60	0	58	59	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 52080, Total Elapsed Frames 540 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	60	60	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	57	56	60	56	59	52	58	60	49	60	60	60	60	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	60	59	58	60	60	59	59	59	60	58	57	54
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 52140, Total Elapsed Frames 600 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	60	60	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	60	60	59	58	60	59	60	60	44	60	60	60	54	59
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	60	60	60	60	60	60	60	60	60	60	44	44
RSP RX	60	56	60	59	58	51	59	59	60	43	23	19
DEL UD	0	0	0	0	0	0	0	0	0	0	2	2
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

======== Test Data Summary ========

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	576	584	591	564	600	600	589	600	592	600	599	600	596	600
RSP RX	485	496	564	486	582	567	559	595	529	599	596	598	521	597
DEL UD	3	2	1	4	0	0	1	0	2	0	0	0	2	0
ENT RQ	0	0	1	3	0	0	0	0	2	0	0	0	2	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	600	600	600	591	600	578	600	599	599	600	584	584
RSP RX	600	577	596	573	584	524	574	591	600	557	547	544
DEL UD	0	0	0	1	0	2	0	0	0	0	2	2
ENT RQ	0	0	0	0	0	7	0	0	0	0	0	0

Frame range = 51600 -> 52199
Total number of frames = 600
Total number of DEL UPDT frames = 22
Total number of ENT RQST frames = 15

==== Start Frame 52080, Total Elapsed Frames 540 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	57	56	0	57	0	0	60	0	57	0	0	0	0	0
RSP TX	57	56	54	60	59	0	60	0	19	60	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	0	0	60	0	0	0	60	60	0	60	60	60
RSP TX	0	0	58	0	0	0	59	59	0	58	57	54
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 52140, Total Elapsed Frames 600 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	60	60	0	60	0	0	60	1	60	0	0	0	0	0
RSP TX	60	60	56	60	60	0	60	1	24	60	1	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	0	0	60	0	0	0	60	60	0	60	19	19
RSP TX	0	0	60	0	0	0	59	59	0	43	7	7
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

======== Test Data Summary ========

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	549	547	0	328	0	0	561	14	531	0	0	0	218	0
RSP TX	552	521	556	564	593	0	559	6	445	599	20	1	168	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	3	2	1	4	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	0	4	600	0	0	1	600	600	0	600	558	558
RSP TX	0	4	595	0	0	0	572	590	0	556	530	531
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

Frame range = 51600 -> 52199
Total number of frames = 600
Total number of DEL UPDT frames = 0
Total number of ENT RQST frames = 10

(Cell 1) HE & Radio #2: Data collected at HE

** Data from file 11051108.log

==== Start Frame 36800, Total Elapsed Frames 60 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	60	60	60	60	60	60	60	60	58	60	60	60	60	60
RSP RX	57	57	60	55	59	56	59	57	46	60	59	60	60	50
DEL UD	0	0	0	0	0	0	0	0	1	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	1	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	60	60	60	52	60	60	60	60	60	60	60	59
RSP RX	60	60	60	47	58	60	60	60	60	60	60	60
DEL UD	0	0	0	1	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 36860, Total Elapsed Frames 120 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	60	60	60	60	60	60	60	60	60	59	60	59	60	60
RSP RX	60	58	60	60	60	54	60	58	57	60	60	60	59	56
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	60	60	60	60	54	60	60	60	60	60	60	60
RSP RX	60	59	59	59	43	60	60	60	60	59	60	60
DEL UD	0	0	0	0	1	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	1	0	0	0	0	0	0	0

==== Start Frame 36920, Total Elapsed Frames 180 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	60	60	60	60	60	60	60	59	60	60	60	60	60	60
RSP RX	59	58	59	51	60	54	60	60	60	60	60	60	60	51
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	59	59	59	59	59	60	59	60	60	51	57	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 36980, Total Elapsed Frames 240 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	60	60	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	59	59	60	57	60	58	60	60	60	60	60	60	60	45
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	60	59	59	60	59	59	59	59	60	59	59	59
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

(Cell 1) HE & Radio #2: Data collected at Radio #2

** Data from file 11051107.log

==== Start Frame 36800, Total Elapsed Frames 60 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	2	59	1	1	1	2	2	12	35	1	1	1	1	1
RSP TX	58	59	59	58	1	1	30	13	34	15	0	1	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	1	1	1	1	1	1	1	1	1	1	1	1
RSP TX	0	0	0	0	0	0	0	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 36860, Total Elapsed Frames 120 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	0	58	0	0	0	1	1	13	57	0	0	0	0	0
RSP TX	60	58	59	60	1	1	26	13	57	18	0	1	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	0	0	0	0	0	0	0	0	0	0	0	0
RSP TX	1	0	0	0	0	0	2	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 36920, Total Elapsed Frames 180 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	1	59	0	0	0	1	1	15	60	0	0	0	0	0
RSP TX	60	59	59	59	1	1	36	16	59	19	0	1	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	0	0	0	0	0	0	0	0	0	0	0	0
RSP TX	0	0	2	0	0	0	3	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 36980, Total Elapsed Frames 240 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	0	60	1	0	1	0	0	9	56	1	1	1	1	1
RSP TX	59	60	55	58	0	0	34	10	54	10	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	1	0	0	0	0	0	0	0	0	0	0	0
RSP TX	0	0	1	0	0	0	2	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 37040, Total Elapsed Frames 300 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	60	60	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	60	60	60	55	60	57	60	58	60	60	60	60	60	55
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	60	60	59	45	60	60	60	60	60	59	60	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 37100, Total Elapsed Frames 360 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	60	60	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	56	54	56	44	58	53	59	60	57	60	59	60	59	58
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	60	60	60	56	60	60	60	60	60	60	60	60
RSP RX	60	58	58	52	58	60	60	59	60	60	60	60
DEL UD	0	0	0	1	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	1	0	0	0	0	0	0	0	0

==== Start Frame 37160, Total Elapsed Frames 420 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	60	60	60	51	60	60	60	60	60	60	60	60	60	60
RSP RX	57	57	58	40	57	51	58	56	58	60	59	60	60	55
DEL UD	0	0	0	1	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	60	60	60	60	60	60	60	60	60	59	60	59
RSP RX	60	54	53	56	55	57	60	59	60	49	57	57
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 37220, Total Elapsed Frames 480 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	60	60	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	60	60	55	57	60	54	60	57	56	60	59	60	60	57
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	60	60	60	59	60	60	60	60	60	60	60	60
RSP RX	60	60	60	60	59	60	60	60	60	59	60	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 37280, Total Elapsed Frames 540 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	60	60	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	55	54	56	53	58	52	60	51	55	59	58	60	60	57
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	60	60	60	60	60	60	60	59	60	58	59	59
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 37040, Total Elapsed Frames 300 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	0	60	0	0	0	0	0	19	59	0	0	0	0	0
RSP TX	60	60	60	58	0	3	31	16	60	20	0	2	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	0	0	0	0	0	0	0	0	0	0	0	0
RSP TX	0	0	1	0	0	0	0	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 37100, Total Elapsed Frames 360 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	1	57	1	1	0	1	1	21	57	0	0	0	0	0
RSP TX	58	57	59	60	2	1	35	20	57	23	0	1	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	0	0	0	0	0	0	0	0	0	0	0	0
RSP TX	0	0	1	0	0	0	1	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 37160, Total Elapsed Frames 420 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	1	58	1	0	1	0	0	15	55	1	1	1	1	1
RSP TX	58	58	55	47	1	4	29	14	53	16	0	1	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	1	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	1	1	0	0	0	1	0	0	1	0	0	0
RSP TX	0	0	1	0	0	0	0	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 37220, Total Elapsed Frames 480 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	2	60	1	1	1	3	3	15	58	1	1	1	1	1
RSP TX	60	60	56	59	1	2	27	10	51	19	0	1	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	1	1	1	1	1	1	1	1	1	1	1	1
RSP TX	0	0	0	0	0	0	0	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 37280, Total Elapsed Frames 540 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	2	59	1	1	1	1	1	19	55	1	1	1	1	1
RSP TX	60	59	57	60	1	0	38	14	53	20	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	1	1	1	1	1	1	1	0	1	0	0	0
RSP TX	0	0	0	0	0	0	2	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 37340, Total Elapsed Frames 600 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	60	60	51	60	60	60	60	60	57	60	60	60	60	60
RSP RX	58	57	37	57	59	56	60	59	41	60	52	60	60	51
DEL UD	0	0	1	0	0	0	0	0	1	0	0	0	0	0
ENT RQ	0	0	1	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	60	51	46	53	45	55	60	60	60	48	60	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 37400, Total Elapsed Frames 660 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	60	60	51	60	60	60	60	60	49	60	60	60	60	60
RSP RX	50	50	40	53	55	56	60	57	35	60	52	60	59	57
DEL UD	0	0	1	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	1	0	0	0	0	0	3	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	60	51	49	52	44	60	60	60	60	60	60	60
RSP RX	60	44	36	32	30	53	58	58	59	58	58	58
DEL UD	0	1	2	1	2	0	0	0	0	0	0	0
ENT RQ	0	1	0	3	2	0	0	0	0	0	0	0

==== Start Frame 37460, Total Elapsed Frames 720 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	60	60	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	58	58	59	57	60	54	60	60	45	60	60	60	60	58
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	60	60	60	53	60	60	60	60	60	60	60	60
RSP RX	60	59	58	41	59	58	60	60	60	58	60	60
DEL UD	0	0	0	1	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	1	0	0	0	0	0	0	0	0

==== Start Frame 37520, Total Elapsed Frames 780 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	60	60	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	58	58	59	60	60	59	60	60	47	60	60	60	60	59
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	60	60	60	60	60	60	60	60	59	60	60	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 37580, Total Elapsed Frames 840 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	60	60	60	60	60	60	60	60	52	60	60	60	59	60
RSP RX	57	56	48	55	58	57	59	56	33	59	57	59	59	59
DEL UD	0	0	0	0	0	0	0	0	1	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	59	58	59	55	59	59	59	59	59	59	59	59
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 37340, Total Elapsed Frames 600 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	0	59	0	0	0	1	1	21	45	0	0	0	0	0
RSP TX	59	59	49	59	0	5	44	19	44	20	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	1	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	0	0	0	0	0	0	0	0	0	0	0	0
RSP TX	0	0	1	0	0	0	2	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 37400, Total Elapsed Frames 660 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	1	60	1	1	1	2	2	21	0	1	1	1	1	1
RSP TX	60	60	49	57	0	1	27	17	0	19	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	1	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	1	2	1	1	1	1	1	1	1	1	1	1
RSP TX	0	0	1	0	0	0	2	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 37460, Total Elapsed Frames 720 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	1	60	0	0	0	1	1	22	1	0	0	0	0	0
RSP TX	60	60	59	60	2	0	32	19	0	20	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	0	0	0	0	0	0	0	0	0	0	0	0
RSP TX	0	0	1	0	0	0	2	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 37520, Total Elapsed Frames 780 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	1	58	1	1	1	2	1	19	1	1	1	1	1	1
RSP TX	58	58	44	60	0	1	25	11	0	12	0	1	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	1	1	1	1	1	1	1	0	1	0	0	0
RSP TX	1	0	0	0	0	0	1	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 37580, Total Elapsed Frames 840 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	1	58	1	0	1	0	0	11	19	1	1	1	0	0
RSP TX	59	58	59	60	0	2	31	11	17	12	0	1	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	0	0	0	0	0	0	0	0	0	0	0	0
RSP TX	1	0	2	0	0	0	1	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 37640, Total Elapsed Frames 900 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	60	60	51	60	60	60	60	60	26	60	60	60	60	60
RSP RX	57	57	47	58	58	57	60	60	5	60	57	60	60	56
DEL UD	0	0	1	0	0	0	0	0	3	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	5	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	60	50	59	47	58	59	60	60	60	52	60	59
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 37700, Total Elapsed Frames 960 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	60	60	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	52	50	53	52	54	54	59	59	54	60	54	60	60	53
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	60	43	59	43	59	59	59	59	59	56	59	59
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

======== Test Data Summary ========

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	960	960	933	951	960	960	960	959	902	959	960	959	959	960
RSP RX	913	903	867	864	936	882	954	928	769	958	926	959	956	877
DEL UD	0	0	3	1	0	0	0	0	6	0	0	0	0	0
ENT RQ	0	0	2	0	0	0	0	0	9	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	960	951	949	932	938	960	960	960	960	959	960	958
RSP RX	958	894	904	829	881	939	954	952	957	904	948	950
DEL UD	0	1	2	4	3	0	0	0	0	0	0	0
ENT RQ	0	1	0	5	3	0	0	0	0	0	0	0

Frame range = 36800 -> 37759
Total number of frames = 960
Total number of DEL UPDT frames = 20
Total number of ENT RQST frames = 20

==== Start Frame 37640, Total Elapsed Frames 900 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	1	60	1	1	2	2	2	15	1	1	1	1	1	1
RSP TX	60	60	50	60	0	2	33	17	1	18	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	1	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	1	1	1	1	1	1	1	1	1	1	1	1
RSP TX	1	0	0	0	0	0	0	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 37700, Total Elapsed Frames 960 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	3	59	2	0	1	1	1	16	0	1	1	1	1	1
RSP TX	59	59	57	59	1	3	26	14	0	21	0	2	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	1	1	0	0	0	1	0	0	1	0	0	0
RSP TX	1	0	0	0	0	0	1	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

======== Test Data Summary ========

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	17	944	12	7	11	18	17	263	559	10	10	10	9	9
RSP TX	948	944	886	934	11	27	504	234	540	282	0	12	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	3	1	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	9	9	6	6	6	8	6	4	8	4	4	4
RSP TX	5	0	11	0	0	0	19	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

Frame range = 36800 -> 37759
Total number of frames = 960
Total number of DEL UPDT frames = 0
Total number of ENT RQST frames = 4

(Cell 1) HE & Radio #7: Data collected at HE

** Data from file 10291330.log

==== Start Frame 51600, Total Elapsed Frames 60 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	60	60	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	45	53	56	53	56	55	57	60	59	60	59	60	50	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	60	60	60	57	60	55	60	60	60	60	60	60
RSP RX	60	58	60	57	59	50	56	60	60	54	58	60
DEL UD	0	0	0	0	0	1	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	1	0	0	0	0	0	0

==== Start Frame 51660, Total Elapsed Frames 120 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	60	60	60	51	60	60	60	60	60	60	60	60	60	60
RSP RX	57	59	59	43	58	56	58	59	57	60	59	60	47	60
DEL UD	0	0	0	1	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	1	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	60	58	60	60	60	57	57	58	60	55	57	57
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 51720, Total Elapsed Frames 180 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	60	60	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	50	54	59	58	60	56	57	59	59	60	60	60	49	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	60	59	59	60	55	47	56	57	60	53	56	56
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 51780, Total Elapsed Frames 240 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	60	60	60	60	60	60	60	60	60	60	60	60	58	60
RSP RX	51	55	58	58	59	57	57	60	60	59	60	59	43	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	1	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	1	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	60	60	60	60	60	60	60	60	59	60	60	60
RSP RX	60	60	59	60	54	60	58	59	60	59	59	59
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

(Cell 1) HE & Radio #7: Data collected at Radio #7

** Data from file 10291326.log

==== Start Frame 51600, Total Elapsed Frames 60 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	60	60	0	38	3	60	60	45	60	0	0	0	60	0
RSP TX	49	57	60	60	57	57	60	60	60	0	50	60	50	59
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	0	2	0	5	60	39	57	0	0	57	56	56
RSP TX	5	2	0	2	58	38	60	54	0	50	52	54
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 51660, Total Elapsed Frames 120 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	60	60	0	38	0	60	60	46	60	0	0	0	58	0
RSP TX	58	60	60	51	56	58	60	60	60	0	45	60	47	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	1	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	0	14	0	18	60	0	59	0	0	59	56	55
RSP TX	15	8	0	10	60	0	60	58	0	56	57	57
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 51720, Total Elapsed Frames 180 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	58	58	0	58	0	60	58	60	58	0	0	0	59	0
RSP TX	48	53	58	59	56	57	58	60	60	0	55	59	48	59
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	0	17	0	40	60	0	59	0	0	59	59	59
RSP TX	36	13	0	30	55	0	58	57	0	52	56	56
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 51780, Total Elapsed Frames 240 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	60	60	1	52	0	60	60	60	60	0	0	0	43	0
RSP TX	53	58	60	60	60	60	60	60	60	0	59	60	30	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	0	0	0	17	60	0	60	0	0	60	60	60
RSP TX	32	0	2	22	54	0	59	60	2	60	60	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 51840, Total Elapsed Frames 300 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	51	60	60	60	60	60	60	60	59	60	60	60	60	60
RSP RX	31	41	60	51	60	60	59	60	48	60	60	60	53	59
DEL UD	1	0	0	0	0	0	0	0	1	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	1	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	60	60	60	60	60	59	60	59	60	60	60	60
RSP RX	60	60	60	52	58	59	58	60	60	60	60	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 51900, Total Elapsed Frames 360 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	60	60	60	51	60	60	60	60	60	60	59	60	58	60
RSP RX	58	44	59	36	57	57	59	59	59	60	59	60	46	60
DEL UD	0	0	0	1	0	0	0	0	0	0	0	0	1	0
ENT RQ	0	0	0	1	0	0	0	0	0	0	0	0	1	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	60	60	60	54	60	44	60	60	60	60	60	60
RSP RX	60	57	60	45	60	33	55	60	60	59	60	60
DEL UD	0	0	0	1	0	1	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	6	0	0	0	0	0	0

==== Start Frame 51960, Total Elapsed Frames 420 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	53	60	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	38	45	57	47	60	58	57	58	56	60	59	59	60	60
DEL UD	1	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	60	60	60	60	60	59	59	59	60	58	58	59
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 52020, Total Elapsed Frames 480 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	52	44	51	42	60	60	49	60	53	60	60	60	60	60
RSP RX	38	29	37	26	53	57	37	60	38	60	60	60	59	59
DEL UD	1	2	1	2	0	0	1	0	1	0	0	0	0	0
ENT RQ	0	0	1	1	0	0	0	0	1	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	60	50	60	60	60	49	57	60	60	58	59	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 52080, Total Elapsed Frames 540 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	60	60	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	57	56	60	56	59	52	58	60	49	60	60	60	60	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	60	59	58	60	60	59	59	59	60	58	57	54
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 51840, Total Elapsed Frames 300 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	50	59	0	0	0	60	59	60	27	0	0	0	4	0
RSP TX	31	41	60	60	60	60	59	60	49	0	59	60	6	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	1	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	0	0	0	7	60	0	60	0	0	60	60	60
RSP TX	30	0	0	6	59	0	60	59	0	59	59	59
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 51900, Total Elapsed Frames 360 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	59	59	0	12	0	60	59	60	59	0	0	0	1	0
RSP TX	58	45	59	51	58	59	59	60	59	0	60	60	0	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	1	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	0	0	0	6	60	21	60	0	0	60	60	60
RSP TX	17	0	0	3	60	21	60	60	0	59	60	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 51960, Total Elapsed Frames 420 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	52	59	1	25	0	60	59	59	59	0	0	0	21	0
RSP TX	40	47	59	60	60	60	59	59	58	0	60	60	17	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	0	0	0	24	60	0	59	0	0	59	59	59
RSP TX	22	0	4	16	60	0	60	60	1	59	59	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 52020, Total Elapsed Frames 480 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	50	42	3	31	0	59	49	57	50	0	0	0	1	0
RSP TX	50	40	51	42	57	60	50	60	51	0	59	60	4	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	2	1	2	0	0	3	0	1	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	0	0	0	16	59	0	60	0	0	60	60	59
RSP TX	24	0	5	12	60	0	59	60	0	58	59	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 52080, Total Elapsed Frames 540 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	55	54	0	55	0	60	60	55	55	0	0	0	0	0
RSP TX	57	56	60	60	59	56	60	60	57	0	55	59	0	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	0	0	0	9	60	0	60	0	0	60	59	59
RSP TX	8	0	0	7	60	0	59	57	0	56	55	52
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 52140, Total Elapsed Frames 600 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	60	60	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	60	60	59	58	60	59	60	60	44	60	60	60	54	59
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	60	60	60	60	60	60	60	60	60	60	44	44
RSP RX	60	56	60	59	58	51	59	59	60	43	23	19
DEL UD	0	0	0	0	0	0	0	0	0	0	2	2
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

======== Test Data Summary ========

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	576	584	591	564	600	600	589	600	592	600	599	600	596	600
RSP RX	485	496	564	486	582	567	559	595	529	599	596	598	521	597
DEL UD	3	2	1	4	0	0	1	0	2	0	0	0	2	0
ENT RQ	0	0	1	3	0	0	0	0	2	0	0	0	2	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	600	600	600	591	600	578	600	599	599	600	584	584
RSP RX	600	577	596	573	584	524	574	591	600	557	547	544
DEL UD	0	0	0	1	0	2	0	0	0	0	2	2
ENT RQ	0	0	0	0	0	7	0	0	0	0	0	0

Frame range = 51600 -> 52199
Total number of frames = 600
Total number of DEL UPDT frames = 22
Total number of ENT RQST frames = 15

==== Start Frame 52140, Total Elapsed Frames 600 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	60	60	0	60	0	60	60	56	60	0	0	0	0	0
RSP TX	60	60	60	60	60	60	60	60	59	0	57	60	0	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	0	0	0	3	60	0	60	0	0	60	19	19
RSP TX	6	0	0	3	59	0	60	57	0	41	7	7
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

======== Test Data Summary ========

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	564	571	5	369	3	599	584	558	548	0	0	0	247	0
RSP TX	504	517	587	563	583	587	585	599	573	0	559	598	202	598
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	2	1	4	0	0	3	0	2	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	0	33	0	145	599	60	594	0	0	594	548	546
RSP TX	195	23	11	111	585	59	595	582	3	550	524	525
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

Frame range = 51600 -> 52199
Total number of frames = 600
Total number of DEL UPDT frames = 0
Total number of ENT RQST frames = 12

(Cell 1) HE & Radio #8: Data collected at HE

** Data from file 10291527.log

==== Start Frame 0, Total Elapsed Frames 60 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	60	60	60	60	53	60	60	60	60	60	60	60	60	60
RSP RX	56	56	54	56	40	54	56	56	47	60	58	60	53	59
DEL UD	0	0	0	0	1	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	1	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	60	57	60	60	60	60	60	60	60	60	60	60
RSP RX	60	40	56	56	56	39	56	55	39	55	55	55
DEL UD	0	1	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 60, Total Elapsed Frames 120 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	60	59	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	49	50	52	50	50	48	50	50	45	60	59	59	59	58
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	60	55	60	60	60	57	60	60	60	60	60	60
RSP RX	50	46	51	45	51	35	45	50	40	50	49	50
DEL UD	0	0	0	0	0	1	0	0	0	0	0	0
ENT RQ	0	1	0	0	0	1	0	0	0	0	0	0

==== Start Frame 120, Total Elapsed Frames 180 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	60	60	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	42	42	56	42	41	41	42	42	35	60	60	60	60	58
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	60	60	60	60	60	60	60	60	58	60	60	60
RSP RX	58	40	42	42	42	37	42	40	39	40	40	40
DEL UD	0	0	0	0	0	0	0	0	1	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	1	0	0	0

==== Start Frame 180, Total Elapsed Frames 240 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	60	60	60	60	60	60	60	60	52	60	60	60	60	60
RSP RX	47	47	54	47	47	46	47	48	31	60	58	59	58	58
DEL UD	0	0	0	0	0	0	0	0	1	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	60	60	60	60	60	57	60	60	60	60	40	31
RSP RX	56	42	47	47	48	40	47	39	51	39	21	13
DEL UD	0	0	0	0	0	1	0	0	0	0	1	1
ENT RQ	0	0	0	0	0	2	0	0	0	0	0	0

(Cell 1) HE & Radio #8: Data collected at Radio #8

** Data from file 10291528.log

==== Start Frame 0, Total Elapsed Frames 60 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	56	56	0	56	5	56	56	56	49	0	0	0	0	0
RSP TX	56	56	57	56	45	56	56	56	51	60	60	60	53	58
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	1	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	0	0	56	48	57	0	51	56	0	56	56	56
RSP TX	49	0	57	50	57	40	50	56	0	56	56	56
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 60, Total Elapsed Frames 120 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	50	50	0	50	50	50	50	51	46	0	0	0	0	0
RSP TX	48	51	57	49	51	50	50	51	46	60	60	58	59	59
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	0	25	51	42	51	14	47	50	0	50	50	50
RSP TX	47	24	51	49	51	38	49	50	0	50	49	50
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	1	0	0	0	0	0	0

