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CALIFORNIA PATH PROGRAM
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Los Angeles FOT Spread Spectrum Radio Traffic Signal Interconnect Evaluation Task: Final Report on Full Deployment

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Los Angeles FOT Spread Spectrum Radio Traffic Signal Interconnect Evaluation Task:

Final Report on Full Deployment

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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 C 4 ifornia 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.

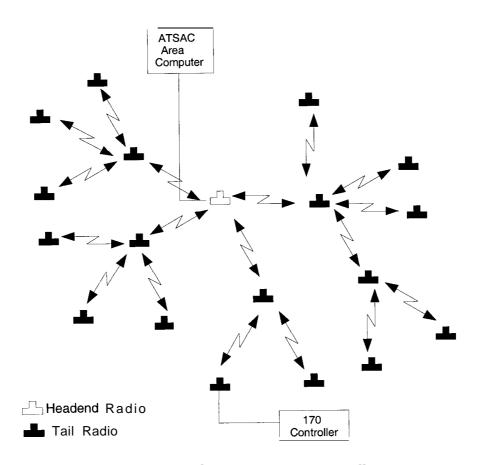


Figure 1: Radio connectivity in a cell

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

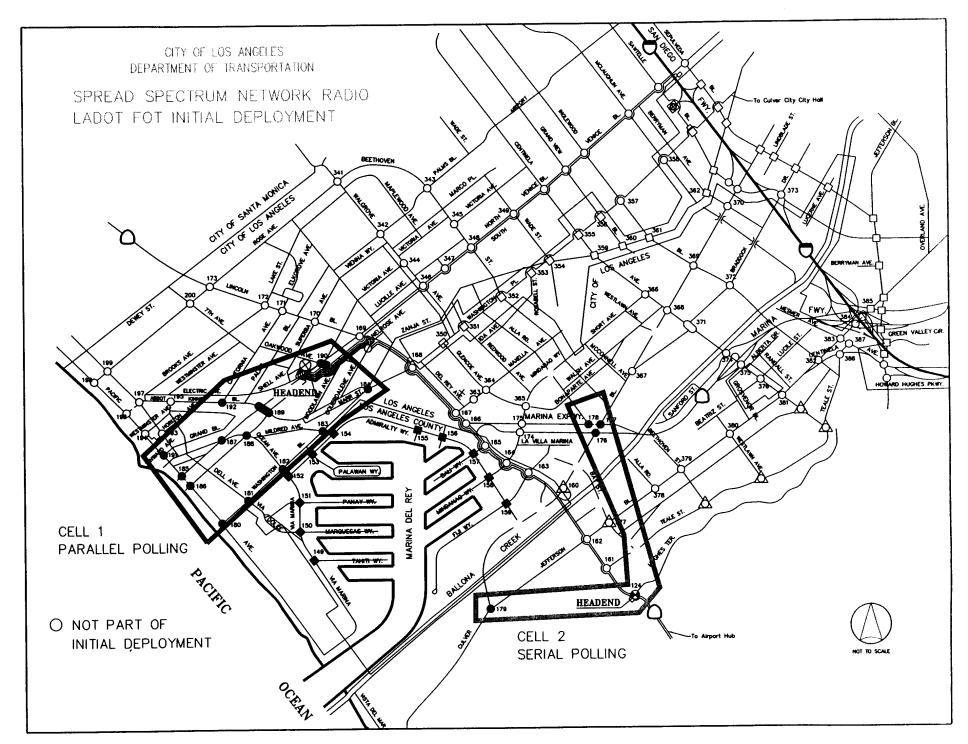


Figure 2: Area Map of the preliminary deployment

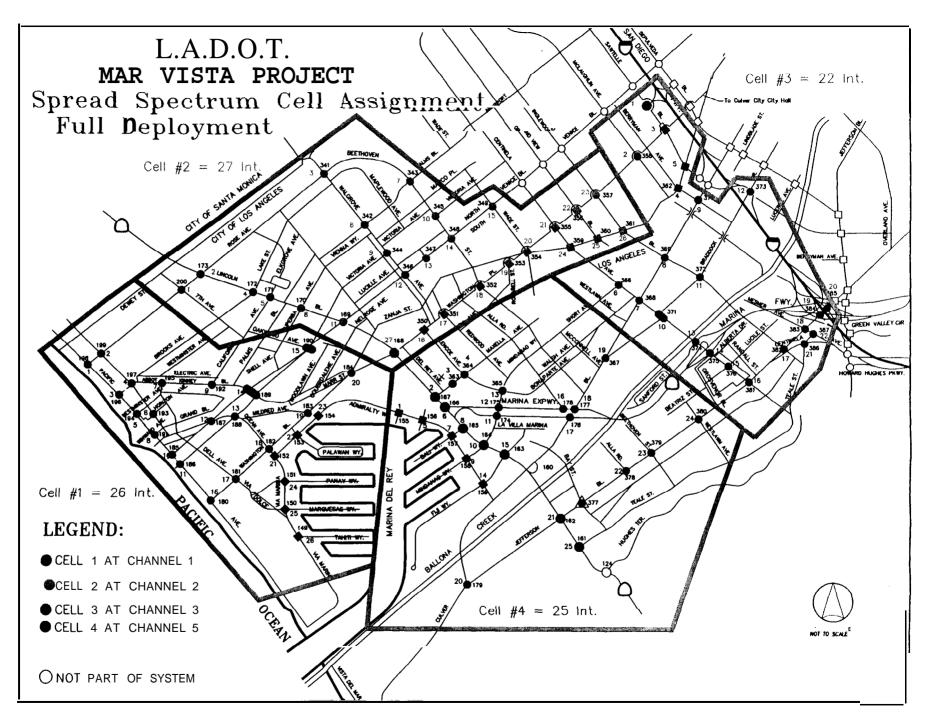


Figure 3: Area Map of the full deployment