==== Start Frame 120, Total Elapsed Frames 180 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	42	42	0	42	42	42	42	42	38	0	0	0	0	0
RSP TX	42	42	57	42	42	41	42	42	39	60	60	60	60	58
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	0	0	42	41	42	5	44	42	9	42	42	42
RSP TX	57	0	42	44	42	39	44	40	9	40	40	40
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 180, Total Elapsed Frames 240 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	48	48	0	48	48	48	48	48	39	0	0	0	0	0
RSP TX	48	48	56	48	48	48	48	48	39	60	60	60	58	58
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	1	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	0	0	48	48	48	11	49	48	22	48	28	19
RSP TX	54	0	48	47	48	40	48	40	22	40	21	13
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	2	0	0	0	0	0	0

==== Start Frame 240, Total Elapsed Frames 300 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	60	60	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	59	59	57	59	55	54	59	55	54	60	59	60	59	58
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	60	60	60	60	60	54	60	57	60	51	45	46
RSP RX	60	55	58	59	58	50	59	53	57	47	41	37
DEL UD	0	0	0	0	0	1	0	1	0	1	1	1
ENT RQ	0	0	0	0	0	1	0	0	0	0	0	0

==== Start Frame 300, Total Elapsed Frames 360 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	60	60	60	60	59	60	60	60	60	60	60	60	60	60
RSP RX	59	59	59	59	48	55	59	60	58	60	59	59	60	60
DEL UD	0	0	0	0	1	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	1	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	60	58	60	60	60	58	60	60	60	60	60	58
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 360, Total Elapsed Frames 420 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	60	60	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	60	59	57	60	48	54	60	59	57	60	58	60	60	59
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	60	57	59	54	59	59	49	60	60	60	60	58
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 420, Total Elapsed Frames 480 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	60	60	60	60	52	60	60	60	59	60	60	59	60	60
RSP RX	57	57	59	58	41	51	58	59	58	59	58	59	57	57
DEL UD	0	0	0	0	1	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	1	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	59	60	60	51	60	60	51	60	60	60	60	60
RSP RX	60	55	59	33	58	58	38	55	58	54	55	51
DEL UD	0	0	0	1	0	0	1	0	0	0	0	0
ENT RQ	0	0	0	1	0	0	0	0	0	0	0	0

==== Start Frame 480, Total Elapsed Frames 540 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	60	60	59	60	60	60	59	60	52	60	60	60	60	60
RSP RX	58	58	57	58	59	52	58	58	42	58	59	59	58	59
DEL UD	0	0	0	0	0	0	0	0	1	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	59	58	58	46	58	59	58	59	59	56	57	54
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 240, Total Elapsed Frames 300 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	59	59	0	59	38	59	59	58	58	0	0	0	0	0
RSP TX	59	59	59	59	55	58	59	58	56	58	60	60	59	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	0	0	58	50	59	0	56	2	0	41	34	36
RSP TX	49	0	58	53	58	53	53	49	0	42	37	31
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	1	0	1	0	0	0	0

==== Start Frame 300, Total Elapsed Frames 360 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	59	59	0	59	30	59	59	60	60	0	0	0	0	0
RSP TX	59	60	60	59	49	59	59	60	58	60	60	59	60	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	1	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	0	0	60	53	60	0	55	0	0	53	52	52
RSP TX	53	0	60	55	60	57	55	52	0	52	52	51
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 360, Total Elapsed Frames 420 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	60	60	0	60	0	60	60	59	59	0	0	0	0	0
RSP TX	60	59	58	60	53	59	60	59	57	60	59	60	60	59
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	0	0	59	5	60	0	55	0	0	59	59	59
RSP TX	57	0	60	57	60	59	54	58	0	58	58	56
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 420, Total Elapsed Frames 480 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	60	60	0	60	22	60	60	60	59	0	0	0	0	0
RSP TX	58	59	58	59	47	59	60	60	59	60	60	60	58	59
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	1	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	0	0	60	0	60	0	48	0	0	45	42	42
RSP TX	42	0	60	39	59	56	47	44	0	41	43	39
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	1	0	0	0	0	0	0	0	0

==== Start Frame 480, Total Elapsed Frames 540 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	59	59	0	59	59	59	59	59	43	0	0	0	0	0
RSP TX	58	59	56	58	59	59	59	59	42	59	59	59	58	58
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	0	0	59	0	59	0	59	0	0	47	41	42
RSP TX	30	0	59	32	59	57	59	43	0	37	40	34
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 540, Total Elapsed Frames 600 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	60	60	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	60	59	55	60	60	56	60	60	54	60	60	60	60	59
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	60	55	60	43	60	58	60	59	59	58	59	59
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 600, Total Elapsed Frames 660 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	60	60	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	59	58	56	60	60	55	60	60	53	60	57	60	58	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	60	60	60	57	60	60	60	60	60	54	54	60
RSP RX	60	55	60	45	60	56	60	60	60	39	33	52
DEL UD	0	0	0	1	0	0	0	0	0	1	2	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 660, Total Elapsed Frames 720 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	60	60	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	60	60	53	60	60	54	60	60	52	60	59	60	60	59
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	60	60	60	48	60	60	60	60	60	59	58	60
RSP RX	59	58	60	33	60	51	59	60	60	38	50	51
DEL UD	0	0	0	1	0	0	0	0	0	1	0	0
ENT RQ	0	0	0	1	0	0	0	0	0	0	0	0

==== Start Frame 720, Total Elapsed Frames 780 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	60	60	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	60	59	51	60	60	55	60	58	52	60	58	60	57	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	60	60	60	60	60	60	59	60	60	29	29	21
RSP RX	60	53	59	60	59	57	46	60	60	18	18	9
DEL UD	0	0	0	0	0	0	1	0	0	1	1	1
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 780, Total Elapsed Frames 840 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	60	60	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	60	58	58	60	60	55	60	60	46	60	60	60	59	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	60	60	60	60	60	60	60	60	60	0	0	16
RSP RX	60	55	59	57	59	59	60	60	60	0	0	6
DEL UD	0	0	0	0	0	0	0	0	0	0	0	1
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 540, Total Elapsed Frames 600 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	60	60	0	60	60	60	60	60	58	0	0	0	0	0
RSP TX	60	59	55	60	60	59	60	60	53	60	60	60	60	59
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	0	0	60	0	60	0	60	0	0	24	15	21
RSP TX	10	0	60	18	60	54	60	26	0	19	20	18
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 600, Total Elapsed Frames 660 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	60	60	0	60	60	60	60	60	57	0	0	0	0	0
RSP TX	59	58	57	60	60	58	60	60	53	60	59	60	58	59
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	0	0	60	0	60	0	60	0	0	21	7	14
RSP TX	10	0	60	24	60	54	60	31	0	16	12	14
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 660, Total Elapsed Frames 720 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	60	60	0	60	60	60	60	60	41	0	0	0	0	0
RSP TX	60	60	49	60	60	60	60	60	44	60	59	60	60	59
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	0	0	60	6	60	0	60	0	0	35	33	35
RSP TX	13	0	60	24	60	55	59	39	0	19	28	25
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	1	0	0	0	0	0	0	0	0

==== Start Frame 720, Total Elapsed Frames 780 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	60	60	0	60	60	60	60	60	53	0	0	0	0	0
RSP TX	60	59	50	60	60	59	60	60	48	60	60	60	57	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	0	0	60	57	60	0	39	0	0	15	15	10
RSP TX	7	0	59	58	59	57	26	34	0	12	12	5
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 780, Total Elapsed Frames 840 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	60	60	0	60	60	60	60	60	50	0	0	0	0	0
RSP TX	60	58	54	60	60	57	60	60	48	60	60	60	59	58
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	0	0	60	59	60	0	0	0	0	0	0	9
RSP TX	12	0	59	58	59	53	5	37	0	0	0	6
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 840, Total Elapsed Frames 900 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	60	60	60	60	60	59	60	60	60	60	60	60	60	60
RSP RX	59	58	55	59	59	49	59	60	51	60	60	59	59	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	60	60	60	60	60	60	60	60	60	23	9	11
RSP RX	60	56	60	58	60	60	58	60	60	18	7	7
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 900, Total Elapsed Frames 960 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	60	60	59	60	59	60	60	60	60	60	60	60	60	60
RSP RX	60	60	58	60	60	55	60	59	57	60	58	60	59	59
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	60	60	60	60	60	60	60	60	60	60	60	59
RSP RX	60	57	60	58	60	57	59	60	60	51	50	44
DEL UD	0	0	0	0	0	0	0	0	0	0	0	1
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

======== Test Data Summary ========

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	960	959	958	960	943	959	959	960	943	960	960	959	960	960
RSP RX	905	899	891	908	848	834	908	904	792	957	940	954	936	943
DEL UD	0	0	0	0	3	0	0	0	2	0	0	0	0	0
ENT RQ	0	0	0	0	3	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	959	952	960	936	960	948	950	957	958	816	775	784
RSP RX	942	840	908	796	908	833	856	890	882	683	655	644
DEL UD	0	1	0	3	0	3	2	1	1	4	5	5
ENT RQ	0	1	0	2	0	4	0	0	1	0	0	0

Frame range = 0 -> 959
Total number of frames = 960
Total number of DEL UPDT frames = 30
Total number of ENT RQST frames = 11

==== Start Frame 840, Total Elapsed Frames 900 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	59	59	0	59	59	59	59	60	52	0	0	0	0	0
RSP TX	59	58	59	59	59	59	59	60	55	60	60	59	59	59
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	0	0	60	59	60	0	0	0	0	8	1	3
RSP TX	5	0	60	60	60	53	0	33	0	6	4	2
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 900, Total Elapsed Frames 960 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	60	60	0	60	60	60	60	60	57	0	0	0	0	0
RSP TX	60	60	57	60	60	58	60	60	57	60	60	60	59	59
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	0	0	60	59	60	0	0	0	0	21	14	12
RSP TX	4	0	60	60	59	47	0	23	0	14	16	13
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

======== Test Data Summary ========

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	912	912	0	912	713	912	912	913	819	0	0	0	0	0
RSP TX	906	905	899	909	868	899	912	913	805	957	956	955	937	942
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	3	0	0	0	1	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	0	25	913	527	916	30	683	198	31	565	489	502
RSP TX	499	24	913	728	911	812	669	655	31	502	488	453
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	2	0	4	0	1	0	0	0	0

Frame range = 0 -> 959
Total number of frames = 960
Total number of DEL UPDT frames = 0
Total number of ENT RQST frames = 11

(Cell 1) HE & Radio #9: Data collected at HE

** Data from file 11051108.log

==== Start Frame 36800, Total Elapsed Frames 60 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	60	60	60	60	60	60	60	60	58	60	60	60	60	60
RSP RX	57	57	60	55	59	56	59	57	46	60	59	60	60	50
DEL UD	0	0	0	0	0	0	0	0	1	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	1	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	60	60	60	52	60	60	60	60	60	60	60	59
RSP RX	60	60	60	47	58	60	60	60	60	60	60	60
DEL UD	0	0	0	1	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 36860, Total Elapsed Frames 120 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	60	60	60	60	60	60	60	60	60	59	60	59	60	60
RSP RX	60	58	60	60	60	54	60	58	57	60	60	60	59	56
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	60	60	60	60	54	60	60	60	60	60	60	60
RSP RX	60	59	59	59	43	60	60	60	60	59	60	60
DEL UD	0	0	0	0	1	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	1	0	0	0	0	0	0	0

==== Start Frame 36920, Total Elapsed Frames 180 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	60	60	60	60	60	60	60	59	60	60	60	60	60	60
RSP RX	59	58	59	51	60	54	60	60	60	60	60	60	60	51
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	59	59	59	59	59	60	59	60	60	51	57	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 36980, Total Elapsed Frames 240 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	60	60	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	59	59	60	57	60	58	60	60	60	60	60	60	60	45
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	60	59	59	60	59	59	59	59	60	59	59	59
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

(Cell 1) HE & Radio #9: Data collected at Radio #9

** Data from file 11051119.log

==== Start Frame 36800, Total Elapsed Frames 60 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	59	59	39	33	34	60	60	24	48	31	29	28	27	27
RSP TX	57	57	60	57	59	59	60	0	49	0	60	60	16	51
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	1	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	27	26	24	23	25	25	57	56	25	58	56	54
RSP TX	39	0	0	0	59	0	45	50	53	52	54	54
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 36860, Total Elapsed Frames 120 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	59	58	5	9	5	60	60	3	59	3	1	1	1	1
RSP TX	60	57	60	60	60	59	60	0	59	2	60	60	7	56
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	1	1	1	1	1	1	31	30	1	34	33	29
RSP TX	47	0	0	0	48	0	33	35	39	31	38	36
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	1	0	0	0	0	0	0	0

==== Start Frame 36920, Total Elapsed Frames 180 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	59	59	17	21	13	60	60	1	60	8	8	6	4	4
RSP TX	57	56	60	59	58	60	60	0	60	0	60	60	17	53
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	2	2	1	0	0	2	42	39	1	43	42	38
RSP TX	42	0	0	0	58	0	31	42	40	29	41	42
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 36980, Total Elapsed Frames 240 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	59	59	40	25	35	60	60	20	60	33	32	31	26	26
RSP TX	58	58	60	58	59	59	60	1	60	2	60	60	5	48
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	25	24	20	20	20	22	57	57	21	57	57	57
RSP TX	47	0	0	0	60	0	56	58	57	57	57	58
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 37040, Total Elapsed Frames 300 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	60	60	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	60	60	60	55	60	57	60	58	60	60	60	60	60	55
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	60	60	59	45	60	60	60	60	60	59	60	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 37100, Total Elapsed Frames 360 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	60	60	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	56	54	56	44	58	53	59	60	57	60	59	60	59	58
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	60	60	60	56	60	60	60	60	60	60	60	60
RSP RX	60	58	58	52	58	60	60	59	60	60	60	60
DEL UD	0	0	0	1	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	1	0	0	0	0	0	0	0	0

==== Start Frame 37160, Total Elapsed Frames 420 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	60	60	60	51	60	60	60	60	60	60	60	60	60	60
RSP RX	57	57	58	40	57	51	58	56	58	60	59	60	60	55
DEL UD	0	0	0	1	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	60	60	60	60	60	60	60	60	60	59	60	59
RSP RX	60	54	53	56	55	57	60	59	60	49	57	57
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 37220, Total Elapsed Frames 480 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	60	60	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	60	60	55	57	60	54	60	57	56	60	59	60	60	57
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	60	60	60	59	60	60	60	60	60	60	60	60
RSP RX	60	60	60	60	59	60	60	60	60	59	60	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 37280, Total Elapsed Frames 540 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	60	60	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	55	54	56	53	58	52	60	51	55	59	58	60	60	57
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	60	60	60	60	60	60	60	59	60	58	59	59
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 37040, Total Elapsed Frames 300 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	60	60	38	26	28	60	60	14	60	23	21	20	19	18
RSP TX	59	59	60	56	59	59	60	1	60	2	60	60	12	55
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	18	18	11	17	11	16	47	44	16	53	53	50
RSP TX	46	0	0	0	59	0	38	56	51	51	54	54
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 37100, Total Elapsed Frames 360 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	58	57	35	30	23	60	60	11	59	20	20	20	19	18
RSP TX	56	55	59	59	57	60	59	0	59	0	59	60	10	59
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	18	18	9	10	9	17	57	55	17	59	59	59
RSP TX	56	0	0	0	57	0	47	57	53	57	57	57
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 37160, Total Elapsed Frames 420 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	55	55	20	12	13	60	60	3	58	10	5	4	4	3
RSP TX	57	57	59	47	57	58	59	0	58	0	59	60	9	55
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	1	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	3	3	3	3	3	3	49	47	3	55	53	53
RSP TX	56	0	0	0	55	0	47	50	52	39	51	50
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 37220, Total Elapsed Frames 480 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	58	58	33	14	29	60	60	7	58	20	15	15	13	12
RSP TX	59	59	59	58	59	60	60	1	58	2	60	60	9	57
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	11	11	4	4	4	9	54	51	8	56	55	53
RSP TX	39	0	0	0	59	0	52	60	54	54	57	58
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 37280, Total Elapsed Frames 540 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	60	60	49	30	45	60	60	16	58	35	33	33	28	27
RSP TX	56	55	60	56	58	59	60	1	58	2	58	60	15	57
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	26	26	15	14	14	23	54	49	20	50	49	49
RSP TX	32	0	0	0	57	0	52	52	57	50	56	55
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 37340, Total Elapsed Frames 600 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	60	60	51	60	60	60	60	60	57	60	60	60	60	60
RSP RX	58	57	37	57	59	56	60	59	41	60	52	60	60	51
DEL UD	0	0	1	0	0	0	0	0	1	0	0	0	0	0
ENT RQ	0	0	1	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	60	51	46	53	45	55	60	60	60	48	60	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 37400, Total Elapsed Frames 660 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	60	60	51	60	60	60	60	60	49	60	60	60	60	60
RSP RX	50	50	40	53	55	56	60	57	35	60	52	60	59	57
DEL UD	0	0	1	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	1	0	0	0	0	0	3	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	60	51	49	52	44	60	60	60	60	60	60	60
RSP RX	60	44	36	32	30	53	58	58	59	58	58	58
DEL UD	0	1	2	1	2	0	0	0	0	0	0	0
ENT RQ	0	1	0	3	2	0	0	0	0	0	0	0

==== Start Frame 37460, Total Elapsed Frames 720 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	60	60	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	58	58	59	57	60	54	60	60	45	60	60	60	60	58
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	60	60	60	53	60	60	60	60	60	60	60	60
RSP RX	60	59	58	41	59	58	60	60	60	58	60	60
DEL UD	0	0	0	1	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	1	0	0	0	0	0	0	0	0

==== Start Frame 37520, Total Elapsed Frames 780 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	60	60	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	58	58	59	60	60	59	60	60	47	60	60	60	60	59
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	60	60	60	60	60	60	60	60	60	59	60	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 37580, Total Elapsed Frames 840 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	60	60	60	60	60	60	60	60	52	60	60	60	59	60
RSP RX	57	56	48	55	58	57	59	56	33	59	57	59	59	59
DEL UD	0	0	0	0	0	0	0	0	1	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	59	58	59	55	59	59	59	59	59	59	59	59
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 37340, Total Elapsed Frames 600 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	57	57	46	35	50	60	60	31	51	45	42	42	38	36
RSP TX	58	56	49	59	58	60	60	5	51	6	58	60	19	51
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	1	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	34	34	26	26	25	31	59	59	29	58	56	55
RSP TX	49	0	0	0	58	0	52	54	54	45	56	55
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 37400, Total Elapsed Frames 660 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	58	58	35	26	39	60	60	24	48	35	33	33	32	28
RSP TX	50	50	50	56	52	58	60	1	49	2	58	60	4	57
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	1	0	0	0	0	0	7	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	27	42	16	19	16	26	55	55	25	55	54	54
RSP TX	39	30	0	0	37	0	48	52	51	49	51	52
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	2	0	0	0	0	0	0	0

==== Start Frame 37460, Total Elapsed Frames 720 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	60	60	39	40	35	60	60	19	60	30	26	25	25	24
RSP TX	57	57	60	60	59	59	60	2	60	2	60	60	34	59
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	24	24	15	13	15	22	59	59	21	60	60	60
RSP TX	50	0	0	0	60	0	57	60	59	57	60	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 37520, Total Elapsed Frames 780 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	59	59	50	53	48	60	60	33	59	46	44	43	43	43
RSP TX	56	56	60	60	58	60	60	1	59	1	60	60	36	59
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	40	38	31	31	29	38	59	58	38	60	60	60
RSP TX	60	0	0	0	60	0	54	60	59	58	60	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 37580, Total Elapsed Frames 840 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	60	60	44	52	41	60	60	29	52	40	38	34	33	31
RSP TX	57	56	59	60	57	59	60	0	53	0	59	60	35	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	1	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	31	30	29	29	29	30	58	58	30	60	59	59
RSP TX	56	0	0	0	60	0	56	57	57	57	57	57
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 37640, Total Elapsed Frames 900 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	60	60	51	60	60	60	60	60	26	60	60	60	60	60
RSP RX	57	57	47	58	58	57	60	60	5	60	57	60	60	56
DEL UD	0	0	1	0	0	0	0	0	3	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	5	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	60	50	59	47	58	59	60	60	60	52	60	59
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 37700, Total Elapsed Frames 960 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	60	60	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	52	50	53	52	54	54	59	59	54	60	54	60	60	53
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	60	43	59	43	59	59	59	59	59	56	59	59
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

======== Test Data Summary ========

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	960	960	933	951	960	960	960	959	902	959	960	959	959	960
RSP RX	913	903	867	864	936	882	954	928	769	958	926	959	956	877
DEL UD	0	0	3	1	0	0	0	0	6	0	0	0	0	0
ENT RQ	0	0	2	0	0	0	0	0	9	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	960	951	949	932	938	960	960	960	960	959	960	958
RSP RX	958	894	904	829	881	939	954	952	957	904	948	950
DEL UD	0	1	2	4	3	0	0	0	0	0	0	0
ENT RQ	0	1	0	5	3	0	0	0	0	0	0	0

Frame range = 36800 -> 37759
Total number of frames = 960
Total number of DEL UPDT frames = 20
Total number of ENT RQST frames = 20

==== Start Frame 37640, Total Elapsed Frames 900 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	60	60	50	41	45	59	59	32	21	42	40	38	38	38
RSP TX	60	60	51	59	60	60	60	0	24	0	60	60	6	56
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	1	0	0	0	0	0	11	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	38	35	31	31	31	35	57	56	35	59	59	59
RSP TX	51	0	0	0	59	0	52	60	55	51	59	58
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 37700, Total Elapsed Frames 960 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	59	58	59	42	53	60	60	30	59	51	47	46	43	37
RSP TX	54	54	58	58	57	60	60	0	59	0	58	60	12	54
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	36	34	28	28	28	34	56	56	33	59	59	59
RSP TX	33	0	0	0	57	0	55	56	58	53	58	57
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

======== Test Data Summary ========

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	940	937	599	489	536	959	959	297	870	472	434	419	393	373
RSP TX	911	902	924	922	927	949	958	13	876	21	949	960	246	887
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	3	1	0	0	0	0	20	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	361	366	264	269	260	334	851	829	323	876	864	848
RSP TX	742	30	0	0	903	0	775	859	849	790	866	863
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	3	0	0	0	0	0	0	0

Frame range = 36800 -> 37759
Total number of frames = 960
Total number of DEL UPDT frames = 0
Total number of ENT RQST frames = 27

(Cell 3) HE & Radio #6: Data collected at HE

** Data from file 09041034.log

==== Start Frame 44800, Total Elapsed Frames 60 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	0	0	0	0	0	60	60	60	60	60	60	60	60	60
RSP RX	0	0	0	0	0	60	60	60	60	60	60	58	60	59
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD TX	60	60	55	60	60	60	60	60	0	0	0	60	0	0
RSP RX	60	60	46	60	60	59	60	60	0	0	0	0	0	0
DEL UD	0	0	1	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	1	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD TX	60	0	60	60
RSP RX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

==== Start Frame 44860, Total Elapsed Frames 120 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	0	0	0	0	0	60	60	60	60	60	60	60	60	60
RSP RX	0	0	0	0	0	60	60	59	60	60	60	59	60	58
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD TX	60	60	60	60	60	60	60	60	0	0	0	60	0	0
RSP RX	60	60	48	60	59	60	58	60	0	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD TX	60	0	60	60
RSP RX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

==== Start Frame 44920, Total Elapsed Frames 180 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	0	0	0	0	0	60	60	60	60	60	60	60	60	60
RSP RX	0	0	0	0	0	60	60	56	60	58	58	56	60	48
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD TX	60	60	56	60	60	60	60	60	0	0	0	60	0	0
RSP RX	60	59	48	60	60	60	60	60	0	0	0	0	0	0
DEL UD	0	0	1	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD TX	60	0	60	60
RSP RX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

(Cell 3) HE & Radio #6: Data collected at Radio #6

** Data from file 09041043.log

==== Start Frame 44800, Total Elapsed Frames 60 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	0	0	0	0	0	60	60	60	60	36	60	60	60	39
RSP TX	0	0	0	0	0	60	60	60	60	60	60	58	60	40
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD RX	38	36	24	31	30	28	27	24	0	0	0	23	0	0
RSP TX	39	44	0	0	0	0	0	0	0	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD RX	20	0	19	19
RSP TX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

==== Start Frame 44860, Total Elapsed Frames 120 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	0	0	0	0	0	60	60	60	60	45	60	60	60	47
RSP TX	0	0	0	0	0	60	60	60	60	58	60	59	59	45
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD RX	46	44	43	42	39	38	37	37	0	0	0	36	0	0
RSP TX	44	51	0	0	0	0	0	0	0	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD RX	36	0	36	36
RSP TX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

==== Start Frame 44920, Total Elapsed Frames 180 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	0	0	0	0	0	60	60	60	60	60	60	60	60	60
RSP TX	0	0	0	0	0	60	60	60	60	60	60	58	60	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD RX	60	60	56	60	60	60	60	60	0	0	0	60	0	0
RSP TX	54	60	0	0	0	0	0	0	0	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD RX	60	0	59	59
RSP TX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

==== Start Frame 44980, Total Elapsed Frames 240 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	0	0	0	0	0	60	60	60	60	60	60	60	60	60
RSP RX	0	0	0	0	0	59	59	58	59	59	59	56	59	56
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD TX	60	60	58	60	60	60	60	60	0	0	0	60	0	0
RSP RX	59	59	47	60	60	60	60	60	0	0	0	0	0	0
DEL UD	0	0	1	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	1	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD TX	60	0	60	60
RSP RX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

==== Start Frame 45040, Total Elapsed Frames 300 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	0	0	0	0	0	60	60	60	60	60	60	60	60	60
RSP RX	0	0	0	0	0	57	57	53	56	56	56	56	57	54
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD TX	60	60	58	60	60	60	60	60	0	0	0	60	0	0
RSP RX	58	58	48	60	60	60	60	60	0	0	0	0	0	0
DEL UD	0	0	1	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	1	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD TX	60	0	60	60
RSP RX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

==== Start Frame 45100, Total Elapsed Frames 360 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	0	0	0	0	0	60	60	60	60	60	60	54	60	55
RSP RX	0	0	0	0	0	60	60	60	60	60	60	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD TX	60	60	58	60	60	60	60	60	0	0	0	60	0	0
RSP RX	60	60	46	60	60	60	60	60	0	0	0	0	0	0
DEL UD	0	0	1	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD TX	60	0	60	60
RSP RX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

==== Start Frame 44980, Total Elapsed Frames 240 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	0	0	0	0	0	60	60	60	60	60	60	60	60	60
RSP TX	0	0	0	0	0	60	60	60	60	60	60	57	60	59
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD RX	60	60	58	60	60	60	59	59	0	0	0	59	0	0
RSP TX	57	60	0	0	0	0	0	0	0	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD RX	59	0	59	59
RSP TX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

==== Start Frame 45040, Total Elapsed Frames 300 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	0	0	0	0	0	60	60	60	60	59	60	60	60	59
RSP TX	0	0	0	0	0	60	59	59	59	59	59	59	59	57
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD RX	59	59	57	59	59	59	59	59	0	0	0	59	0	0
RSP TX	58	59	0	0	0	0	0	0	0	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD RX	59	0	59	59
RSP TX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

==== Start Frame 45100, Total Elapsed Frames 360 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	0	0	0	0	0	59	59	59	60	59	60	60	60	60
RSP TX	0	0	0	0	0	60	60	60	60	60	60	54	60	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD RX	60	60	58	60	60	60	60	60	0	0	0	60	0	0
RSP TX	57	60	0	0	0	0	0	0	0	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD RX	60	0	60	60
RSP TX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

==== Start Frame 45160, Total Elapsed Frames 420 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	0	0	0	0	0	60	60	60	60	60	60	60	60	60
RSP RX	0	0	0	0	0	59	59	59	59	59	59	55	59	59
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD TX	60	60	60	60	60	60	60	60	0	0	0	60	0	0
RSP RX	59	59	59	59	59	59	56	59	0	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD TX	60	0	60	60
RSP RX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

==== Start Frame 45220, Total Elapsed Frames 480 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	0	0	0	0	0	60	60	60	60	60	60	60	60	60
RSP RX	0	0	0	0	0	59	58	58	59	58	58	52	58	56
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD TX	60	60	59	60	60	60	60	60	0	0	0	60	0	0
RSP RX	59	59	50	59	60	60	59	60	0	0	0	0	0	0
DEL UD	0	0	1	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	1	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD TX	60	0	60	60
RSP RX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

==== Start Frame 45280, Total Elapsed Frames 540 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	0	0	0	0	0	60	60	60	60	60	60	60	60	60
RSP RX	0	0	0	0	0	60	60	59	60	60	60	51	60	59
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD TX	60	60	60	60	60	60	60	60	0	0	0	60	0	0
RSP RX	60	60	54	60	60	60	60	60	0	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD TX	60	0	60	60
RSP RX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

==== Start Frame 45160, Total Elapsed Frames 420 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	0	0	0	0	0	60	60	60	60	60	60	60	60	60
RSP TX	0	0	0	0	0	60	60	60	60	60	60	56	60	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD RX	60	59	59	59	59	59	59	59	0	0	0	59	0	0
RSP TX	51	60	0	0	0	0	0	0	0	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD RX	59	0	59	59
RSP TX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

==== Start Frame 45220, Total Elapsed Frames 480 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	0	0	0	0	0	60	60	60	60	60	60	60	60	59
RSP TX	0	0	0	0	0	60	60	60	60	60	60	52	60	59
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD RX	58	58	55	58	58	58	58	58	0	0	0	57	0	0
RSP TX	57	60	0	0	0	0	0	0	0	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD RX	57	0	56	56
RSP TX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

==== Start Frame 45280, Total Elapsed Frames 540 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	0	0	0	0	0	60	60	60	60	60	60	60	60	60
RSP TX	0	0	0	0	0	60	60	59	60	60	60	51	60	58
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD RX	60	60	60	59	59	59	59	59	0	0	0	59	0	0
RSP TX	60	60	0	0	0	0	0	0	0	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD RX	59	0	59	59
RSP TX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

==== Start Frame 45340, Total Elapsed Frames 600 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	0	0	0	0	0	60	60	60	60	60	60	60	60	60
RSP RX	0	0	0	0	0	60	60	59	60	60	60	43	60	53
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD TX	60	60	56	60	60	60	60	60	0	0	0	60	0	0
RSP RX	60	55	46	60	60	60	60	60	0	0	0	0	0	0
DEL UD	0	0	1	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	1	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD TX	60	0	60	60
RSP RX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

==== Start Frame 45400, Total Elapsed Frames 660 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	0	0	0	0	0	60	60	60	60	60	60	60	60	60
RSP RX	0	0	0	0	0	59	59	58	59	58	58	53	59	50
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD TX	60	60	60	60	60	60	60	60	0	0	0	60	0	0
RSP RX	60	58	50	60	60	59	60	60	0	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD TX	60	0	60	60
RSP RX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

==== Start Frame 45460, Total Elapsed Frames 720 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	0	0	0	0	0	60	60	60	60	60	60	60	60	60
RSP RX	0	0	0	0	0	59	59	59	59	59	59	58	59	56
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD TX	60	60	57	60	60	60	60	60	0	0	0	60	0	0
RSP RX	59	53	51	60	59	59	59	59	0	0	0	0	0	0
DEL UD	0	0	1	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD TX	60	0	60	60
RSP RX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

==== Start Frame 45340, Total Elapsed Frames 600 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	0	0	0	0	0	60	60	60	60	60	60	60	60	60
RSP TX	0	0	0	0	0	60	60	60	60	60	60	43	60	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD RX	60	60	56	60	60	60	60	60	0	0	0	60	0	0
RSP TX	59	56	0	0	0	0	0	0	0	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD RX	60	0	60	60
RSP TX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

==== Start Frame 45400, Total Elapsed Frames 660 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	0	0	0	0	0	60	60	60	60	60	60	60	60	60
RSP TX	0	0	0	0	0	60	60	60	60	60	60	55	60	58
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD RX	60	60	60	60	60	60	60	60	0	0	0	60	0	0
RSP TX	55	60	0	0	0	0	0	0	0	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD RX	60	0	60	60
RSP TX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

==== Start Frame 45460, Total Elapsed Frames 720 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	0	0	0	0	0	60	60	60	60	60	60	60	60	60
RSP TX	0	0	0	0	0	60	60	60	60	60	60	59	60	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD RX	60	60	57	60	60	60	60	60	0	0	0	60	0	0
RSP TX	60	58	0	0	0	0	0	0	0	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD RX	60	0	60	60
RSP TX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

==== Start Frame 45520, Total Elapsed Frames 780 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	0	0	0	0	0	60	60	60	60	60	60	60	60	60
RSP RX	0	0	0	0	0	59	59	59	59	59	59	55	59	52
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD TX	60	60	60	60	60	60	60	60	0	0	0	60	0	0
RSP RX	59	58	40	60	60	57	60	60	0	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD TX	60	0	60	60
RSP RX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

==== Start Frame 45580, Total Elapsed Frames 840 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	0	0	0	0	0	60	60	60	60	60	60	60	60	60
RSP RX	0	0	0	0	0	60	60	58	60	59	59	59	60	53
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD TX	60	60	60	60	60	60	60	60	0	0	0	60	0	0
RSP RX	60	60	43	60	60	60	60	60	0	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD TX	60	0	60	60
RSP RX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

==== Start Frame 45640, Total Elapsed Frames 900 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	0	0	0	0	0	60	60	60	60	60	60	60	60	60
RSP RX	0	0	0	0	0	59	59	59	59	59	59	59	59	57
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD TX	60	60	58	60	60	60	60	60	0	0	0	60	0	0
RSP RX	59	57	39	60	60	60	60	60	0	0	0	0	0	0
DEL UD	0	0	1	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	1	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD TX	60	0	60	60
RSP RX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

==== Start Frame 45520, Total Elapsed Frames 780 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	0	0	0	0	0	60	60	60	60	60	60	60	60	60
RSP TX	0	0	0	0	0	60	60	60	60	60	60	56	60	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD RX	60	60	60	59	59	59	59	59	0	0	0	59	0	0
RSP TX	52	60	0	0	0	0	0	0	0	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD RX	59	0	59	59
RSP TX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

==== Start Frame 45580, Total Elapsed Frames 840 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	0	0	0	0	0	60	60	60	60	60	60	60	60	60
RSP TX	0	0	0	0	0	60	60	60	60	60	60	59	60	59
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD RX	60	60	60	60	59	59	59	59	0	0	0	59	0	0
RSP TX	55	60	0	0	0	0	0	0	0	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD RX	59	0	59	59
RSP TX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

==== Start Frame 45640, Total Elapsed Frames 900 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	0	0	0	0	0	60	60	60	60	60	60	60	60	59
RSP TX	0	0	0	0	0	60	60	60	60	60	60	60	60	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD RX	59	59	57	59	59	59	59	59	0	0	0	59	0	0
RSP TX	60	59	0	0	0	0	0	0	0	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD RX	59	0	59	59
RSP TX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

==== Start Frame 45700, Total Elapsed Frames 960 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	0	0	0	0	0	60	60	60	60	60	60	60	60	60
RSP RX	0	0	0	0	0	60	60	59	60	60	60	54	60	58
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD TX	60	60	59	60	60	60	60	60	0	0	0	60	0	0
RSP RX	60	60	46	60	60	58	60	60	0	0	0	0	0	0
DEL UD	0	0	1	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD TX	60	0	60	60
RSP RX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

======== Test Data Summary ========

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	0	0	0	0	0	960	960	960	960	960	960	960	960	960
RSP RX	0	0	0	0	0	950	949	933	949	944	944	878	949	883
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD TX	960	960	934	960	960	960	960	960	0	0	0	960	0	0
RSP RX	952	935	761	958	957	951	952	958	0	0	0	0	0	0
DEL UD	0	0	10	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	6	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD TX	960	0	960	960
RSP RX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

Frame range = 44800 -> 45759
Total number of frames = 960
Total number of DEL UPDT frames = 10
Total number of ENT RQST frames = 6

==== Start Frame 45700, Total Elapsed Frames 960 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	0	0	0	0	0	60	60	60	60	60	60	60	60	60
RSP TX	0	0	0	0	0	60	60	60	60	60	60	54	60	58
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD RX	60	60	59	60	60	60	60	60	0	0	0	60	0	0
RSP TX	56	60	0	0	0	0	0	0	0	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD RX	60	0	60	60
RSP TX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

======== Test Data Summary ========

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	0	0	0	0	0	959	959	959	960	919	960	960	960	923
RSP TX	0	0	0	0	0	960	959	958	959	957	959	890	958	913
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD RX	920	915	879	906	901	898	895	892	0	0	0	889	0	0
RSP TX	874	927	0	0	0	0	0	0	0	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD RX	886	0	883	883
RSP TX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

Frame range = 44800 -> 45759
Total number of frames = 960
Total number of DEL UPDT frames = 0
Total number of ENT RQST frames = 0

(Cell 3) HE & Radio #13: Data collected at HE

** Data from file 09041212.log

==== Start Frame 56100, Total Elapsed Frames 60 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	0	0	0	0	0	60	60	60	51	60	60	3	60	60
RSP RX	0	0	0	0	0	59	59	55	44	55	54	3	59	56
DEL UD	0	0	0	0	0	0	0	0	1	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	1	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD TX	60	60	60	60	60	60	60	60	0	0	0	60	0	0
RSP RX	59	58	56	60	60	59	60	60	0	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD TX	60	0	60	60
RSP RX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

==== Start Frame 56160, Total Elapsed Frames 120 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	0	0	0	0	0	60	60	60	60	60	60	60	60	60
RSP RX	0	0	0	0	0	59	59	58	59	58	58	47	60	58
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD TX	60	60	60	60	60	60	60	60	0	0	0	60	0	0
RSP RX	60	59	56	60	60	57	60	60	0	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD TX	60	0	60	60
RSP RX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

==== Start Frame 56220, Total Elapsed Frames 180 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	0	0	0	0	0	60	60	60	60	60	60	60	60	60
RSP RX	0	0	0	0	0	55	59	58	58	58	58	54	59	59
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD TX	60	60	60	60	60	60	60	60	0	0	0	60	0	0
RSP RX	60	59	54	60	60	57	59	60	0	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD TX	60	0	60	60
RSP RX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

(Cell 3) HE & Radio #13: Data collected at Radio #13

** Data from file 09041213.log

==== Start Frame 56100, Total Elapsed Frames 60 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	0	0	0	0	0	60	60	60	51	60	60	3	60	45
RSP TX	0	0	0	0	0	60	60	60	48	60	60	3	60	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD RX	44	44	44	44	44	44	44	43	0	0	0	43	0	0
RSP TX	60	0	0	0	0	0	0	0	0	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD RX	43	0	43	43
RSP TX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

==== Start Frame 56160, Total Elapsed Frames 120 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	0	0	0	0	0	60	60	60	60	60	60	60	60	60
RSP TX	0	0	0	0	0	59	59	60	60	60	60	48	60	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD RX	60	60	60	60	60	60	60	59	0	0	0	59	0	0
RSP TX	60	1	0	0	0	0	0	0	0	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD RX	59	0	59	59
RSP TX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

==== Start Frame 56220, Total Elapsed Frames 180 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	0	0	0	0	0	60	60	60	60	60	60	60	60	60
RSP TX	0	0	0	0	0	58	59	60	60	60	60	56	60	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD RX	60	60	60	60	60	60	60	60	0	0	0	60	0	0
RSP TX	60	1	0	0	0	0	0	0	0	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD RX	60	0	60	60
RSP TX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

==== Start Frame 56280, Total Elapsed Frames 240 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	0	0	0	0	0	60	60	60	60	60	60	60	60	60
RSP RX	0	0	0	0	0	53	57	58	58	58	57	49	59	58
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD TX	60	60	60	60	60	60	60	60	0	0	0	60	0	0
RSP RX	60	59	59	60	60	58	59	60	0	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD TX	60	0	60	60
RSP RX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

==== Start Frame 56340, Total Elapsed Frames 300 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	0	0	0	0	0	60	60	60	60	60	60	49	60	60
RSP RX	0	0	0	0	0	52	58	50	51	50	49	31	60	51
DEL UD	0	0	0	0	0	0	0	0	0	0	0	1	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD TX	60	60	60	60	60	60	60	60	0	0	0	60	0	0
RSP RX	60	60	56	60	60	60	60	60	0	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD TX	60	0	60	60
RSP RX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

==== Start Frame 56400, Total Elapsed Frames 360 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	0	0	0	0	0	60	60	60	51	60	60	45	60	60
RSP RX	0	0	0	0	0	60	59	58	41	60	60	27	60	60
DEL UD	0	0	0	0	0	0	0	0	1	0	0	1	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD TX	60	60	60	60	60	60	60	60	0	0	0	60	0	0
RSP RX	60	55	56	60	60	57	56	60	0	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD TX	60	0	60	60
RSP RX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

==== Start Frame 56280, Total Elapsed Frames 240 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	0	0	0	0	0	60	60	60	60	60	60	60	60	2
RSP TX	0	0	0	0	0	55	57	60	60	60	60	50	60	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD RX	2	2	2	2	2	2	2	2	0	0	0	2	0	0
RSP TX	60	0	0	0	0	0	0	0	0	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD RX	2	0	2	2
RSP TX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

==== Start Frame 56340, Total Elapsed Frames 300 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	0	0	0	0	0	60	60	60	60	60	60	49	60	0
RSP TX	0	0	0	0	0	56	59	59	59	60	60	38	60	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD RX	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RSP TX	60	0	0	0	0	0	0	0	0	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD RX	0	0	0	0
RSP TX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

==== Start Frame 56400, Total Elapsed Frames 360 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	0	0	0	0	0	60	60	60	38	60	60	32	60	0
RSP TX	0	0	0	0	0	60	60	58	36	60	60	23	60	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD RX	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RSP TX	60	0	0	0	0	0	0	0	0	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD RX	0	0	0	0
RSP TX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

==== Start Frame 56460, Total Elapsed Frames 420 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	0	0	0	0	0	60	60	60	60	60	60	60	60	60
RSP RX	0	0	0	0	0	59	60	54	54	56	55	49	60	56
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD TX	60	60	60	60	60	60	60	60	0	0	0	60	0	0
RSP RX	60	60	59	60	60	60	59	60	0	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD TX	60	0	60	60
RSP RX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

==== Start Frame 56520, Total Elapsed Frames 480 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	0	0	0	0	0	60	60	60	60	60	60	60	60	60
RSP RX	0	0	0	0	0	59	59	53	53	56	54	51	60	56
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD TX	60	60	60	60	60	60	60	60	0	0	0	60	0	0
RSP RX	60	52	50	60	59	60	60	60	0	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD TX	60	0	60	60
RSP RX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

==== Start Frame 56580, Total Elapsed Frames 540 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	0	0	0	0	0	60	60	60	60	60	51	41	60	60
RSP RX	0	0	0	0	0	58	58	47	45	49	38	19	60	49
DEL UD	0	0	0	0	0	0	0	0	0	0	1	2	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD TX	60	60	60	60	60	60	60	60	0	0	0	60	0	0
RSP RX	60	59	60	60	60	60	60	60	0	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD TX	60	0	60	60
RSP RX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

==== Start Frame 56460, Total Elapsed Frames 420 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	0	0	0	0	0	60	60	60	60	60	60	60	60	52
RSP TX	0	0	0	0	0	59	60	60	60	60	60	54	60	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD RX	52	52	52	52	51	51	51	51	0	0	0	51	0	0
RSP TX	60	0	0	0	0	0	0	0	0	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD RX	51	0	51	51
RSP TX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

==== Start Frame 56520, Total Elapsed Frames 480 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	0	0	0	0	0	60	60	60	60	60	60	60	60	35
RSP TX	0	0	0	0	0	59	59	60	59	60	60	57	60	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD RX	34	34	34	34	34	34	34	34	0	0	0	34	0	0
RSP TX	60	0	0	0	0	0	0	0	0	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD RX	34	0	34	34
RSP TX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

==== Start Frame 56580, Total Elapsed Frames 540 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	0	0	0	0	0	60	60	60	60	60	51	41	60	35
RSP TX	0	0	0	0	0	58	58	58	58	60	51	26	60	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD RX	35	34	34	34	34	34	34	34	0	0	0	34	0	0
RSP TX	60	2	0	0	0	0	0	0	0	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD RX	34	0	34	34
RSP TX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

==== Start Frame 56640, Total Elapsed Frames 600 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	0	0	0	0	0	60	60	60	60	60	60	49	60	60
RSP RX	0	0	0	0	0	58	60	57	55	58	57	35	60	58
DEL UD	0	0	0	0	0	0	0	0	0	0	0	1	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD TX	60	60	60	60	60	60	60	60	0	0	0	60	0	0
RSP RX	60	57	53	60	60	59	60	60	0	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD TX	60	0	60	60
RSP RX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

==== Start Frame 56700, Total Elapsed Frames 660 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	0	0	0	0	0	60	60	60	51	60	60	33	60	60
RSP RX	0	0	0	0	0	56	58	50	35	51	50	17	60	53
DEL UD	0	0	0	0	0	0	0	0	1	0	0	2	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD TX	60	60	60	60	60	60	60	60	0	0	0	60	0	0
RSP RX	60	48	60	60	60	60	60	60	0	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD TX	60	0	60	60
RSP RX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

==== Start Frame 56760, Total Elapsed Frames 720 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	0	0	0	0	0	60	60	60	60	60	60	52	60	60
RSP RX	0	0	0	0	0	56	58	49	46	49	44	30	57	52
DEL UD	0	0	0	0	0	0	0	0	0	0	0	1	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD TX	60	60	60	60	60	60	60	60	0	0	0	60	0	0
RSP RX	58	57	50	60	60	59	60	60	0	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD TX	60	0	60	60
RSP RX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

==== Start Frame 56640, Total Elapsed Frames 600 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	0	0	0	0	0	60	60	60	60	60	60	49	60	52
RSP TX	0	0	0	0	0	60	60	60	56	60	60	35	60	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD RX	52	52	52	52	52	52	52	52	0	0	0	52	0	0
RSP TX	60	0	0	0	0	0	0	0	0	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD RX	52	0	52	52
RSP TX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

==== Start Frame 56700, Total Elapsed Frames 660 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	0	0	0	0	0	60	60	60	51	60	60	33	60	55
RSP TX	0	0	0	0	0	58	58	60	40	60	60	23	60	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD RX	55	55	53	53	53	52	52	52	0	0	0	52	0	0
RSP TX	60	0	0	0	0	0	0	0	0	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD RX	52	0	52	51
RSP TX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

==== Start Frame 56760, Total Elapsed Frames 720 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	0	0	0	0	0	59	59	58	58	58	58	50	59	34
RSP TX	0	0	0	0	0	58	59	58	58	58	58	38	59	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD RX	34	34	34	34	34	33	33	33	0	0	0	33	0	0
RSP TX	59	0	0	0	0	0	0	0	0	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD RX	33	0	33	33
RSP TX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

==== Start Frame 56820, Total Elapsed Frames 780 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	0	0	0	0	0	56	56	51	27	51	51	17	56	47
RSP RX	0	0	0	0	0	50	52	40	11	41	41	9	53	36
DEL UD	0	0	0	0	0	0	0	1	2	1	1	1	0	1
ENT RQ	0	0	0	0	0	0	0	0	1	0	0	0	0	1

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD TX	56	56	56	56	56	56	56	56	0	0	0	56	0	0
RSP RX	55	56	52	56	56	56	56	56	0	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD TX	56	0	56	56
RSP RX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

==== Start Frame 56880, Total Elapsed Frames 840 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	0	0	0	0	0	60	60	60	51	60	60	44	60	60
RSP RX	0	0	0	0	0	58	59	56	50	59	58	26	58	55
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD TX	60	60	60	60	60	60	60	60	0	0	0	60	0	0
RSP RX	60	60	50	60	60	54	60	60	0	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD TX	60	0	60	60
RSP RX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

==== Start Frame 56940, Total Elapsed Frames 900 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	0	0	0	0	0	60	60	60	60	60	60	60	60	60
RSP RX	0	0	0	0	0	58	60	58	59	58	59	51	59	58
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD TX	60	60	56	60	60	60	60	60	0	0	0	60	0	0
RSP RX	60	60	43	60	59	60	60	60	0	0	0	0	0	0
DEL UD	0	0	1	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	1	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD TX	60	0	60	60
RSP RX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

==== Start Frame 56820, Total Elapsed Frames 780 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	0	0	0	0	0	60	60	51	20	51	51	17	60	26
RSP TX	0	0	0	0	0	59	60	51	20	51	51	13	60	51
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	1	0	1	1	0	0	1

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD RX	32	32	31	31	31	31	31	31	0	0	0	31	0	0
RSP TX	60	0	0	0	0	0	0	0	0	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD RX	31	0	31	31
RSP TX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

==== Start Frame 56880, Total Elapsed Frames 840 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	0	0	0	0	0	60	59	59	51	60	60	44	59	0
RSP TX	0	0	0	0	0	59	59	57	50	60	59	26	59	58
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD RX	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RSP TX	60	0	0	0	0	0	0	0	0	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD RX	0	0	0	0
RSP TX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

==== Start Frame 56940, Total Elapsed Frames 900 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	0	0	0	0	0	60	60	60	60	60	60	60	60	0
RSP TX	0	0	0	0	0	56	60	56	60	59	60	52	60	6
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD RX	0	0	0	0	0	0	0	0	0	0	0	0	0	
RSP TX	60	0	0	0	0	0	0	0	0	0	0	0	0	
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	

Radio#	29	30	31	32
CMD RX	0	0	0	0
RSP TX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

==== Start Frame 57000, Total Elapsed Frames 960 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	0	0	0	0	0	60	60	60	51	60	60	35	60	60
RSP RX	0	0	0	0	0	56	57	56	35	59	57	17	58	58
DEL UD	0	0	0	0	0	0	0	0	1	0	0	1	0	0
ENT RQ	0	0	0	0	0	0	0	0	1	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD TX	60	60	60	60	60	60	60	60	0	0	0	60	0	0
RSP RX	59	59	58	60	60	60	60	60	0	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD TX	60	0	60	60
RSP RX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

======== Test Data Summary ========

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	0	0	0	0	0	956	956	951	882	951	942	728	956	947
RSP RX	0	0	0	0	0	906	932	857	754	875	849	515	942	873
DEL UD	0	0	0	0	0	0	0	1	6	1	2	10	0	1
ENT RQ	0	0	0	0	0	0	0	0	3	0	0	0	0	1

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD TX	956	956	952	956	956	956	956	956	0	0	0	956	0	0
RSP RX	951	918	872	956	954	936	949	956	0	0	0	0	0	0
DEL UD	0	0	1	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	1	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD TX	956	0	956	956
RSP RX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

Frame range = 56100 -> 57059
Total number of frames = 960
Total number of DEL UPDT frames = 22
Total number of ENT RQST frames = 5

==== Start Frame 57000, Total Elapsed Frames 960 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	0	0	0	0	0	60	60	60	19	60	60	13	60	0
RSP TX	0	0	0	0	0	59	59	59	19	60	59	8	60	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD RX	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RSP TX	60	0	0	0	0	0	0	0	0	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD RX	0	0	0	0
RSP TX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

======== Test Data Summary ========

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	0	0	0	0	0	959	958	948	828	949	940	691	958	456
RSP TX	0	0	0	0	0	933	946	936	803	948	938	550	958	949
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	1	0	1	1	0	0	1

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD RX	460	459	456	456	455	453	453	451	0	0	0	451	0	0
RSP TX	959	4	0	0	0	0	0	0	0	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD RX	451	0	451	450
RSP TX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

Frame range = 56100 -> 57059
Total number of frames = 960
Total number of DEL UPDT frames = 0
Total number of ENT RQST frames = 4

(Cell 3) HE & Radio #14: Data collected at HE

** Data from file 09041339.log

==== Start Frame 900, Total Elapsed Frames 60 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	0	0	0	0	0	60	60	60	60	60	60	60	60	60
RSP RX	0	0	0	0	0	60	60	56	58	59	59	58	58	55
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD TX	60	60	60	60	60	60	60	60	0	0	0	60	0	0
RSP RX	60	54	49	60	60	60	60	59	0	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD TX	60	0	60	60
RSP RX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

==== Start Frame 960, Total Elapsed Frames 120 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	0	0	0	0	0	60	60	60	60	60	60	60	60	60
RSP RX	0	0	0	0	0	60	60	59	60	60	60	58	60	49
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD TX	60	60	60	60	60	60	60	60	0	0	0	60	0	0
RSP RX	60	59	52	60	60	60	60	60	0	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD TX	60	0	60	60
RSP RX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

==== Start Frame 1020, Total Elapsed Frames 180 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	0	0	0	0	0	60	60	60	60	60	60	60	60	60
RSP RX	0	0	0	0	0	60	60	60	60	60	60	58	60	53
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD TX	60	60	58	60	60	60	60	60	0	0	0	60	0	0
RSP RX	60	57	41	60	60	60	60	60	0	0	0	0	0	0
DEL UD	0	0	1	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	1	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD TX	60	0	60	60
RSP RX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

(Cell 3) HE & Radio #14: Data collected at Radio #14

** Data from file 09041339.log

==== Start Frame 900, Total Elapsed Frames 60 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	0	0	0	0	0	60	60	60	60	60	60	60	60	60
RSP TX	0	0	0	0	0	60	60	57	60	60	60	59	60	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD RX	60	60	60	60	60	60	60	60	0	0	0	60	0	0
RSP TX	60	55	42	0	0	0	0	3	0	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD RX	60	0	60	60
RSP TX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

==== Start Frame 960, Total Elapsed Frames 120 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	0	0	0	0	0	60	60	60	60	60	60	60	60	60
RSP TX	0	0	0	0	0	60	60	59	60	60	60	58	60	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD RX	60	60	60	60	60	60	60	60	0	0	0	60	0	0
RSP TX	60	60	54	0	0	0	0	10	0	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD RX	60	0	60	60
RSP TX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

==== Start Frame 1020, Total Elapsed Frames 180 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	0	0	0	0	0	60	60	60	60	60	60	60	60	60
RSP TX	0	0	0	0	0	60	60	60	60	60	60	58	60	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD RX	60	60	58	60	60	60	60	60	0	0	0	60	0	0
RSP TX	60	60	38	0	0	0	0	33	0	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	1	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD RX	60	0	60	60
RSP TX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

==== Start Frame 1080, Total Elapsed Frames 240 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	0	0	0	0	0	60	60	60	60	60	60	60	60	60
RSP RX	0	0	0	0	0	57	57	56	57	57	57	51	56	48
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD TX	60	60	60	60	60	60	60	60	0	0	0	60	0	0
RSP RX	57	55	57	60	59	59	59	59	0	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD TX	60	0	60	60
RSP RX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

==== Start Frame 1140, Total Elapsed Frames 300 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	0	0	0	0	0	60	60	60	60	60	60	60	60	50
RSP RX	0	0	0	0	0	57	56	56	52	56	54	46	50	35
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	1
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	1

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD TX	60	60	60	60	60	60	60	60	0	0	0	60	0	0
RSP RX	57	52	46	60	60	59	59	60	0	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD TX	60	0	60	60
RSP RX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

==== Start Frame 1200, Total Elapsed Frames 360 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	0	0	0	0	0	60	60	60	60	60	60	60	60	60
RSP RX	0	0	0	0	0	57	57	57	55	56	56	46	57	55
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD TX	60	60	55	60	60	60	60	60	0	0	0	60	0	0
RSP RX	59	60	46	60	60	58	60	60	0	0	0	0	0	0
DEL UD	0	0	1	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	1	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD TX	60	0	60	60
RSP RX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

==== Start Frame 1080, Total Elapsed Frames 240 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	0	0	0	0	0	60	60	60	60	60	60	60	60	59
RSP TX	0	0	0	0	0	60	60	58	59	60	60	53	60	59
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD RX	59	59	59	59	59	59	59	59	0	0	0	59	0	0
RSP TX	60	59	56	1	0	0	0	20	0	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD RX	59	0	59	59
RSP TX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

==== Start Frame 1140, Total Elapsed Frames 300 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	0	0	0	0	0	60	60	60	60	60	60	60	60	50
RSP TX	0	0	0	0	0	60	60	60	60	60	60	54	60	51
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	2

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD RX	60	60	60	60	60	60	60	60	0	0	0	60	0	0
RSP TX	60	60	47	0	0	0	0	12	0	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD RX	60	0	60	60
RSP TX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

==== Start Frame 1200, Total Elapsed Frames 360 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	0	0	0	0	0	60	60	60	60	60	60	60	60	60
RSP TX	0	0	0	0	0	60	59	59	58	59	59	48	59	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD RX	60	60	55	60	60	60	60	60	0	0	0	59	0	0
RSP TX	60	60	39	0	0	0	0	0	0	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	1	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD RX	59	0	59	59
RSP TX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

==== Start Frame 1260, Total Elapsed Frames 420 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	0	0	0	0	0	60	60	60	60	60	60	60	60	60
RSP RX	0	0	0	0	0	58	60	59	58	58	58	42	58	48
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD TX	60	60	56	60	60	60	60	60	0	0	0	60	0	0
RSP RX	60	44	50	60	60	60	60	60	0	0	0	0	0	0
DEL UD	0	0	1	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD TX	60	0	60	60
RSP RX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

==== Start Frame 1320, Total Elapsed Frames 480 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	0	0	0	0	0	60	60	60	60	60	60	36	60	60
RSP RX	0	0	0	0	0	60	60	58	57	59	58	25	58	53
DEL UD	0	0	0	0	0	0	0	0	0	0	0	1	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD TX	60	60	60	60	60	60	60	60	0	0	0	60	0	0
RSP RX	60	57	56	60	60	60	60	60	0	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD TX	60	0	60	60
RSP RX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

==== Start Frame 1380, Total Elapsed Frames 540 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	0	0	0	0	0	60	60	60	60	60	60	60	60	60
RSP RX	0	0	0	0	0	58	58	58	58	58	58	49	57	57
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD TX	60	60	60	60	60	60	60	60	0	0	0	60	0	0
RSP RX	59	60	59	60	60	58	60	60	0	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD TX	60	0	60	60
RSP RX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

==== Start Frame 1260, Total Elapsed Frames 420 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	0	0	0	0	0	60	60	60	60	60	60	60	60	60
RSP TX	0	0	0	0	0	60	60	60	60	60	60	42	60	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD RX	60	60	56	60	60	60	60	60	0	0	0	60	0	0
RSP TX	60	57	41	0	0	0	0	1	0	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	1	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD RX	60	0	60	60
RSP TX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

==== Start Frame 1320, Total Elapsed Frames 480 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	0	0	0	0	0	60	60	60	60	60	60	36	60	60
RSP TX	0	0	0	0	0	60	60	59	59	60	60	27	60	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD RX	60	60	60	60	60	60	60	60	0	0	0	60	0	0
RSP TX	60	60	50	0	0	0	0	9	0	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD RX	60	0	60	60
RSP TX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

==== Start Frame 1380, Total Elapsed Frames 540 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	0	0	0	0	0	59	59	59	59	59	59	59	59	60
RSP TX	0	0	0	0	0	58	58	58	58	58	58	49	57	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD RX	60	60	60	59	59	59	59	59	0	0	0	59	0	0
RSP TX	59	60	53	0	0	0	0	5	0	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD RX	59	0	59	59
RSP TX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

==== Start Frame 1440, Total Elapsed Frames 600 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	0	0	0	0	0	60	60	60	60	60	60	60	60	60
RSP RX	0	0	0	0	0	59	59	58	59	59	58	55	57	55
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD TX	60	60	60	60	60	60	60	60	0	0	0	60	0	0
RSP RX	59	60	60	60	60	60	60	60	0	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD TX	60	0	60	60
RSP RX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

==== Start Frame 1500, Total Elapsed Frames 660 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	0	0	0	0	0	60	60	60	60	60	60	60	60	60
RSP RX	0	0	0	0	0	59	59	58	58	58	58	52	56	53
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD TX	60	60	60	60	60	60	60	60	0	0	0	60	0	0
RSP RX	59	56	56	60	60	60	60	60	0	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD TX	60	0	60	60
RSP RX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

==== Start Frame 1560, Total Elapsed Frames 720 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	0	0	0	0	0	60	60	60	60	60	60	60	60	60
RSP RX	0	0	0	0	0	60	60	60	59	60	60	58	58	54
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD TX	60	60	60	60	60	60	60	60	0	0	0	60	0	0
RSP RX	60	59	56	60	60	60	60	60	0	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD TX	60	0	60	60
RSP RX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

==== Start Frame 1440, Total Elapsed Frames 600 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	0	0	0	0	0	60	60	60	60	60	60	60	60	58
RSP TX	0	0	0	0	0	60	60	60	60	60	60	58	60	58
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD RX	58	58	58	58	58	58	58	58	0	0	0	58	0	0
RSP TX	60	60	47	0	0	0	0	0	0	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD RX	56	0	56	55
RSP TX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

==== Start Frame 1500, Total Elapsed Frames 660 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	0	0	0	0	0	60	60	60	60	60	60	60	60	60
RSP TX	0	0	0	0	0	60	60	60	60	60	60	56	60	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD RX	60	60	60	60	60	59	59	59	0	0	0	59	0	0
RSP TX	60	59	45	0	0	0	0	0	0	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD RX	59	0	58	58
RSP TX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

==== Start Frame 1560, Total Elapsed Frames 720 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	0	0	0	0	0	60	60	60	60	60	60	60	60	60
RSP TX	0	0	0	0	0	60	60	60	59	60	60	58	58	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD RX	60	60	60	60	60	60	60	60	0	0	0	60	0	0
RSP TX	60	59	51	0	0	0	0	0	0	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD RX	60	0	60	60
RSP TX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

==== Start Frame 1620, Total Elapsed Frames 780 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	0	0	0	0	0	60	60	60	60	60	60	60	60	60
RSP RX	0	0	0	0	0	59	59	59	60	59	59	58	58	56
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD TX	60	60	60	60	60	60	60	60	0	0	0	60	0	0
RSP RX	59	56	56	60	60	51	60	60	0	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD TX	60	0	60	60
RSP RX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

==== Start Frame 1680, Total Elapsed Frames 840 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	0	0	0	0	0	60	60	60	60	60	60	60	60	60
RSP RX	0	0	0	0	0	60	60	60	59	60	60	57	60	51
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD TX	60	60	60	60	60	60	60	60	0	0	0	60	0	0
RSP RX	60	58	58	60	60	55	58	60	0	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD TX	60	0	60	60
RSP RX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

==== Start Frame 1740, Total Elapsed Frames 900 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	0	0	0	0	0	60	60	60	60	60	60	60	60	60
RSP RX	0	0	0	0	0	60	60	60	60	60	60	55	58	46
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD TX	60	60	60	60	60	60	60	60	0	0	0	60	0	0
RSP RX	60	49	58	60	60	60	60	60	0	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD TX	60	0	60	60
RSP RX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

==== Start Frame 1620, Total Elapsed Frames 780 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	0	0	0	0	0	60	60	60	60	60	60	60	60	60
RSP TX	0	0	0	0	0	60	60	60	60	60	60	58	59	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD RX	60	60	60	60	60	60	60	60	0	0	0	60	0	0
RSP TX	60	60	50	0	0	0	0	0	0	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD RX	60	0	60	60
RSP TX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

==== Start Frame 1680, Total Elapsed Frames 840 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	0	0	0	0	0	60	60	60	60	60	60	60	60	60
RSP TX	0	0	0	0	0	60	60	60	59	60	60	57	60	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD RX	60	60	60	60	60	60	60	60	0	0	0	60	0	0
RSP TX	60	60	57	0	0	0	0	10	0	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD RX	60	0	60	60
RSP TX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

==== Start Frame 1740, Total Elapsed Frames 900 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	0	0	0	0	0	60	60	60	60	60	60	60	60	60
RSP TX	0	0	0	0	0	60	60	60	60	60	60	55	59	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD RX	60	60	60	60	60	60	60	60	0	0	0	60	0	0
RSP TX	60	59	53	0	0	0	0	0	0	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD RX	60	0	60	60
RSP TX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

==== Start Frame 1800, Total Elapsed Frames 960 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	0	0	0	0	0	60	60	60	60	60	60	60	60	60
RSP RX	0	0	0	0	0	57	58	58	57	57	57	54	56	52
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD TX	60	60	60	60	60	60	60	60	0	0	0	60	0	0
RSP RX	59	58	56	60	60	54	60	60	0	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD TX	60	0	60	60
RSP RX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

======== Test Data Summary ========

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	0	0	0	0	0	960	960	960	960	960	960	936	960	950
RSP RX	0	0	0	0	0	941	943	932	927	936	932	822	917	820
DEL UD	0	0	0	0	0	0	0	0	0	0	0	1	0	1
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	1

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD TX	960	960	949	960	960	960	960	960	0	0	0	960	0	0
RSP RX	948	894	856	960	959	934	956	958	0	0	0	0	0	0
DEL UD	0	0	3	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	2	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD TX	960	0	960	960
RSP RX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

Frame range = 900 -> 1859
Total number of frames = 960
Total number of DEL UPDT frames = 5
Total number of ENT RQST frames = 3

==== Start Frame 1800, Total Elapsed Frames 960 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	0	0	0	0	0	60	60	60	60	60	60	60	60	58
RSP TX	0	0	0	0	0	60	60	60	60	60	60	56	59	58
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD RX	58	58	58	58	58	58	58	58	0	0	0	58	0	0
RSP TX	60	59	31	0	0	0	0	0	0	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD RX	58	0	58	58
RSP TX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

======== Test Data Summary ========

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	0	0	0	0	0	959	959	959	959	959	959	935	959	945
RSP TX	0	0	0	0	0	958	957	950	952	957	957	846	951	946
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	2

Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD RX	955	955	944	954	954	953	953	953	0	0	0	952	0	0
RSP TX	959	947	754	1	0	0	0	103	0	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	3	0	0	0	0	0	0	0	0	0	0	0

Radio#	29	30	31	32
CMD RX	950	0	949	948
RSP TX	0	0	0	0
DEL UD	0	0	0	0
ENT RQ	0	0	0	0

Frame range = 900 -> 1859
Total number of frames = 960
Total number of DEL UPDT frames = 0
Total number of ENT RQST frames = 5

(Cell 4) HE & Radio #16: Data collected at HE

** Data from file 09161418.log

==== Start Frame 11640, Total Elapsed Frames 60 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	30	60	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	17	59	57	60	48	59	60	60	60	60	60	60	59	60
DEL UD	1	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	60	60	60	60	60	56	49	60	60	59	60	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 11700, Total Elapsed Frames 120 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	0	60	60	60	51	60	60	60	60	60	60	60	60	60
RSP RX	0	60	60	60	42	60	60	60	60	60	58	60	60	60
DEL UD	0	0	0	0	1	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	1	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	60	60	60	60	60	51	51	60	60	60	60	60
RSP RX	60	60	60	60	60	43	37	60	60	60	60	60
DEL UD	0	0	0	0	0	1	1	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 11760, Total Elapsed Frames 180 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	30	60	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	24	60	58	60	60	55	60	60	60	60	58	60	60	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	60	60	60	60	60	51	51	60	60	60	60	60
RSP RX	59	60	60	60	60	39	41	60	60	60	60	60
DEL UD	0	0	0	0	0	1	1	0	0	0	0	0
ENT RQ	0	0	0	0	0	1	0	0	0	0	0	0

==== Start Frame 11820, Total Elapsed Frames 240 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	35	60	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	20	60	57	60	60	55	60	60	60	60	50	60	60	60
DEL UD	1	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	60	60	60	60	60	51	60	60	60	60	60	60
RSP RX	59	60	60	60	60	39	59	60	60	60	60	60
DEL UD	0	0	0	0	0	1	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	1	0	0	0	0	0	0

(Cell 4) HE & Radio #16: Data collected at Radio #16

** Data from file 09161423.log

==== Start Frame 11640, Total Elapsed Frames 60 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	30	56	56	60	4	56	60	60	0	0	0	0	0	0
RSP TX	20	54	52	60	60	51	60	60	0	0	60	60	55	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	0	60	60	60	60	0	0	60	60	60	60	60
RSP TX	0	60	60	60	60	55	57	60	60	59	60	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 11700, Total Elapsed Frames 120 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	0	59	59	60	31	59	60	60	0	0	0	0	0	0
RSP TX	0	60	60	60	51	59	60	60	0	0	60	60	60	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	1	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX		60	60	60	60	2	2	60	60	60	60	60
RSP TX	8	60	60	60	60	51	51	60	60	60	60	60
DEL UD						0	0		0			0
ENT RQ	8	8	8	8	8	1	1	8	0	8	8	0

==== Start Frame 11760, Total Elapsed Frames 180 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX 30	58	59	60	60	59	60	60	0	0	0	0	0	0	0
RSP TX 24	60	57	60	60	53	60	60	0	0	60	60	60	60	0
DEL UD 0	0	0		0	0	0	0	0		0	0	0		
EBT RQ 0	0	0	8	0	0	0	0	0	8	0	0	0	8	

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX		60	60	60	60	19	28		60	60	60	60
RSP TX	8	60	60	60	60	49	51	88	60	60	60	60
DEL UD		0		0	0	0	0			0	0	
ENT RQ	8	0	8	0	0	2	1	8	8	0	0	8

==== Start Frame 11820, Total Elapsed Frames 240 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	35	56	59	60	60	59	60	60	0	0	0	0	0	0
RSP TX	20	60	57	60	60	55	60	60	0	0	60	60	60	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	0	60	60	60	60	32	60	60	60	60	60	60
RSP TX	0	60	60	60	60	46	59	60	60	60	60	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	1	0	0	0	0	0	0

==== Start Frame 11880, Total Elapsed Frames 300 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	21	60	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	11	59	60	60	60	59	60	60	60	60	55	60	60	60
DEL UD	1	0	0	0	0		0	0	0	0	0	0	0	
ENT RQ	0	0	0	0	0	8	0	0	0	0	0	0	0	8

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	56	60	60	60	60	59	59	58	58	58	59	58
DEL UD	0	0		0	0	0		0			0	0
EBT RQ	0	0	8	0	0	0	8	0	8	8	0	0

==== Start Frame 11940, Total Elapsed Frames 360 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	20	60	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	10	59	58	60	59	56	60	60	60	60	60	60	59	59
DEL UD	1				0				0	0		0	0	0
ENT RQ	0	8	8	8	0	8	8	8	0	0	8	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	54	60	60	60	60	60	60	60	60	60	60	59
DEL UD			0		0		0	0	0	0	0	0
ENT RQ	8	8	0	8	0	8	0	0	0	0	0	0

======== Test Data Summary ========

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	136	360	360	360	351	360	360	360	360	360	360	360	360	360
RSP RX	82	35;	350	360	329	344	360	360	360	360	341	360	358	359
DEL UD	4		0	0	1	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	1	0	0	0	0	0	0	0	0	0

Radio#	#	15	16	17	18	19	20	21	22	23	24	25	26
CMD	360	360	360	360	360	333	342	360	360	360	360	360	
RSP HI	348	360	360	360	360	296	305	358	358	3570	359	357	
DEL UD			0	0	0	3	2	0	0		0		
ENT RQ	8	8	0	0	0	2	0	0	0	0	0	8	

Frame range = 11640 -> 11999
Total number of frames = 360
Total number of DEL UPDT frames = 10
Total number of EBT RQST frames = 3

==== Start Frame 11880, Total Elapsed Frames 300 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	21	55	57	60	60	56	60	60	0	0	0	0	0	0
RSP TX	11	56	56	60	60	55	60	60	8	0	60	60	59	0
DEL UD		0	0	0						0			0	0
ENT RQ	8	0	0	0	8	8	8	8	8	0	8	8	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	0	60	60	60	60	60	60	60	60	60	60	60
RSP TX		60	60	60	60	60	58	58	58	58	59	58
DEL UD	8			0	0	0	0	0	0	0	0	0
ENT RQ	0	8	8	0	0	0	0	0	0	0	0	0

==== Start Frame 11940, Total Elapsed Frames 360 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	20	57	57	60	47	57	60	60	0	0	0	0	0	0
RSP TX	10	59	57	60	60	51	60	60	8	8	60	60	59	
DEL UD					0	0	0				0		0	8
ENT RQ	8	8	8	8	0	0	0	8	8	8	0	8	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX		60	60	60	60	58	41		60	60	60	60
RSP TX	8	60	60	60	60	59	60	88	60	60	60	59
DEL UD		0	0	0			0	0		0	0	0
ENT RQ	8	0	0	0	8	8	0	0	8	0	0	0

======== Test Data Summary ========

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	136	341	347	360	262	346	360	360	0		0	0	0	
RSP TX	85	349	339	360	351	324	360	360	0	8	360	360	353	
DEL UD			0	0	0	0	0	0				0		6
ENT RQ	8	8	0	0	10	0	0	8	8	8	0	8	0	

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	0	360	360	360	360	171	191	360	360	360	360	360
RSP TX	0	360	360	360	360	320	336	358	358	357	359	35;
DEL UD		0	0	0	0	0	0	0	0	0	0	
ENT RQ	8	0	0	0	0	4	2	0	0	0	0	0

Frame range = 11640 -> 11999
Total number of frames = 360
Total number of DEL UPDT frames = 0
Total number of EBT RQST frames = 7

(Cell 4) HE & Radio #17: Data collected at HE

** Data from file 09161447.log

==== Start Frame 15160, Total Elapsed Frames 60 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	1	60	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	1	59	56	60	60	57	60	60	60	60	54	60	59	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	60	60	60	60	60	45	60	60	60	60	60	60
RSP RX	52	59	60	49	60	35	60	59	59	59	59	59
DEL UD			0	0	0	1		0	0	0		
ENT RQ	8	8	0	0	0	0	8	0	0	0	8	8

==== Start Frame 15220, Total Elapsed Frames 120 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	41	60	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	28	60	58	59	60	58	59	60	60	60	57	60	60	60
DEL UD	1	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	52	60	60	60	60	60	60	60	60	60	60	60
RSP RX	49	59	59	54	59	59	59	58	58	58	59	58
DEL UD	1	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	1	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 15280, Total Elapsed Frames 180 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	0	60	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	0	59	54	58	59	57	59	59	59	59	59	59	59	59
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	54	59	59	57	59	58	53	58	59	58	58	59
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 15340, Total Elapsed Frames 240 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	0	60	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	0	60	59	60	60	60	60	60	60	60	60	60	60	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	60	60	60	57	59	59	55	60	60	60	60	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

(Cell 4) HE & Radio #17: Data collected at Radio #17

** Data from file 09161452.log

==== Start Frame 15160, Total Elapsed Frames 60 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	1	58	58	60	58	58	60	60	59	59	58	58	58	58
RSP TX	0	56	7	60	48	10	60	60	0	0	60	60	25	45
DEL UD						0	0	0						
EBT RQ	8	8	8	8	8	0	0	0	8	8	8	8	8	8

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	58	60	60	60	60	45		60	60	60	60	60
RSP TX	0	60	60	59		41		59	59	59	59	59
DEL UD	0	0	0		"8	0	60	0	0		0	0
ENT RQ	0	0	0	8	0	2	60 0 0	0	0	8	0	0

==== Start Frame 15220, Total Elapsed Frames 120 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	40	58	58	60	58	58	60	60	57	57	57	57	57	57
RSP TX	27	57	6	59	56	5	58	58	0	0	59	59	20	42
DEL UD	0	0	0	0						0	0	0		
ENT RQ	0	0	0	0	8	8	8	8	8	0	0	0	8	8

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	49	60	60	60	60	59	59	60	60	60	60	60 59
RSP TX	16	60	60	57	60	56	60	59	59	59	60	
DEL UD	0			0	0		0	0	0			0
ENT RQ	0	8	8	0	0	8	0	0	0	8	8	0

==== Start Frame 15280, Total Elapsed Frames 180 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CUD RX	0	60	60	60	60	60	60	60	59	59	59	59	59	59
RSP TX	0	59	10	59	55	7	60	60	0	0	60	60	22	57
DEL UD	0	0			0	0	0	0	0	0	0	0		
EBT RQ	0	0	8	8	0	0	0	0	0	0	0	0	8	8

Radio#		15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	59	60	60	60	60	59	59	60	60	60	60	60	
RSP TX	0	60	60	59	60	47	59	60	60	60	60	60	
DEL UD			0	0		0	0	0					
ENT RQ	8	8	0	0	8	0	0	0	8	8	8	8	

==== Start Frame 15340, Total Elapsed Frames 240 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	0	56	58	60	56	58	60	60	57	57	57	57	57	57
RSP TX	0	58	8	60	60	10	60	60	0	0	60	60	20	51
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	57	60	60	60	60	57	57	60	60	60	60	60
RSP TX	0	60	60	57	59	34	56	60	60	60	60	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 15400, Total Elapsed Frames 300 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	0	60	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	0	60	57	60	60	59	60	60	60	59	60	60	60	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	60	60	60	60	60	59	51	60	60	60	60	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 15460, Total Elapsed Frames 360 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	0	60	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	0	60	60	59	60	60	60	60	59	60	60	60	60	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	60	60	60	60	60	60	51	60	60	60	60	60
RSP RX	60	60	60	60	60	47	42	60	60	60	60	60
DEL UD		0		0	0	0	1			0	0	0
EBT RQ	8	0	8	0	0	0	0	8	8	0	0	0

======== Test Data Summary ========

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
RSP RX	42	360	360	360	360	360	360	360	360	360	360	360	360	360
DEL UD	29	358	344	356	359	351	358	359	358	358	350	359	358	359
	1	0	0	0	0	0	0	0	0	0	0	0	0	0
EBT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD												
RSP II	352	360	360	360	360	345	351	360	360	360	360	360
DEL UD	1	8	0	3370	357	0	0	355	356	355	356	356
					0			0	0	0	0	0
EBT RQ				0	0			0	0	0	0	0

Frame range = 15160 -> 15519
Total number of frames = 360
Total number of DEL UPDT frames = 4
Total number of EBT RQST frames = 1

==== Start Frame 15400, Total Elapsed Frames 300 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	0	58	60	60	58	58	60	60	59	59	59	59	59	59
RSP TX	0	56	5	59	58	4	59	59	0	0	60	59	14	49
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	59	60	60	60	60	59	59	60	60	60	60	60
RSP TX	0	60	60	60	60	50	58	60	60	60	60	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 15460, Total Elapsed Frames 360 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	0	60	60	60	60	60	60	60	60	60	60	60	60	60
RSP TX	0	59	32	59	57	29	60	60	0	0	60	60	44	51
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	60	60	60	60	60	60	51	60	60	60	60	60
RSP TX	0	60	60	60	60	46	51	60	60	60	60	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	1	0	0	0	0	0

======== Test Data Summary ========

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
RSP TX		0	368	356	334	365	357	357		351	350	350	350	350
DEL UD	41	350	0	0	0	0	0		351	0	359	358	145	295
	27	345								0	0	0	0	0
EBT RQ	8	0	0	0	0	0	0	8	8	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
RSP TX	342	360	360	360	360	339	345	360	360	360	360	360
DEL UD	16	360	360	35;	359	274	344	358	358	358	359	358
		0	0		0	0	0	0	0	0	0	0
EBT RQ	8	0	0	0	0	2	1	0	0	0	0	0

Frame range = 15160 -> 15519
Total number of frames = 360
Total number of DEL UPDT frames = 0
Total number of ENT RQST frames = 3

(Cell **4)** HE & Radio #18: Data collected at HE

** Data from file 09161436.log

==== Start Frame 13860, Total Elapsed Frames 60 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD	31	60	60	60	60	60	60	60	60	60	60	60	60	60
RSP I%	21	60	59	60	60	58	60	60	60	60	47	60	60	60
DEL UD	1								0			0	0	
ENT RQ	0	8	8	8	8	8	8	8	0	8	8	0	0	8

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	60	60	60	60	60	51	51	60	60	60	60	60
RSP RX	59	41	60	59	59	42	42	57	57	58	60	56
DEL UD	0	0	0	0	0	1	1	0	0	0	0	0
EBT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 13920, Total Elapsed Frames 120 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	17	60	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	7	60	60	60	60	60	60	60	60	60	39	60	60	60
DEL UD	1	0								0	0		0	
ENT RQ	0	0	8	8	8	8	8	8	8	0	0	8	0	8

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	60	41	60	60	60	60	60	60	60	60	60	60
RSP RX	57	19	60	60	59	60	60	59	59	59	60	60
DEL UD						0					0	
ENT RQ	8	a	8	8	8	0	8	11	8	8	0	8

==== Start Frame 13980, Total Elapsed Frames 180 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CHD TX	25	60	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	16	60	58	60	60	56	60	60	60	60	53	60	60	60
DEL UD	0	0	0	0	0	0	0		0			0		
EBT RQ	0	0	0	0	0	0	0	8	0	8	8	0	8	8

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	60	57	60	60	60	60		60	60	60	60	60
RSP RX	51	57	60	60	60	59	88	60	60	60	60	60
DEL UD	0	0	0	0								
ENT RQ	0	0	0	0	8	8	8	8	8	8	8	8

==== Start Frame 14040, Total Elapsed Frames 240 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD	5	60	60	60	60	60	60	60	60	60		60	60	60
RSP 11	0	60	59	60	60	59	60	60	60	59	88	60	60	60
DEL UD	1	0		0	0	0	0	0	0		0	0	0	0
EBT RQ	0	0	8	0	0	0	0	0	0	8	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	60	60	60	60	59	52	59	55	57	57	59	58
DEL UD	0	0	0			0		0	0		0	
EBT RQ	0	0	0	8	8	0	8	0	0	8	0	8

(Cell 4) HE & Radio #18: Data collected at Radio #18

** Data from file 09161439.log

==== Start Frame 13860, Total Elapsed Frames 60 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	31	55	56	60	54	55	60	60	0		0	0	0	0
RSP TX	21	60	59	60	60	58	60	60	0	8	60	60	60	60
DEL UD	0	0	0			0	0	0	0				0	0
ENT RQ	2	0	0	8	8	0	0	0	0	8	8	8	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX		60	60	60	60	32	36	60	60	60	60	60
RSP TX	8	60	60	60	59	32	45	57	57	58	60	56
DEL UD	0	0	0			0	0	0	0	0	0	0
ENT RQ	0	0	0	8	8	0	1	0	0	0	0	0

==== Start Frame 13920, Total Elapsed Frames 120 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	17	50	53	60	50	52	60	60	0	0	0	0	0	0
RSP TX	7	53	49	59	60	47	59	59	0	0	57	59	56	57
DEL UD	0	0	0	0	0	0				0	0	0	0	0
ENT RQ	0	0	0	0	0	0	8	8	8	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	0	40	60	60	60	60	60	60	60	60	60	60
RSP TX	0	39	59	60	59	58	60	59	59	59	60	60
DEL UD	0	0			0	0	0					
ENT RQ	0	3	8	8	0	0	0	8	8	8	8	8

==== Start Frame 13980, Total Elapsed Frames 180 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	25	53	54	59	53	54	58	57	0	0	0	0	0	0
RSP TX	16	53	50	57	60	49	57	60	0	0	58	57	55	57
DEL UD	0	0	0	0					0	0	0	0	0	0
ENT RQ	1	0	0	0	8	8	8	8	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX		55	57	60	60	57	60	60	60	60	60	60
RSP TX	8	57	60	60	60	55	60	60	60	60	60	60
DEL UD		0	0	0	0	0						
ENT RQ	8	3	0	0	0	0	8	8	8	8	8	8

==== Start Frame 14040, Total Elapsed Frames 240 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	5	55	57	60	55	56	60	60	0		0	0	0	0
RSP TX	0	54	52	57	60	52	57	60	0	8	56	60	56	60
DEL UD	0		0	0		0	0	0	0	0	0	0		0
ENT RQ	0	8	0	0	8	0	0	0	0	0	0	0	8	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CHD RX		60	58	60	60	8	60	60	60	60	60	60
RSP TX	8	60	60	60	59	7	59	55	57	57	59	58
DEL UD	0		0		0	0		0	0	0		0
EBT RQ	0	8	0	8	0	0	8	0	0	0	8	0

==== Start Frame 14100, Total Elapsed Frames 300 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	0	60	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	0	60	60	60	60	58	60	60	60	60	60	60	60	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	60	60	60	60	60	51	60	60	60	60	60	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 14160, Total Elapsed Frames 360 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	0	60	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	0	60	59	60	60	59	60	60	60	60	59	60	60	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	59	59	60	60	60	50	53	60	60	60	60	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

======== Test Data Summary ========

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	78	360	360	360	360	360	360	360	360	360	360	360	360	360
RSP RX	44		360	355	360	360	350	360	360	360	359	318	360	360	360
DEL UD	3		0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX												
RSP RX	360	338	360	360	360	351	351	360	360	360	360	360
	346	296	360	359	35;	314	334	351	353	354	359	354
DEL UD	0	2	0	0		1	1	0	0	0	0	
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	8

Frame range = 13860 -> 14219
Total number of frames = 360
Total number of DEL UPDT frames = 7
Total number of EBT RQST frames = 0

==== Start Frame 14100, Total Elapsed Frames 300 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX		50	53	59	50	52	59	58			0	0	0	0
RSP TX	8	58	56	59	60	54	59	60	8	8	58	59	58	58
DEL UD		0		0	0				0		0	0		
ENT RQ	8	0	8	0	0	8	8	8	0	8	0	0	8	8

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	0	58	58	60	60		60	60	60	60	60	60
RSP TX	0	60	60	60	60	0	60	60	60	60	60	60
DEL UD		0	0	0	0	0	0	0	0		0	
ENT RQ	0	0	0	0	0	0	0	0	0	8	0	8

==== Start Frame 14160, Total Elapsed Frames 360 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	0	56	57	60	55	57	60	60	0	0	0	0	0	0
RSP TX	0	55	51	57	60	50	57	60	0	0	58	58	55	59
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	0	59	59	60	60	0	40	60	60	60	60	60
RSP TX	0	60	60	60	60	0	47	60	60	60	60	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

======== Test Data Summary ========

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	78	319	330	358	317	326	357	355	0	0	0	0	0	0
RSP TX	44		333	317	349	360	310	349	359	0	0	347	353	340	351
DEL UD	0		0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX												
RSP TX	0	332	352	360	360	157	316	360	360	360	360	360
	0	336	359	360	357	15;	331	351	353	354	359	354
DEL UD	0	0	0	0	0		0	0	0	0	0	0
EBT RQ	0	6	0	0	0	0	1	0	0	0	0	0

Frame range = 13860 -> 14219
Total number of frames = 360
Total number of DEL UPDT frames = 0
Total number of EBT RQST frames = 10

(Cell 4) HE & Radio #22: Data collected at HE

** Data from file 09161310.log

==== Start Frame 3515, Total Elapsed Frames 60 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	0	60	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	0	57	58	60	59	56	60	60	60	60	58	60	59	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	59	60	60	60	60	60	60	60	60	59	60	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 3575, Total Elapsed Frames 120 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	0	57	57	57	51	57	57	57	57	57	57	57	57	57
RSP RX	0	57	52	57	43	55	57	57	57	57	55	57	57	57
DEL UD	0	0	0	0	1	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	57	57	57	57	57	46	51	57	57	57	57	57
RSP RX	57	57	57	57	57	38	42	57	57	57	57	57
DEL UD	0	0	0	0	0	1	1	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

==== Start Frame 3635, Total Elapsed Frames 180 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	0	60	60	60	60	60	60	60	60	60	51	60	60	60
RSP RX	0	58	56	60	59	55	60	60	60	60	36	60	59	60
DEL UD	0	0	0	0	0	0	0	0	0	0	1	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD	60	60	60	60	60	60	60	60	60	60	60	60
RSP If	54	60	60	60	59	60	60	60	60	60	60	60
DEL UD			0	0								0
ENT RQ	8	8	0	0	8	8	8	8	8	8	8	0

======== Test Data Summary ========

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	0	177	177	177	171	177	177	177	177	177	168	177	177	177
RSP RX	0	172	166	177	161	166	177	177	177	177	149	17;:	175	177
DEL UD	0		0	0	1	0	0	0	0	0	1		0	0
ENT RQ	0	8	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	177	177	177	177	177	166	171	177	177	177	177	177
RSP RX	170	179	177	177	176	158	162	177	177	176	17;	177
DEL UD	0		0	0	0	1	1	0	0	0		0
EBT RQ	0	0	0	0	0	0	0	0	0	0	0	0

Frame range = 3515 -> 3694
Total number of frames = 180
Total number of DEL UPDT frames = 4
Total number of EBT RQST frames = 0

(Cell 4) HE & Radio #22: Data collected at Radio #22

** Data from file 09161315.log

==== Start Frame 3515, Total Elapsed Frames 60 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX		0	3		1	0	0	0	0	0	0	0	0	0
RSP TX	8	1	0	8	0	0	0	0	0	0	0	0	2	0
DEL UD					0	0	0	0	0	0	0	0	0	0
EBT RQ	8	8	8	8	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
RX	0	0	60	60	60	0	60	60	60	60	60	60
BP TX	14	60	57	60	43	33	60	60	60	59	60	60
DEL UD	0		0	0	0		0	0		0	0	0
ENT RQ	0	8	0	0	0	8	0	0	8	0	0	0

==== Start Frame 3575, Total Elapsed Frames 120 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CMD RX	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RSP TX	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	0		56	53	52	0	11	60	60	60	60	58
RSP TX	1	48	48	52	25	1	11	60	60	60	60	60
DEL UD					0		0					
ENT RQ	8	8	8	8	0	8	1	8	8	8	8	8

==== Start Frame 3635, Total Elapsed Frames 180 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX		0	0				0						0	
RSP TX	0	0	0	8	0	0	0	8	0	0	2	0	0	0
	0				0	0			0	0	2	0		0
DEL UD	0		0		0	0	0		0	0	0	0	0	0
EBT RQ	0	8	0	8	0	0	0	8	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	0	0	56	56	49	0	60	60	60	60	60	52
RSP TX	6	59	46	49	34	9	60	60	60	60	60	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0

======== Test Data Summary ========

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX		0	3	0	1	0	0				2		0	
RSP TX	8	1	0	0	0	0	0	8	8	8	2	8	2	8
DEL UD	0		0	0	0	0	0	0	0		0	0	0	
ENT RQ	0	8	0	0	0	0	0	0	0	8	0	0	0	8

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	0											
RSP TX	20	164 0	172 0	168 0	161 182	0	131	180	180	180	180	170
DEL UD	0	8	0	0	8	43	131	180	180	179	180	180
						0	0	0	0	0	0	0
EBT RQ						0	1	0	0	0	0	0

Frame range = 3515 -> 3694
Total number of frames = 180
Total number of DEL UPDT frames = 0
Total number of ENT RQST frames = 1

(Cell 4) HE & Radio #23: Data collected at HE

** Data from file 09161330.log

==== Start Frame 5910, Total Elapsed Frames 60 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	3	60	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	2	60	59	60	60	59	60	60	60	60	53	60	60	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	60	60	60	60	60	60	60	60	60	59	60	60
DEL UD	0	0		0		0			0		0	0
ENT RQ	0	0	8	0	8	0	8	8	0	8	0	0

==== Start Frame 5970, Total Elapsed Frames 120 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	50	60	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	34	60	57	60	60	60	60	60	60	59	59	60	60	60
DEL UD	1					0				0				
ENT RQ	0	8	8	8	8	0	8	8	8	0	0	8	8	8

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	58	60	60	60	60	60	60	59	59	59	60	59
DEL UD		0							0			
ENT RQ	8	0	8	8	8	8	8	8	0	8	8	8

==== Start Frame 6030, Total Elapsed Frames 180 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	33	60	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	25	60	58	60	59	60	60	60	60	60	51	60	60	60
DEL UD	1	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	60	60	60	60	60	60	60	59	59	59	60	59
DEL UD												0
ENT RQ	8	8	8	8	8	8	8	8	8	8	8	0

==== Start Frame 6090, Total Elapsed Frames 240 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX		60	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	8	60	53		60	60	60	60	60	60	56	60	60	60
DEL UD		0		"8	0	0	0	0		0			0	
ENT RQ	8	0	8	0	0	0	0	0	8	0	8	8	0	8

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD	60	60	60	60	60	60	60	60	60	60	60	60
RSP HI	60	60	60	60	59	60	60	60	60	60	60	60
DEL UD			0	0		0	0	0		0	0	
ENT RQ	8	8	0	0	8	0	0	0	8	0	0	8

(Cell 4) HE & Radio #23: Data collected at Radio #23

** Data from file 09161335.log

==== Start Frame 5910, Total Elapsed Frames 60 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
RSP TX	0													
DEL UD	0	8	8	8	8	8	8	8	8	8	8	8	8	8
												0	0	
EBT RQ	8	8	8	8	8	8	8	8	8	8	8	0	0	8

Radio#	#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	0	0	0	0	0	0	60	60	60	60	60	0	
RSP TX	0	0	0	0	0	8	60	60	60	59	60	60	
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	

==== Start Frame 5970, Total Elapsed Frames 120 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX		0		0	0	0		0	0	0	0		0	0
RSP TX	8	0	8	0	0	0	8	0	0	0	0	8	0	0
DEL UD					0			0	0	0		0	0	0
ENT RQ	8	8	8	8	0	8	8	0	0	0	8	0	0	0

Radio#		15	16	17	18	19	20	21	22	23	24	25	26
CMD RX					0	0	60	59	59	59	59	0	
RSP TX	8	8	8	8	0	10	60	59	59	59	60	59	
DEL UD											0	0	
ENT RQ	8	8	8	8	8	8	8	8	8	8	0	0	

==== Start Frame 6030, Total Elapsed Frames 180 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	0		0	0	0	0	0	0	0	0		0	0	0
RSP TX	0	8	0	0	0	0	0	0	0	0	8	0	0	0
DEL UD	0		0	0	0	0	0		0	0		0	0	0
ENT RQ	0	8	0	0	0	0	0	8	0	0	8	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	0	0			0	0	60	59	59	59	59	0
RSP TX	0	0	8	8	0	4	60	59	59	59	60	59
DEL UD	0	0		0		0	0	0	0			
ENT RQ	0	0	8	0	8	0	0	0	0	8	8	8

==== Start Frame 6090, Total Elapsed Frames 240 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX			0	0							0	0		
RSP TX	8	8	0	0	8	8	8	8	8	8	0	0	8	8
DEL UD	0		0	0			0	0	0	0	0	0		0
ENT RQ	0	8	0	0	8	8	0	0	0	0	0	0	8	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	0	0	0	0	0	0	60	60	60	60	60	34
RSP TX	0		24	0	0	43	60	60	60	60	60	60
DEL UD	0	8	0	0	0	0		0	0	0	0	0
ENT RQ	0	0	0	0	0	0	8	0	0	0	0	0

==== Start Frame 6150, Total Elapsed Frames 300 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	0	60	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	0	60	58	60	60	60	60	60	60	60	47	60	60	60
DEL UD		0	0	0	0	0		0			0	0	0	0
ENT RQ	8	0	0	0	0	0	8	0	8	8	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX		60	60	60	60	60	60	60	60	60	60	60
DEL UD	"8	0	0	0	0			0		0	0	
ENT RQ	0	0	0	0	0	8	8	0	8	0	0	8

==== Start Frame 6210, Total Elapsed Frames 360 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	2	60	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	2	60	57	59	60	60	59	60	60	60	48	60	60	60
DEL UD	0	0			0								0	0
ENT RQ	0	0	8	8	0	8	8	8	8	8	8	8	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CHD		TX			60	60	60	60	60	60	60	60
RSP RX					58	59	59	59	58	60	59	59
DEL UD	0		0			0			0		0	
EBT RQ	0	8	0	8		0	8	0	0		0	8

==== Start Frame 6270, Total Elapsed Frames 403 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX	26	42	42	42	42	42	42	42	42	42	42	42	42	42
RSP RX	9	42	40	42	42	42	42	42	42	42	35	42	42	42
DEL UD	2						0	0						
EBT RQ	0	8	8	8	8	8	0	0	8	8	8	8	8	8

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CHD TX	42	42	42	42	42	42	42	42		42	42	42
RSP RX	42	42	42	42	42	42	42	42	1%	41	42	42
DEL UD	0				0	0			0	0	0	
EBT RQ	0	8	8	8	0	0	8	8	0	0	0	8

======== Test Data Summary ========

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CHD TX	114	402	402	402	402	402	402	402	402	402	402	402	402	402
RSP RX	72	402	382	401	401	401	402	402	401	349	402	402	402	
DEL UD	4	0	0		0	0	0	0	0	0				0
EBT RQ	0	0	0	8	0	0	0	0	0	0	0	8	8	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD TX	402	402	402	402	402	402	402	402	402	402	402	402
RSP RX	398		401	401	401	39;	402	401	399	399	396	401	399
DEL UD		0		0	0			0	0	0	0		0
EBT RQ	0	0	0	0	0	0	0	0	0	0	8	0	

Frame range = 5910 -> 6312
Total number of frames = 403
Total number of DEL UPDT frames = 4
Total number of EBT RQST frames = 0

==== Start Frame 6150, Total Elapsed Frames 300 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
RX	0		0	0	0			0	0				0	
EBB TX	0	8	0	0	0	8	8	0	0	8	8	8	0	8
DEL UD	0		0	0	0			0	0					
ENT RQ	0	8	0	0	0	8	8	0	0	8	8	8	8	8

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	0	0	0			0	60	60	60	60	60	41
RSP TX	0	0	34	8	8	60	60	60	60	60	60	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	
EBT RQ	0	0	0	0	0	0	0	0	0	0	0	8

==== Start Frame 6210, Total Elapsed Frames 360 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX		0	0					0	0	0	0	0		
RSP TX	8	0	0	8	8	8	8	0	0	0	0	0	8	8
DEL UD		0	0		0			0	0	0	0	0		
ENT RQ	8	0	0	8	0	8	8	0	0	0	0	0	8	8

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX		0	0	0	0	0	60	60	60	60	60	39
RSP TX	8	0	36	0	0	54	60	60	60	59	60	60
DEL UD		0	0	0	0	0			0	0	0	0
ENT RQ	8	0	0	0	0	0	8	8	0	0	0	0

==== Start Frame 6270, Total Elapsed Frames 411 ====

Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	0	0	0	0			0	0	0	0	0	0	0	0
RSP TX	0	0	0	0	8	8	0	0	0	0	0	0	0	0
DEL UD	0	0	0	0	0			0	0			0	0	0
ENT RQ	0	0	0	0	0	8	8	0	0	8	8	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CHD RX	0	0	0	0		0	51	51	51	51	51	38
RSP TX	0	0	29	0	8	48	51	51	51	50	51	51
DEL UD	0	0	0	0	0							
EBT RQ	0	0	0	0	0	8	8	8	8	8	8	8

======== Test Data Summary ========

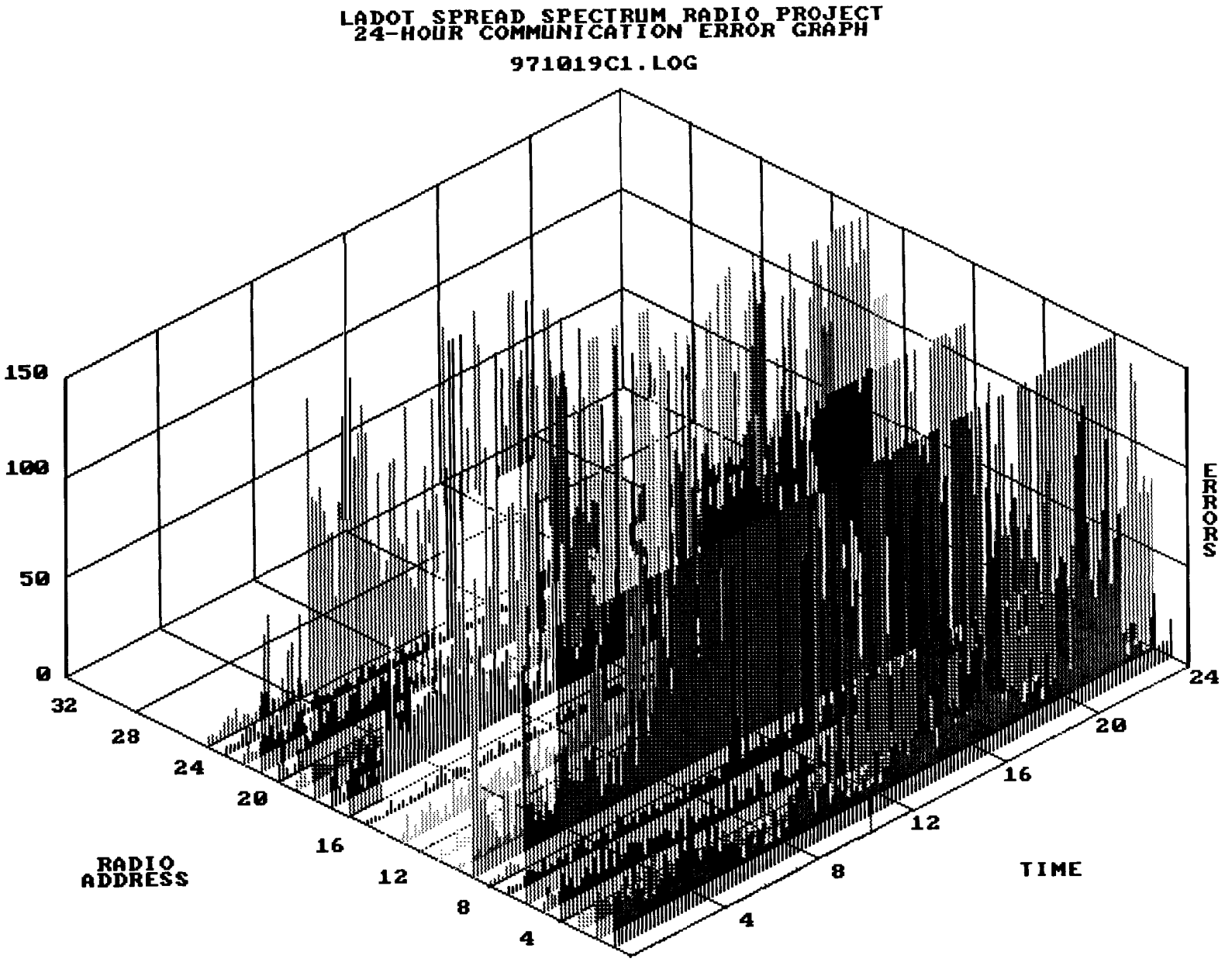
Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX	0	0		0	0	0	0	0	0	0	0	0	0	
RSP TX	0	0	8	0	0	0		0	0	0		0		8
DEL UD	0	0		0	0	0	8	0	0	0	8	0	8	0
ENT RQ	0	0	8	0	0	0	0	0	0	0	0	0	0	0

Radio#	15	16	17	18	19	20	21	22	23	24	25	26
CMD RX	0	0	0	0		0	411	409	409	409	409	152
RSP TX	0	0	123	0	8	22;	411	409	409	4060	411	409
DEL UD	0	0	0	0			0	0	0		0	0
ENT RQ	0	0	0	0	8	0	0	0	0	0	0	0

Frame range = 5910 -> 6320
Total number of frames = 411
Total number of DEL UPDT frames = 0
Total number of EBT RQST frames = 0

APPENDIX C : 24-HOUR ERROR PLOTS

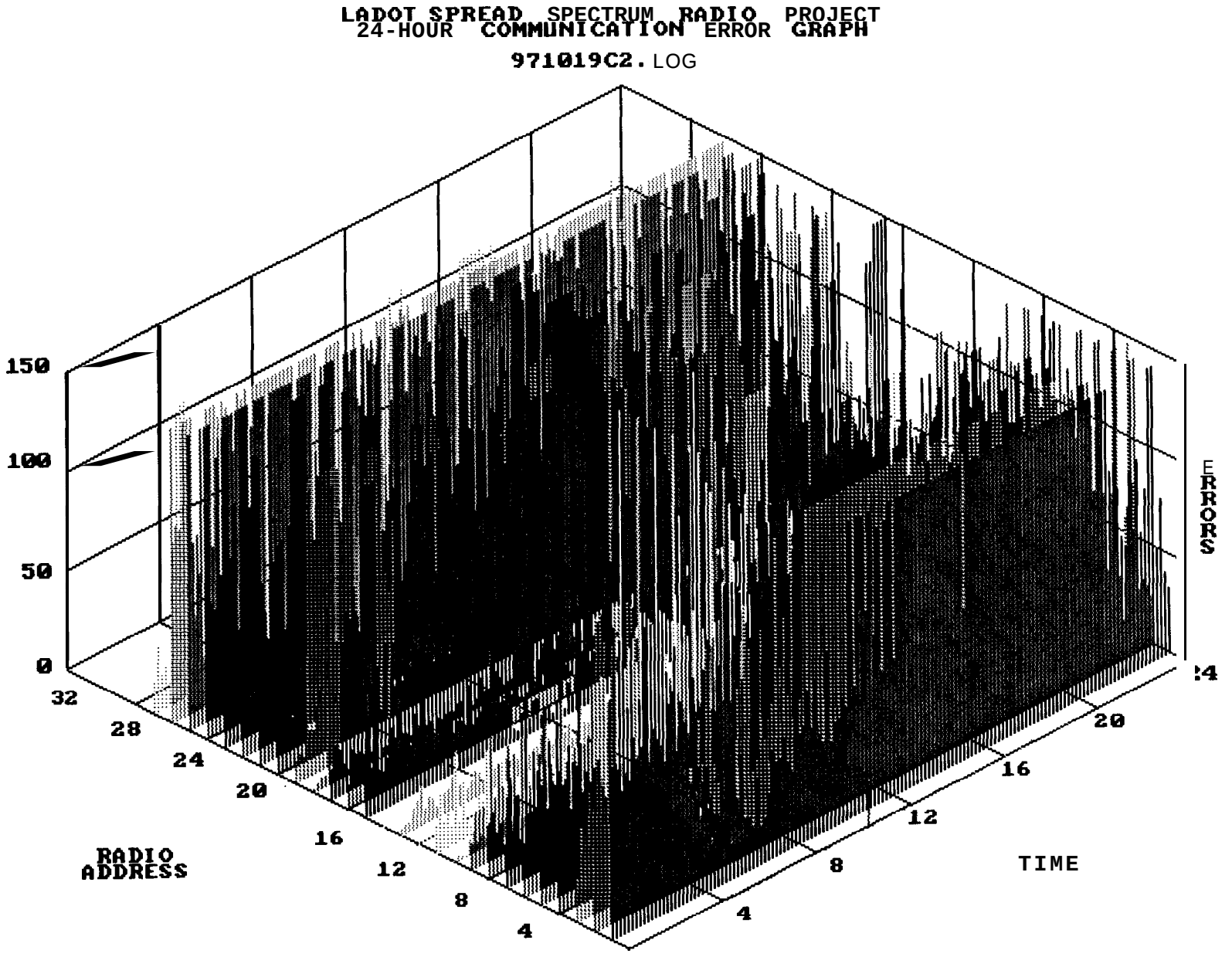
Twelve 24-hour message error plots obtained on three typical days (Oct 19, 21 and 23) from radios in the four cells have been included here. The X-axis indicates time in intervals of 10 minutes. During this interval, 1200 UTCS responses are expected at the central (or specifically, the PPUs) from each radio in the cell. The number of times a response was not received from a radio during this 10 minute interval is indicated on the Z-axis. The Y-axis represents the radio number. We also include the data sheets associated with the plots. From the data, it can be concluded that the long term throughput is more than 90%.


LADOT SPREAD SPECTRUM RADIO PROJECT
24-HOUR COMMUNICATION ERROR GRAPH
971019C1.LOG
150
100
50
0
ERRORS
32
28
24
20
16
12
8
4
RADIO
ADDRESS
4
8
12
16
20
24
TIME

ADOT SPREAD SPECTRUM RADIO PROJECT
24-HOUR COMMUNICATIONS ANALYSIS

971019C1.LOG

Radio Address	Totals Good Frames	Totals Bad Frames	Missed Frames	Frame Thruput (%)	Values in 2-Minute Periods: Avg Good	Max Good	Total Good	Avg Bad	Max Bad	Total Bad
0	172257	303	240	99.824	11	86	656	1	2	63
1	166205	6355	240	96.317	1	1	14	44	132	705
2	164887	7673	240	95.553	1	2	21	34	262	698
3	168017	4543	240	97.367	1	4	81	9	225	638
4	136200	36360	240	78.929	1	3	14	58	269	705
5	169442	3118	240	98.193	1	4	135	5	73	584
6	160614	11946	240	93.077	1	4	56	15	269	663
7	170185	2375	240	98.624	1	5	157	4	36	562
8	170536	2024	240	98.827	1	5	159	4	31	560
9	150532	22028	240	87.235	1	1	11	59	168	708
10	170726	1834	240	98.937	1	11	309	2	21	410
11	169825	2735	240	98.415	1	6	159	4	63	560
12	171408	1152	240	99.332	1	7	328	2	11	391
13	168575	3985	240	97.691	1	7	184	4	45	535
14	160421	12139	240	92.965	1	1	16	39	259	703
15	171500	1060	240	99.386	1	9	365	1	15	354
16	168485	4075	240	97.639	1	1	44	14	72	675
17	168011	4549	240	97.364	1	5	47	16	169	672
18	159565	12995	240	92.469	1	6	67	14	207	652
19	162396	10164	240	94.110	1	3	96	8	92	623
20	168649	3911	240	97.734	1	4	98	7	112	621
21	169130	3430	240	98.012	1	4	145	5	31	574
22	168762	3798	240	97.799	1	2	119	6	62	600
23	170428	2132	240	98.764	1	8	267	2	14	452
24	167247	5313	240	96.921	1	4	100	8	59	619


LADOT SPREAD SPECTRUM RADIO PROJECT
24-HOUR COMMUNICATION ERROR GRAPH
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ERRORS
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RADIO ADDRESS
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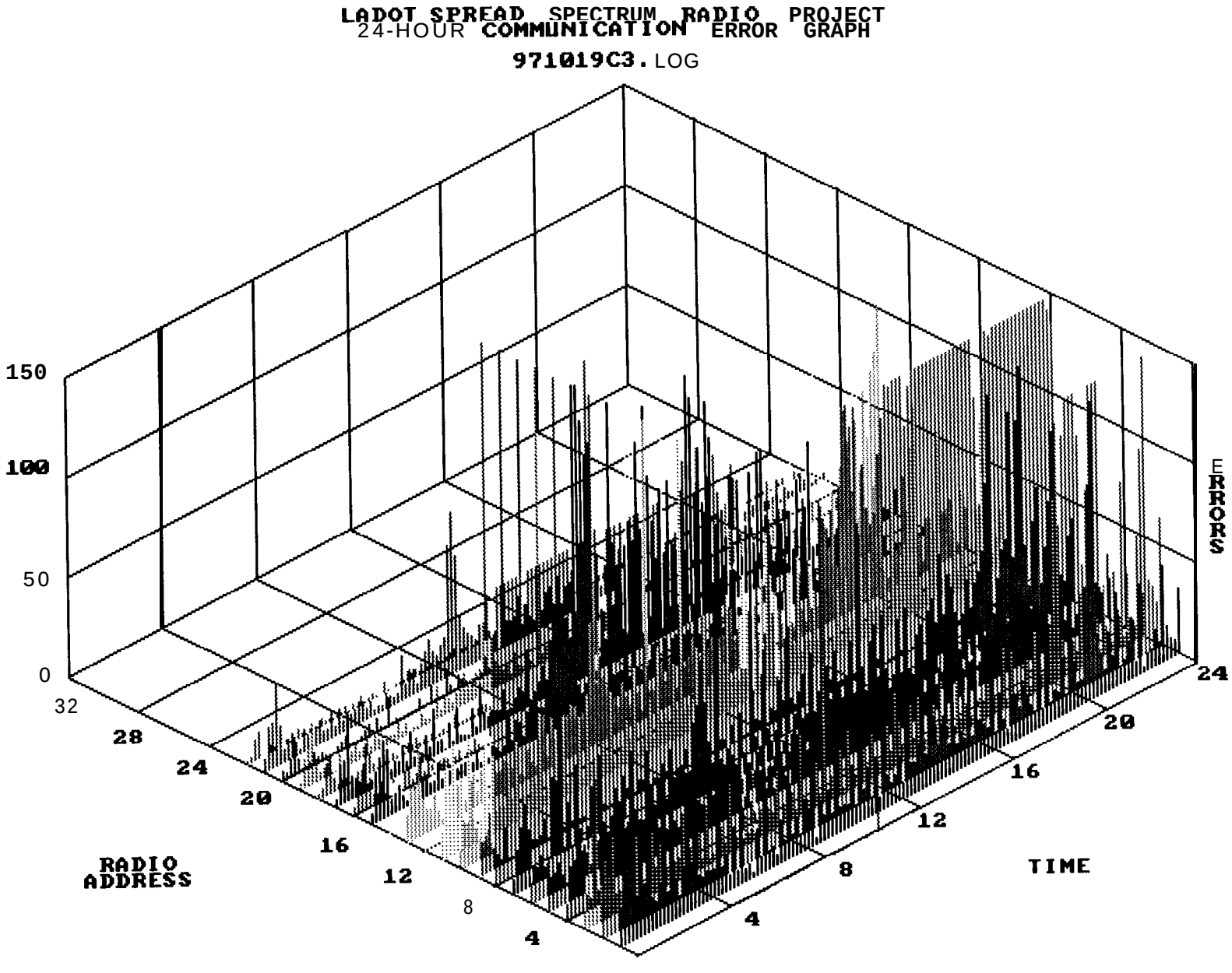
TIME

LADOT SPREAD SPECTRUM RADIO PROJECT
24-HOUR COMMUNICATIONS ANALYSIS

971019C2.LOG

Radio Address	Totals Good Frames	Totals Bad Frames	Missed Frames	Frame Thruput (%)	Values in 2-Minute Periods Avg Good	Max Good	p & l	Avg Bad	Max Bad	Total Bad
0	172286	274	240	99.841	18	126	683	1	2	36
1	149089	23471	240	86.398	0	0	0	359	450	719
2	152240	20320	240	88.224	0	0	0	359	450	719
3	151046	21514	240	87.532	1	1	1	239	450	718
4	154437	18123	240	89.498	0	0	0	359	450	719
5	154732	17828	240	89.669	1	1	1	239	450	718
6	160442	12118	240	92.978	1	1	2	179	450	717
7	158013	14547	240	91.570	1	1	1	239	450	718
8	160592	11968	240	93.064	1	1	12	50	369	707
9	163761	8799	240	94.901	1	2	9	78	376	710
10	169939	2621	240	98.481	1	6	212	3	48	507
11	166494	6066	240	96.485	1	2	42	16	85	677
12	168081	4479	240	97.404	1	2	28	25	166	691
13	169692	2868	240	98.338	1	4	124	6	36	595
14	167831	4729	240	97.260	1	10	188	5	50	531
15	161901	10659	240	93.823	1	2	18	41	216	701
16	167122	5438	240	96.849	1	2	17	39	229	702
17	147878	24682	240	85.697	1	1	1	239	450	718
18	169292	3268	240	98.106	1	10	263	3	15	456
19	153077	19483	240	88.709	1	3	16	50	241	703
20	160768	11792	240	93.166	1	1	2	179	450	717
21	162035	10525	240	93.901	0	0	0	359	450	719
22	159522	13038	240	92.444	0	0	0	359	450	719
23	156228	16332	240	90.535	0	0	0	359	450	719
24	155846	16714	240	90.314	1	1	2	179	269	717
25	142748	29812	240	82.724	1	1	1	239	450	718
26	138290	34270	240	80.140	0	0	0	359	450	719
27	163058	9502	240	94.494	1	2	15	44	341	704


LADOT SPREAD SPECTRUM RADIO PROJECT
24-HOUR COMMUNICATION ERROR GRAPH
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ERRORS
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RADIO ADDRESS
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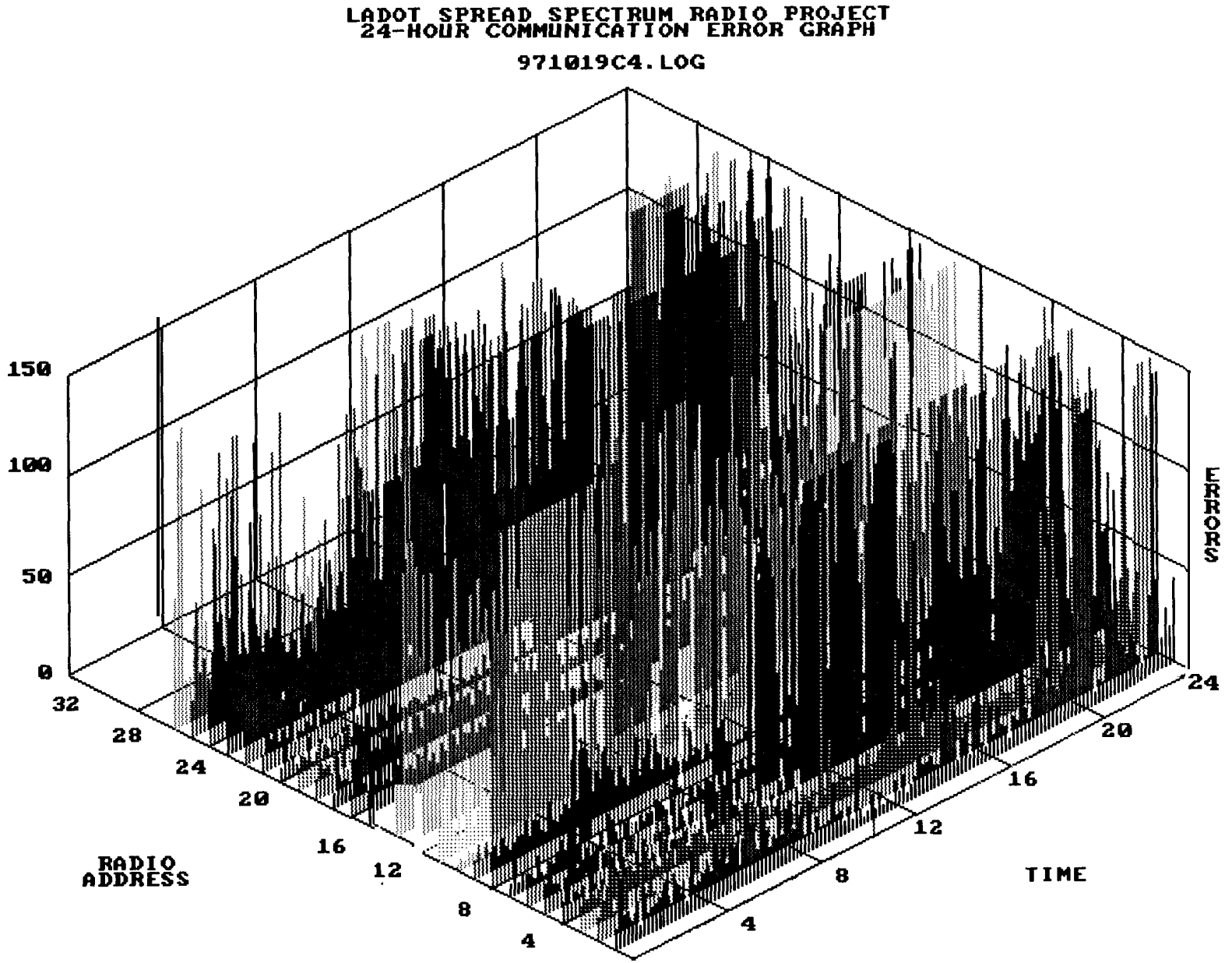
TIME

LADOT SPREAD SPECTRUM RADIO PROJECT
24-HOUR COMMUNICATIONS ANALYSIS

971019C3.LOG

Radio Address	Totals Good Frames	Totals Bad Frames	Missed Frames	Frame Thruput (%)	Values in 2-Minute Periods Avg Good	Max Good	T&:21 Avg Bad	Max Bad	Total Bad
0	172276	284	240	99.835	14	132	673	1	2	46
1	168734	3826	240	97.783	1	3	61	12	72	658
2	159263	13297	240	92.294	1	1	5	102	269	714
3	169898	2662	240	98.457	1	3	123	6	38	596
4	170638	1922	240	98.886	1	5	187	4	26	532
5	167548	5012	240	97.096	1	2	25	26	129	694
6	170269	2291	240	98.672	1	5	147	5	40	572
7	169500	3060	240	98.227	1	3	119	6	148	600
8	149717	22843	240	86.762	0	0	0	359	450	719
9	171389	1171	240	99.321	2	9	360	2	18	359
10	169577	2983	240	98.271	1	3	111	6	90	608
11	168599	3961	240	97.705	1	2	67	10	86	652
12	169546	3014	240	98.253	1	3	85	9	47	634
13	168887	3673	240	97.871	1	3	81	9	90	638
14	167840	4720	240	97.265	1	2	66	11	151	653
15	170374	2186	240	98.733	1	5	154	5	40	565
16	170913	1647	240	99.046	1	6	215	3	28	504
17	168074	4486	240	97.400	1	4	118	6	188	601
18	171473	1087	240	99.370	2	11	413	1	14	306
19	171200	1360	240	99.212	1	7	275	3	27	444
20	171792	768	240	99.555	2	13	425	1	10	294
21	170311	2249	240	98.697	1	6	162	5	56	557
22	172037	523	240	99.697	3	23	510	1	5	209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24-HOUR COMMUNICATION ERROR GRAPH
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ERRORS
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RADIO ADDRESS
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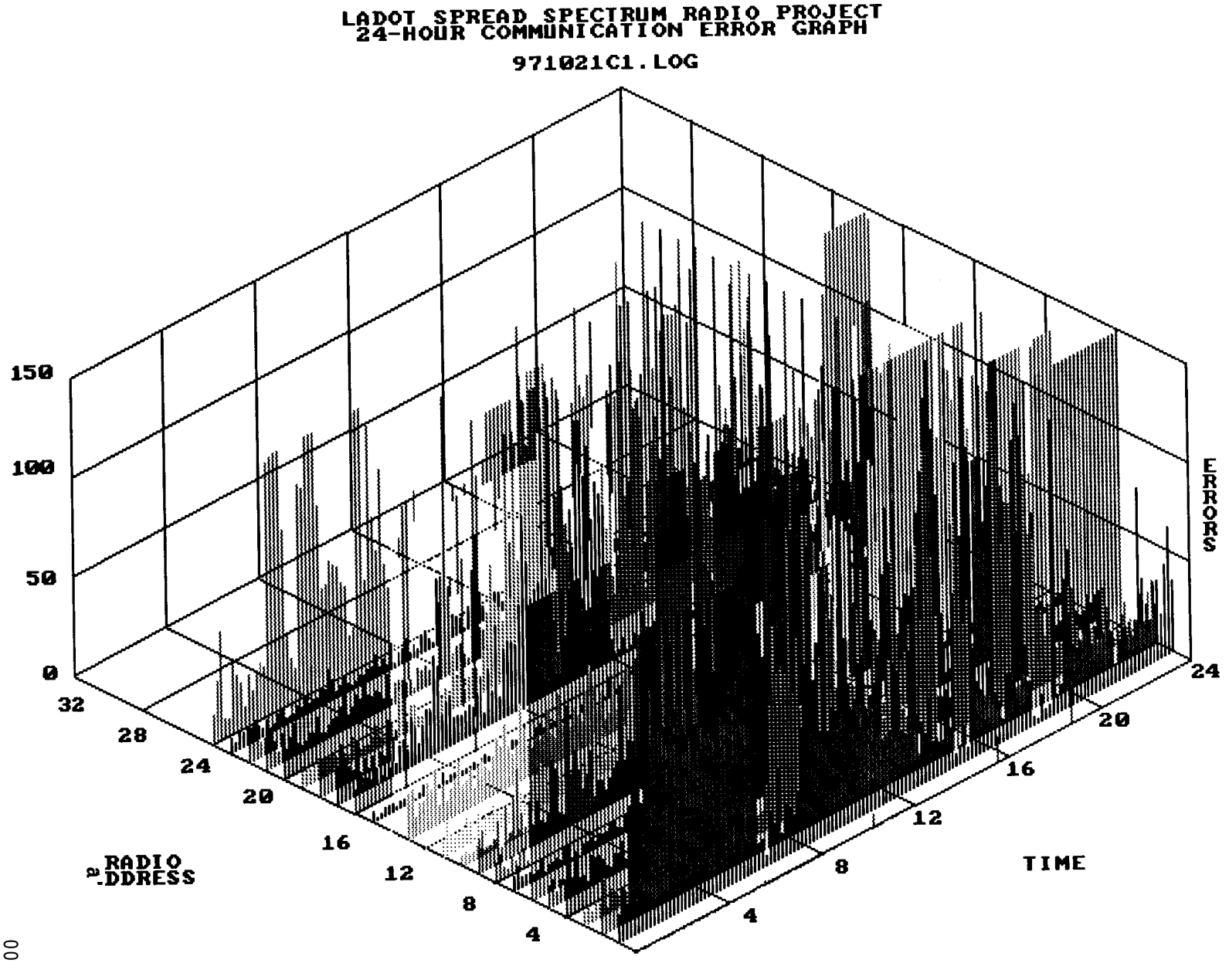
TIME

LADOT SPREAD SPECTRUM RADIO PROJECT
24-HOUR COMMUNICATIONS ANALYSIS

971019C4.LOG

Radio Address	Good Frames	Total Bad Frames	Missed Frames	Frame Thruput (%)	Values in 2-Minute Periods: Avg Good	Max Good	Total Good	Avg Bad	Max Bad	Total Bad
0	172275	285	240	99.835	14	80	674	1	2	
1	168405	4155	240	97.592	1	3	52	13	105	6%:
2	157502	15058	240	91.274		2	38	20	233	681
3	168847	3713	240	97.848	1	3	66	11	56	653
4	169510	3050	240	98.232	1	3	94	8	54	625
5	160789	11771	240	93.179	1	3	60	12	109	659
6	157668	14892	240	91.370	1	3	42	16	120	677
7	170341	2219	240	98.714	1	5	166	4	31	553
8	161286	11274	240	93.467		4	87	9	135	632
9	170184	2376	240	98.623		5	134	5	60	585
10	171526	1034	240	99.401	1	10	303	2	17	416
11	162858	9702	240	94.378	1	2	40	16	78	679
12	171105	1455	240	99.157	1	7	249	2	31	470
13	152162	20398	240	88.179	0	0	0	359	450	719
14	171047	1513	240	99.123	2	11	351	2	24	368
15	162354	10206	240	94.086	1	3	36	22	204	683
16	169408	3152	240	98.173	1	4	104	7	39	615
17	160382	12178	240	92.943	1	3	93	8	204	626
18	169284	3276	240	98.102	1	4	99	7	49	620
19	169263	3297	240	98.089	1	4	111	6	41	608
20	156829	15731	240	90.884	1	4	104	7	75	615
21	159731	12829	240	92.565	1	2	44	16	186	675
22	161858	10702	240	93.798	1	1	15	41	214	704
23	163612	8948	240	94.815	1	1	25	25	222	694
24	160975	11585	240	93.286	1	1	11	54	269	708
25	161117	11443	240	93.369	1	2	18	36	137	701
26	164823	7737	240	95.516	1	2	28	24	109	691


LADOT SPREAD SPECTRUM RADIO PROJECT
24-HOUR COMMUNICATION ERROR GRAPH
971021C1.LOG
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ERRORS
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RADIO ADDRESS
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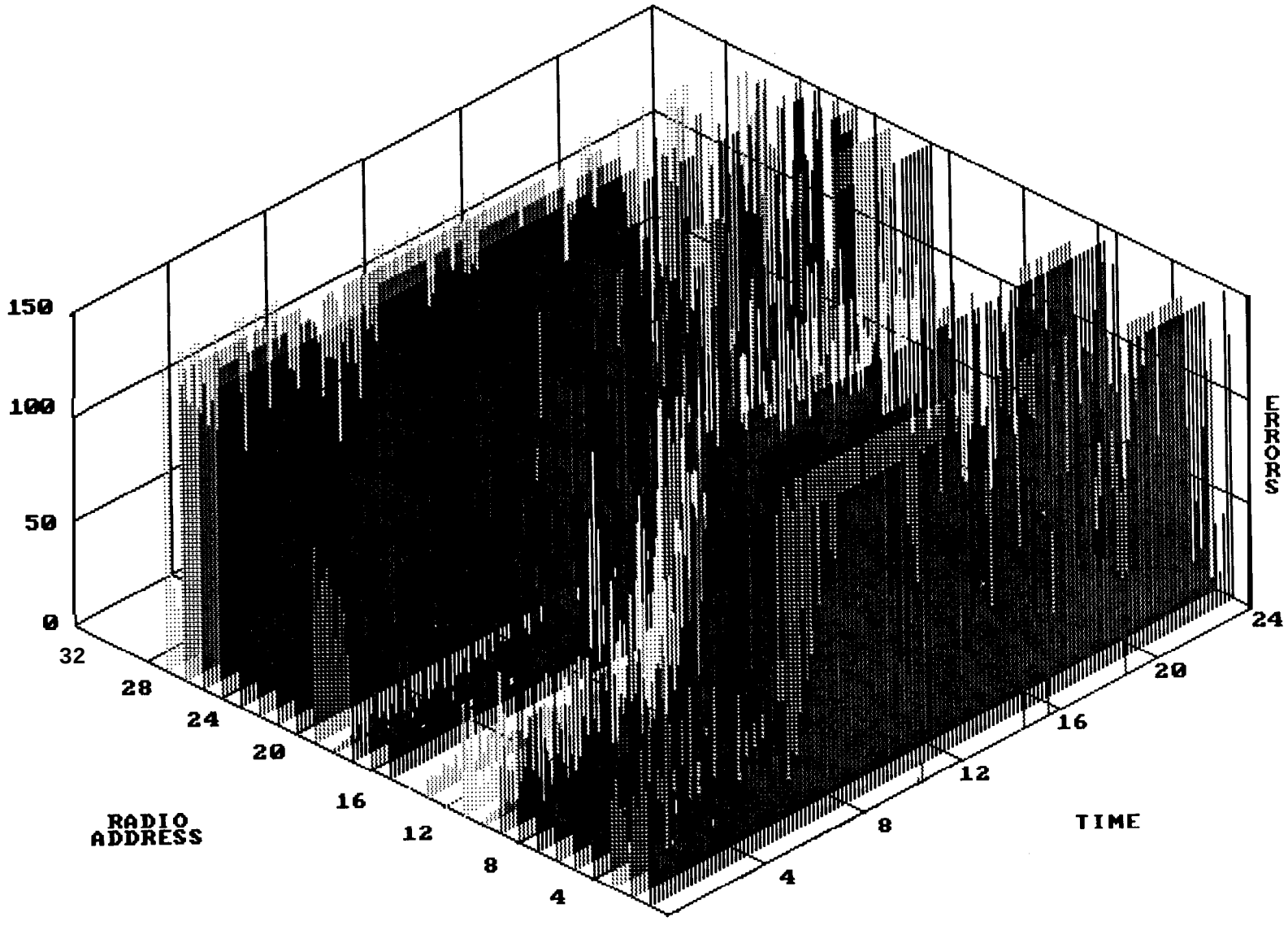
TIME

LADOT SPREAD SPECTRUM RADIO PROJECT
24-HOUR COMMUNICATIONS ANALYSIS
971021C1.LOG

Radio Address	Totals Good Frames	Totals Bad Frames	Missed Frames	Frame Thruput (%)	Values Avg Good	Values Max Good	TOO: Avg Bad	TOO: Max Bad	Total Bad
0	172242	318	240	99.816	13	95	664	1	2	55
1	158728	13832	240	91.984	1	2	22	31	132	697
2	161620	10940	240	93.660	1	2	10	78	243	709
3	164804	7756	240	95.505	1	3	62	12	390	657
4	152929	19631	240	88.624	1	4	41	20	240	678
5	167391	5169	240	97.005	1	3	56	13	151	663
6	154327	18233	240	89.434	1	4	18	50	243	701
7	170080	2480	240	98.563	1	4	168	4	47	551
8	170518	2042	240	98.817	1	4	171	4	47	548
9	152127	20433	240	88.159	1	1	16	39	213	703
10	171800	760	240	99.560	2	16	405	1	10	314
11	169573	2987	240	98.269	1	5	109	6	46	610
12	171603	957	240	99.445	1	9	310	2	12	409
13	169099	3461	240	97.994	1	5	120	6	57	599
14	160380	12180	240	92.942	1	5	53	15	175	666
15	171819	741	240	99.571	2	10	395	1	8	324
16	166218	6342	240	96.325	1	2	24	30	178	695
17	167429	5131	240	97.027	1	5	67	13	71	652
18	157260	15300	240	91.134	1	3	58	13	243	661
19	166284	6276	240	96.363	1	3	80	9	107	639
20	165081	7479	240	95.666	1	2	28	23	192	691
21	170324	2236	240	98.704	1	5	147	5	23	572
22	167392	5168	240	97.005	1	5	107	7	83	612
23	171213	1347	240	99.219	1	5	250	3	17	469
24	168265	4295	240	97.511	1	4	89	9	84	630


LADOT SPREAD SPECTRUM RADIO PROJECT
24-HOUR COMMUNICATION ERROR GRAPH
971021C2. LOG
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ERRORS
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RADIO ADDRESS
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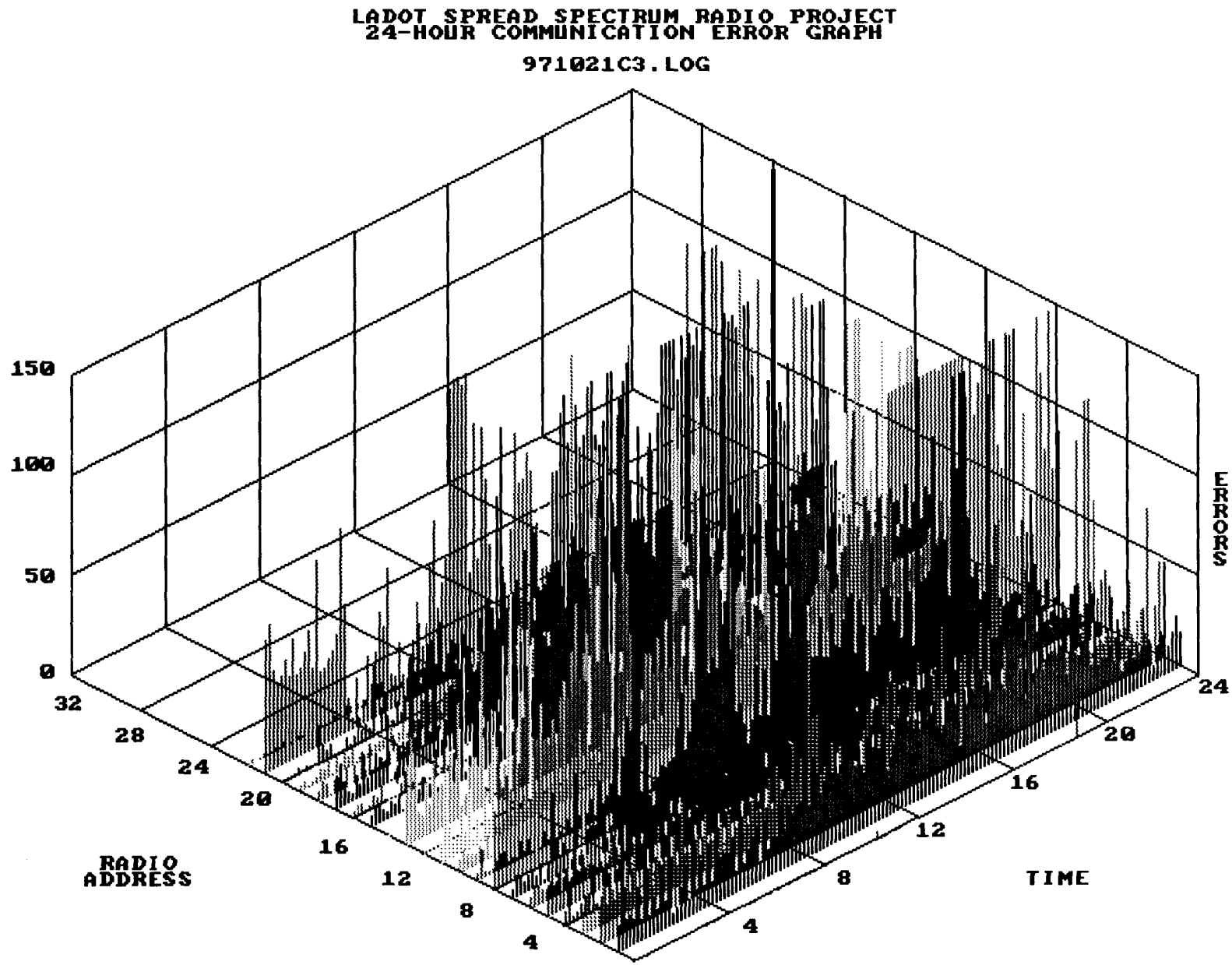
TIME

LADOT SPREAD SPECTRUM RADIO PROJECT
24-HOUR COMMUNICATIONS ANALYSIS

971021C2.LOG

Radio Address	Totals Good Frames	Totals Bad Frames	Missed Frames	Frame Thruput (%)	Values in 5-Minute Periods Avg Good	Max Good	Total Good	Avg Bad	Max Bad	Total Bad
0	172288	512	0	99.704	20	105	686	1	2	34
1	143405	29395	0	82.989	0	0	0	720	720	720
2	146531	26269	0	84.798	1	1	4	143	625	716
3	143572	29228	0	83.086	0	0	0	720	720	720
4	148493	24307	0	85.933	1	1	8	79	625	712
5	145924	26876	0	84.447	1	1	6	102	628	714
6	151483	21317	0	87.664	1	1	1	359	619	719
7	149064	23736	0	86.264	1	1	1	359	619	719
8	153613	19187	0	88.896	1	1	9	71	625	711
9	155104	17696	0	89.759	1	1	3	179	541	717
10	171209	1591	0	99.079	1	11	294	2	14	426
11	163047	9753	0	94.356	1	2	24	29	198	696
12	159855	12945	0	92.509	1	2	15	47	347	705
13	169053	3747	0	97.832	1	2	67	11	194	653
14	165647	7153	0	95.861	1		90	9	192	630
15	164609	8191	0	95.260	1	3	20	38	137	700
16	163679	9121	0	94.722	1		7	89	253	713
17	144450	28350	0	83.594	1		1	359	690	719
18	170650	2150	0	98.756	1	3	312	2	16	408
19	148683	24117	0	86.043	1	1	2	239	391	718
20	154566	18234	0	89.448	1	1	2	239	568	718
21	154042	18758	0	89.145	0	0	0	720	720	720
22	148042	24758	0	85.672	1	1	2	239	533	718
23	143767	29033	0	83.198	0	0	0	720	720	720
24	76449	96351	0	44.241	0	0	0	720	720	720
25	137097	35703	0	79.339	0	0	0	720	720	720
26	131355	41445	0	76.016	0		0	720	720	720
27	155855	16945	0	90.194	0	8	0	720	720	720


LADOT SPREAD SPECTRUM RADIO PROJECT
24-HOUR COMMUNICATION ERROR GRAPH
971021C3.LOG
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ERRORS
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RADIO ADDRESS
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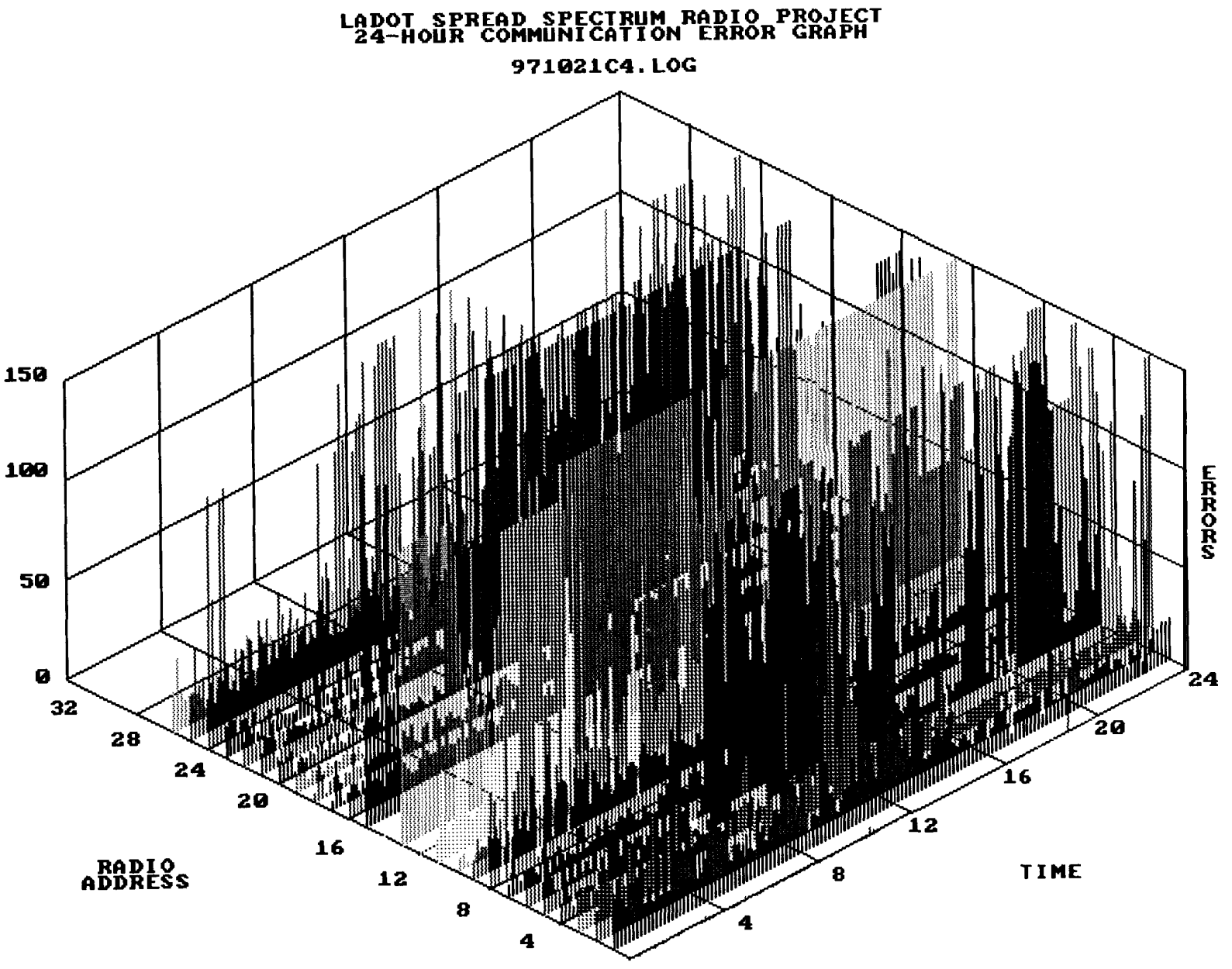
TIME

LADOT SPREAD SPECTRUM RADIO PROJECT
24-HOUR COMMUNICATIONS ANALYSIS

971021C3.LOG

Radio Address	Totals Good Frames	Totals Bad Frames	Missed Frames	Frame Thruput (%)	Values in 2-Minute Periods: Avg Good	Max Good	Total Good	Avg Bad	Max Bad	Total Bad
0	172289	271	240	99.843	26	155	692	1	2	27
1	167077	5483	240	96.823	1	2	27	24	330	692
2	165843	6717	240	96.107	1	1	12	50	177	707
3	168643	3917	240	97.730	1	2	53	13	170	666
4	170680	1880	240	98.911	1	4	180	3	18	539
5	165724	6836	240	96.038	1	1	15	41	401	704
6	160611	11949	240	93.075	1	4	61	12	69	658
7	166571	5989	240	96.529	1	4	58	13	69	661
8	154070	18490	240	89.285	1	2	6	118	437	713
9	171227	1333	240	99.228	1	10	300	2	15	419
10	167316	5244	240	96.961	1	4	65	12	69	654
11	168275	4285	240	97.517	1	3	59	12	264	660
12	169245	3315	240	98.079	1	3	60	11	101	659
13	166059	6501	240	96.233	1	2	20	33	106	699
14	164816	7744	240	95.512	1	2	23	33	377	696
15	167535	5025	240	97.088	1	4	67	12	112	652
16	169441	3119	240	98.193	1	5	117	7	60	602
17	162628	9932	240	94.244	1	4	71	12	351	648
18	167850	4710	240	97.271	2	12	191	5	163	528
19	169881	2679	240	98.447	1	5	175	4	44	544
20	170637	1923	240	98.886	1	8	268	3	21	451
21	166359	6201	240	96.406	1	2	45	16	104	674
22	172012	548	240	99.682	3	17	493	1	13	226


LADOT SPREAD SPECTRUM RADIO PROJECT
24-HOUR COMMUNICATION ERROR GRAPH
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RADIO
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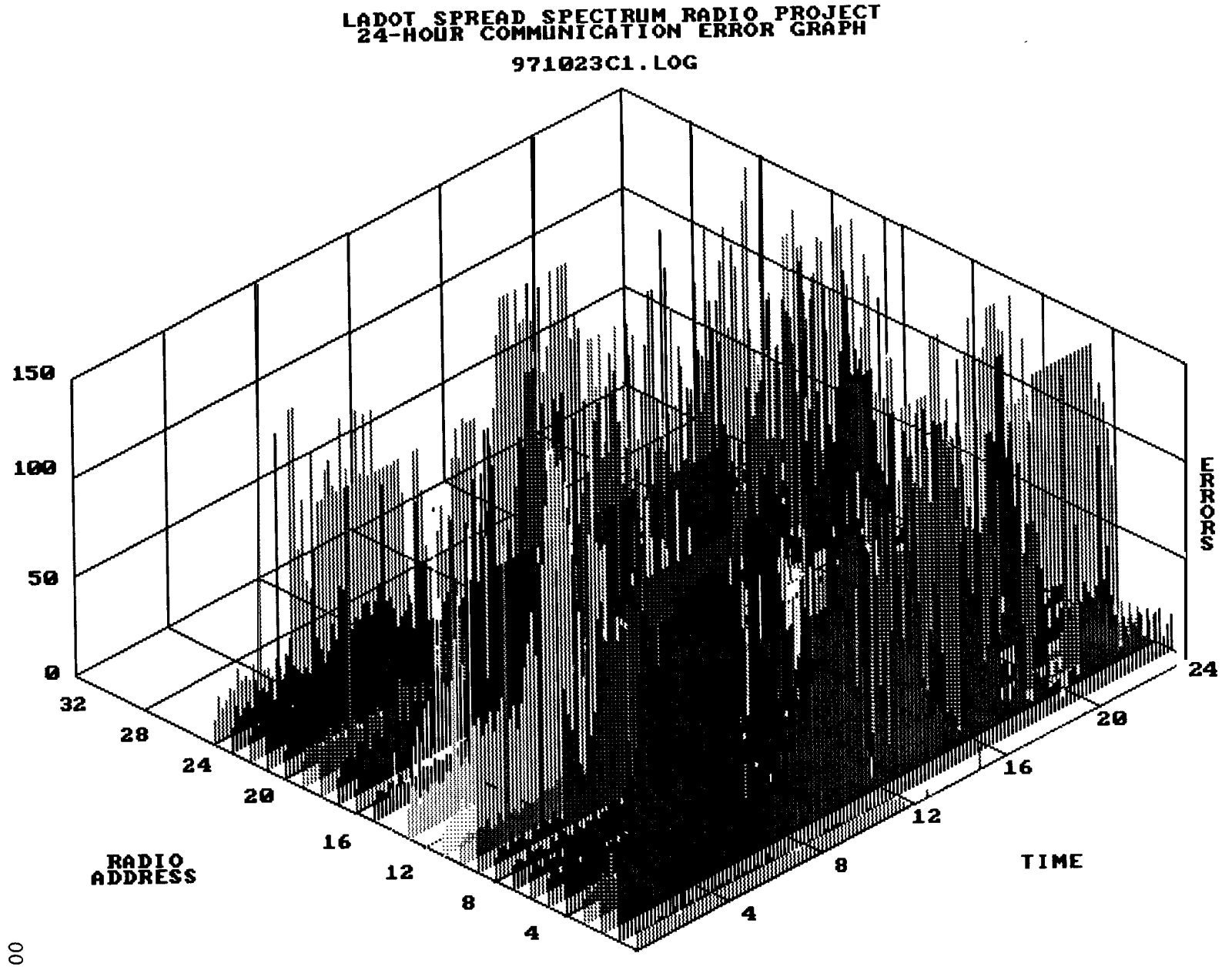
TIME

LADOT SPREAD SPECTRUM RADIO PROJECT
24-HOUR COMMUNICATIONS ANALYSIS

971021C4.LOG

Radio Address	Totals Good Frames	Totals Bad Frames	Missed Frames	Frame Thruput (%)	Values in 2-Minute Periods: Avg Good	Max Good	Total Good	Avg Bad	Max Bad	Total Bad
0	172268	292	240	99.831	14	132	672	1	2	47
1	168314	4246	240	97.539	1	2	24	27	181	695
2	154200	18360	240	89.360	1	2	24	28	121	695
3	169351	3209	240	98.140	1	4	63	13	97	656
4	169895	2665	240	98.456	1	4	88	9	112	631
5	162265	10295	240	94.034	1	4	66	11	62	653
6	158413	14147	240	91.802	1	1	18	35	114	701
7	170173	2387	240	98.617	1	7	152	5	34	567
8	165692	6868	240	96.020	1	7	169	4	31	550
9	170233	2327	240	98.651	1	5	95	8	93	624
10	171595	965	240	99.441	2	9	323	2	21	396
11	163965	8595	240	95.019	1	3	32	22	125	687
12	171227	1333	240	99.228	1	8	253	3	20	466
13	118633	53927	240	68.749	1	1	3	143	446	716
14	171308	12252	240	99.274	2	9	303	2	25	416
15	161191	11369	240	93.412	1	3	27	27	243	692
16	169259	3301	240	98.087	1	5	90	9	43	629
17	170407	2153	240	98.752	1	7	165	4	51	554
18	170444	2116	240	98.774	1	4	152	5	34	567
19	170235	2325	240	98.653	1	6	139	5	72	580
20	146426	26134	240	84.855	1	6	90	10	203	629
21	159966	12594	240	92.702	1	10	81	11	163	638
22	168786	3774	240	97.813	1	5	104	7	55	615
23	169075	3485	240	97.980	1	4	88	9	55	631
24	166447	6113	240	96.457	1	3	21	34	225	698
25	164180	8380	240	95.144	1	5	55	15	142	664
26	169070	3490	240	97.978	1	2	59	12	55	660


LADOT SPREAD SPECTRUM RADIO PROJECT
24-HOUR COMMUNICATION ERROR GRAPH
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150
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ERRORS
32
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RADIO ADDRESS
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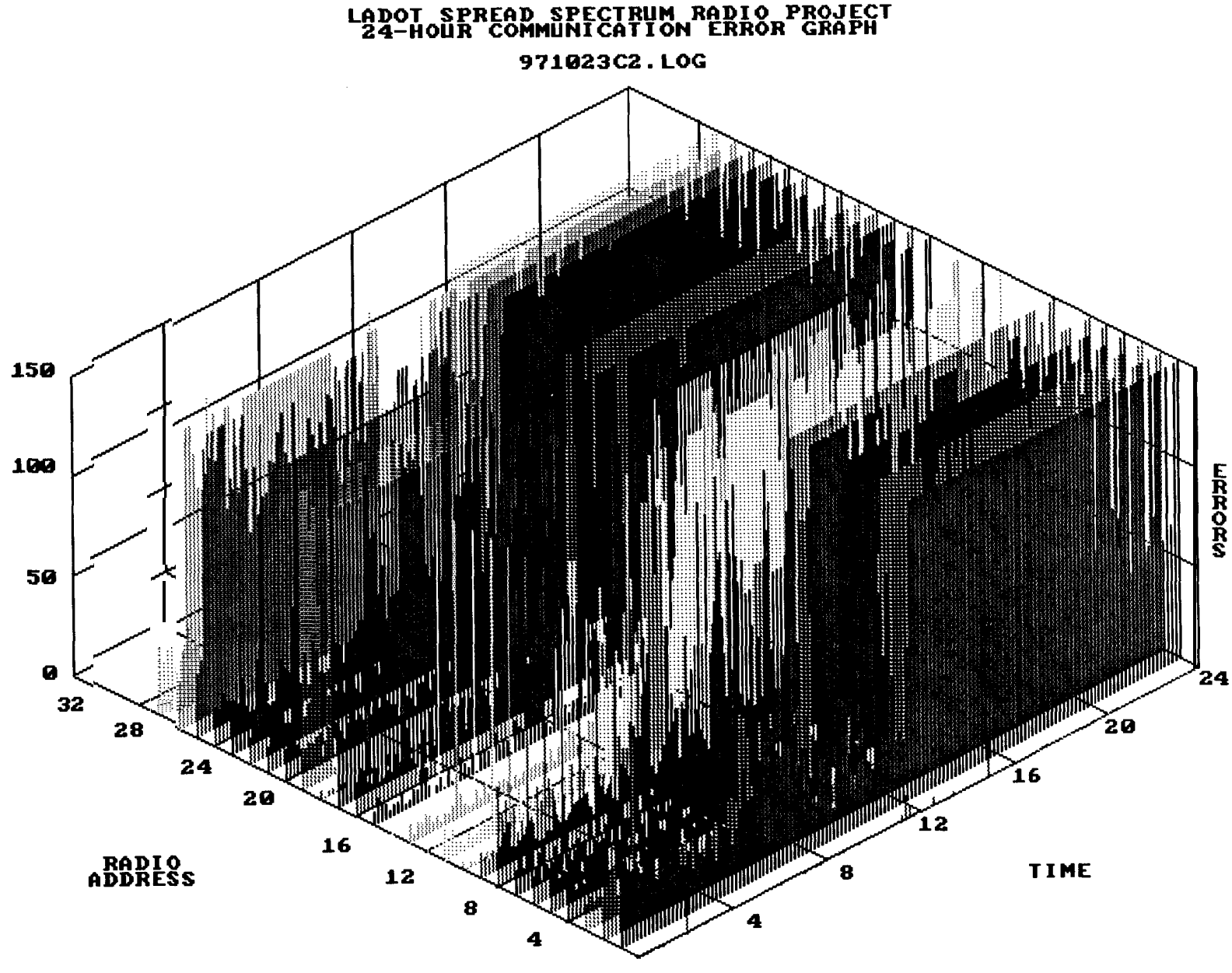
TIME

LADOT SPREAD SPECTRUM RADIO PROJECT
24-HOUR COMMUNICATIONS ANALYSIS

971023C1.LOG

Radio Address	Totals Good Frames	Totals Bad Frames	Missed Frames	Frame Thruput (%)	Values in 2-Minute Periods Avg Good	Max Good	Total Good	Avg Bad	Max Bad	Total Bad
0	171302	1018	480	99.409	10	88	343	11	137	375
1	158513	13807	480	91.988	1	2	17	43	447	701
2	158269	14051	480	91.846	1	2	16	50	348	702
3	162651	9669	480	[illegible]	1	2	17	41	447	701
4	151373	20947	480	87.844	1	2	24	31	348	694
5	167165	5155	480	97.008	1	2	24	30	351	694
6	159766	12554	480	92.715	1	1	1	239	447	717
7	168134	4186	480	97.571	1	3	65	11	348	653
8	169225	3095	480	98.204	1	3	76	11	348	642
9	150091	22229	480	87.100	1	2	18	43	348	700
10	170430	1890	480	98.903	1	11	124	8	348	594
11	167818	4502	480	97.387	1		38	24	364	680
12	170309	2011	480	98.833	1		132	7	348	586
13	169173	3147	480	98.174	1		89	11	348	629
14	166048	6272	480	96.360	1	5	45	18	371	673
15	170628	1692	480	99.018	1	8	179	5	348	539
16	163924	8396	480	95.128	1	2	9	70	447	709
17	165445	6875	480	96.010	1	2	25	28	349	693
18	156201	16119	480	90.646	1	2	21	34	353	697
19	163605	8715	480	94.943	1	2	4	142	447	714
20	164231	8089	480	95.306	1	4	22	36	447	696
21	167538	4782	480	97.225	1	3	42	17	348	676
22	166413	5907	480	96.572	1	4	31	26	357	687
23	169270	3050	480	98.230	1	5	104	9	348	614
24	162854	9466	480	94.507	1	1	11	54	348	707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ERRORS
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RADIO
ADDRESS
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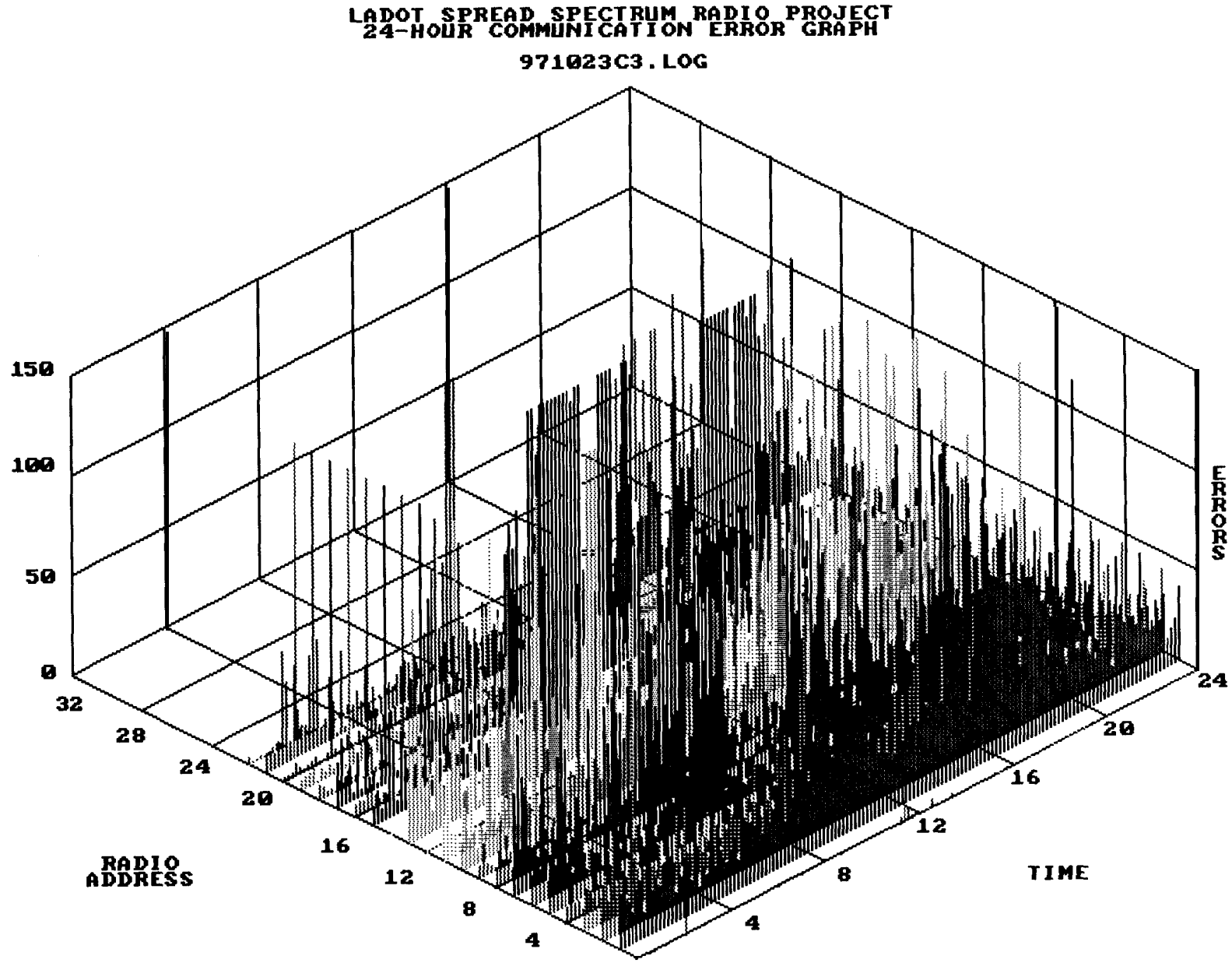
TIME

LADOT SPREAD SPECTRUM RADIO PROJECT
24-HOUR COMMUNICATIONS ANALYSIS

971023C2.LOG

Radio Address	Totals: Good Frames	Totals: Bad Frames	Missed Frames	Frame Thruput (%)	Values in 2-Minute Periods: 2	3	Max Good	Total Good	Avg Bad	Max Bad	Total Bad
0	171948	372	480	99.784	10	93	647		9		71
1	137760	34560	480	79.944	1	1	4	119	256		714
2	145206	27114	480	84.265	1	1	4	119	271		714
3	152171	20149	480	88.307	1	2	22	36	250		696
4	153561	18759	480	89.114	1	2	12	54	256		706
5	150400	21920	480	87.279	1	2	7	88	256		711
6	156198	16122	480	90.644	1	2	23	30	150		695
7	159410	12910	480	92.508	1	2	19	36	256		699
8	148942	23378	480	86.433	1	1	4	119	256		714
9	170194	2126	480	98.766	1	4	134	5	33		584
10	170582	17738	480	98.991	2	19	338	2	30		380
11	155623	16697	480	90.310	1	6	43	21	281		675
12	168973	3347	480	98.058	2	28	364	2	21		354
13	164985	7335	480	95.743	1	3	86	8	48		632
14	158521	13799	480	91.992	3	28	186	8	159		532
15	157024	15296	480	91.123	1	5	89	10	197		629
16	153812	18508	480	89.260	1	1	11	54	298		707
17	136038	36282	480	78.945	0	0	0	359	447		718
18	153331	18989	480	88.980	2	21	255	4	60		463
19	142998	29322	480	82.984	1	2	17	38	271		701
20	146009	26311	480	84.731	1	3	20	38	271		698
21	143557	28763	480	83.308	1	1	2	179	267		716
22	148588	23732	480	86.228	1	1	6	89	304		712
23	147134	25186	480	85.384	1	1	3	143	304		715
24	142495	29825	480	82.692	1	2	22	30	181		696
25	142685	29635	480	82.802	0	0	0	359	447		718
26	141187	31133	480	81.933	0	0	0	359	447		718
27	146221	26099	480	84.854	0	0	0	359	447		718


LADOT SPREAD SPECTRUM RADIO PROJECT
24-HOUR COMMUNICATION ERROR GRAPH
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ERRORS
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RADIO
ADDRESS
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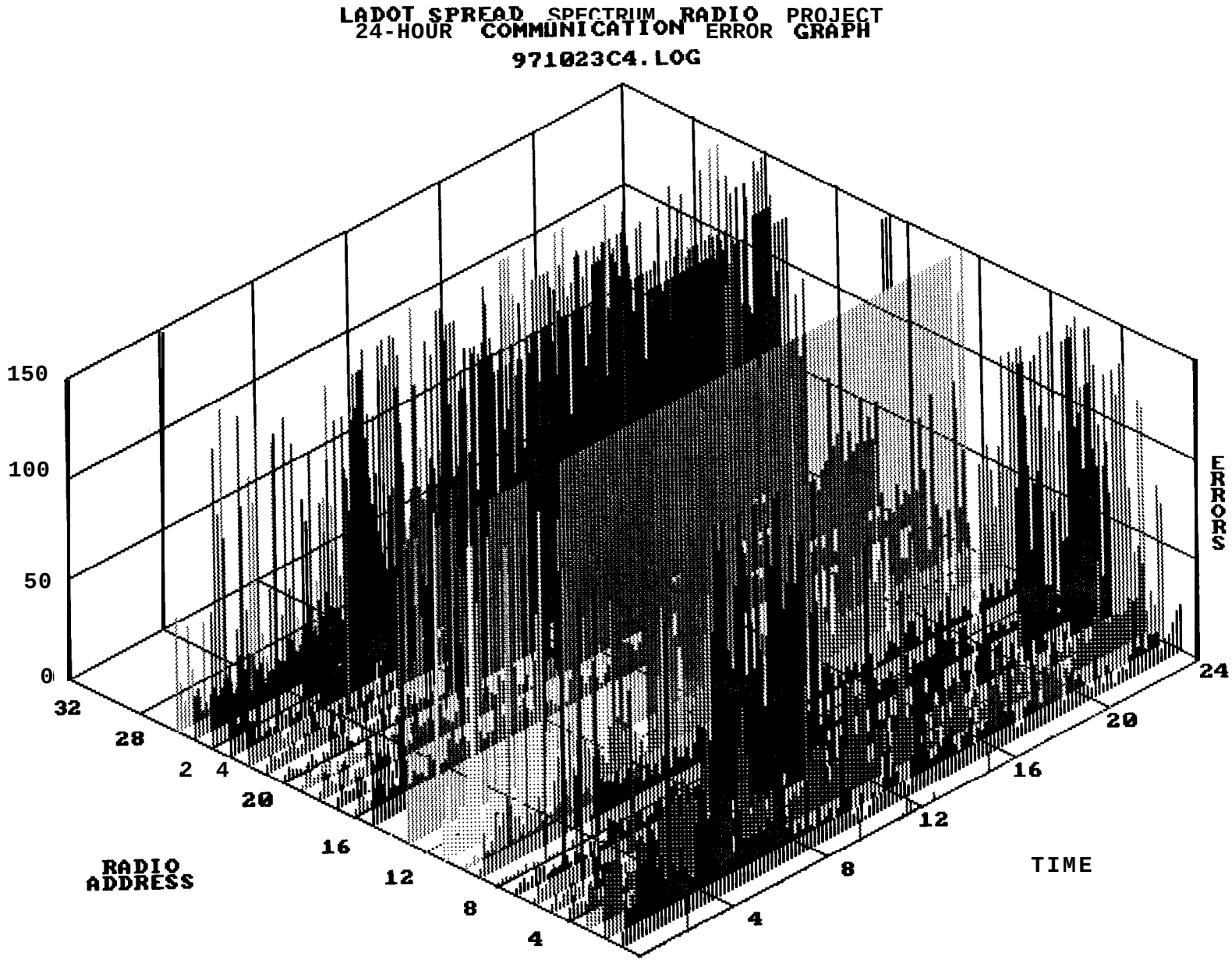
TIME

LADOT SPREAD SPECTRUM RADIO PROJECT
24-HOUR COMMUNICATIONS ANALYSIS

971023C3.LOG

Radio Address	Totals Good Frames	Totals Bad Frames	Missed Frames	Frame Thruput (%)	Values in 2-Minute Periods: Avg Good	Max Good	Total Good	Avg Bad	Max Bad	Total Bad
0	172015	305	480	99.823	15	98	664	1	10	54
1	164631	7689	480	95.538	1	1	8	71	298	710
2	164200	8120	480	95.288	1	1	7	79	359	711
3	168234	4086	480	97.629	1	2	40	17	72	678
4	170340	1980	480	98.851	1	4	162	4	20	556
5	167828	4492	480	97.393	1	2	25	26	72	693
6	168037	4283	480	97.515	1	4	56	13	119	662
7	165077	7243	480	95.797	1	2	35	21	173	683
8	167382	4938	480	97.134	1	2	47	14	112	671
9	170978	1342	480	99.221	1	7	291	2	15	427
10	165006	7314	480	95.756	1	3	57	14	119	661
11	167828	4492	480	97.393	1	3	58	12	68	660
12	168739	3581	480	97.922	1	3	43	16	92	675
13	166097	6223	480	96.389	1	2	45	16	83	673
14	163579	8741	480	94.927	1	3	44	19	240	674
15	168645	3675	480	97.867	1	3	98	7	46	620
16	170052	2268	480	98.684	1	6	163	4	29	555
17	162982	9338	480	94.581	1	4	113	7	112	605
18	167204	5116	480	97.031	2	9	179	6	129	539
19	170922	1398	480	99.189	1	7	270	3	33	448
20	170742	1578	480	99.084	1	10	258	3	19	460
21	167230	5090	480	97.046	1	3	67	11	79	651
22	171722	598	480	99.653	3	17	475	1	14	243


LADOT SPREAD SPECTRUM RADIO PROJECT
24-HOUR COMMUNICATION ERROR GRAPH
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ERRORS
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RADIO ADDRESS
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ADOT SPREAD SPECTRUM RADIO PROJECT
24-HOUR COMMUNICATIONS ANALYSIS

971023C4.LOG

Radio Address	Totals Good Frames	Totals Bad Frames	Missed Frames	Frame Thruput (%)	Values in 2-Minute Periods Avg Good	Max Good	Total Good	Avg Bad	Max Bad	Total Bad
0	171983	337	480	99.804	12	92	650	1	9	68
1	168667	3653	480	97.880	1	4	50	15	162	668
2	157434	14886	480	91.361	1	2	33	20	150	685
3	168511	3809	480	97.790	1	2	47	16	174	671
4	170120	2200	480	98.723	1	3	103	6	43	615
5	164455	7865	480	95.436	1	5	98	7	59	620
6	160449	11871	480	93.111	1	3	31	23	145	687
7	170613	1707	480	99.009	1	4	165	4	35	553
8	170151	2169	480	98.741	1	7	176	4	55	542
9	170420	1900	480	98.897	1	7	189	4	106	529
10	171310	1010	480	99.414	1	8	294	2	14	424
11	166782	5538	480	96.786	1	2	27	25	119	691
12	171252	1068	480	99.380	1	6	275	2	13	443
13	84437	87883	480	49.000	1	1	1	239	278	717
14	171462	858	480	99.502	1	10	344	2	17	374
15	167200	5120	480	97.029	1	4	58	14	133	660
16	169700	2620	480	98.480	1	3	89	8	44	629
17	168939	3381	480	98.038	1	5	114	7	56	604
18	167268	5052	480	97.068	1	3	52	15	172	666
19	168983	3337	480	98.063	1	5	101	8	56	617
20	154367	17953	480	89.582	1	5	102	8	92	616
21	157897	14423	480	91.630	1	3	58	13	180	660
22	159995	12325	480	92.848	1	3	27	34	178	691
23	162642	9678	480	94.384	1	4	42	19	178	676
24	158858	13462	480	92.188	1	1	5	101	196	713
25	162639	9681	480	94.382	1	2	18	41	130	700
26	164498	7822	480	95.461	1	4	39	19	132	679

APPENDIX D : GLOSSARY OF TERMS

AM	Amplitude Modulation
ATSAC	Automated Traffic Surveillance & Control
BER	Bit Error Rate
BFSK	Binary Frequency Shift Keying
BPSK	Binary Phase Shift Keying
CDMA	Code Division Multiple Access
CMD	Command
CRC	Cyclic Redundancy Check
DS	Direct Sequence
EOT	Evaluation Oversight Team
FEC	Forward Error Correction
FH	Frequency Hopping
FHWA	Federal Highway Administration
FM	Frequency Modulation
FOT	Field Operational Test
FSK	Frequency Shift Keying
HE	Headend
ITS	Intelligent Transportation Systems
LADOT	Los Angeles Dept. of Transportation
LOS	Line of Sight
MSK	Minimum Shift Keying
PATH	Partners for Advanced Transit & Highways
PN	Pseudo-random Noise
PPU	Peripheral Processing Unit
QPSK	Quadrature Phase Shift Keying
RA	Remote Antenna
RF	Radio Frequency
RR	Remote Radio
RSP	Response
RSSI	Received Signal Strength Interference
RX	Reception
SSNR	Spread Spectrum Network Radio
SSRN	Spread Spectrum Radio Network
TDMA	Time Division Multiple Access
TX	Transmission
USC	University of Southern California
UTCS	Urban Traffic Control System