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

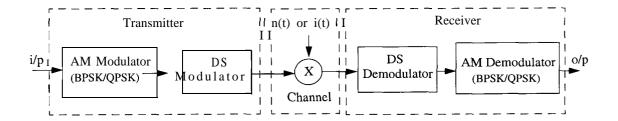


Figure 4: Direct sequence spread spectrum system

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.

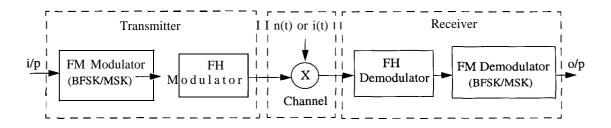


Figure 5: Frequency hopping spread spectrum system

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 *Type170* 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.

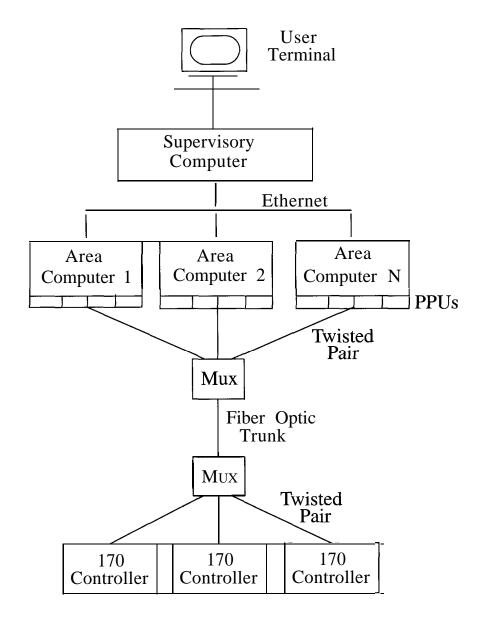


Figure 6: ATSAC system architecture

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.

	msb	1	2	3	4	5	6	7	8	lsb
	Byte 1			Com	mand 1	Block '	Type	•		
(a)	(a) Byte 2 One's Complement of Byte 1									
Variable Command Message Packet 1 Variable Command Message Packet 2										
	Variable		C	Comma	nd Me	ssage	Packet	N		ĺ

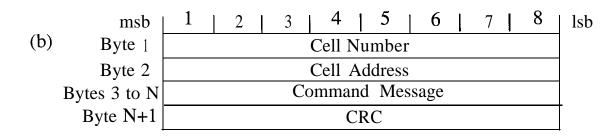


Figure 7: Format for (a) command block (b) command message packet

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-

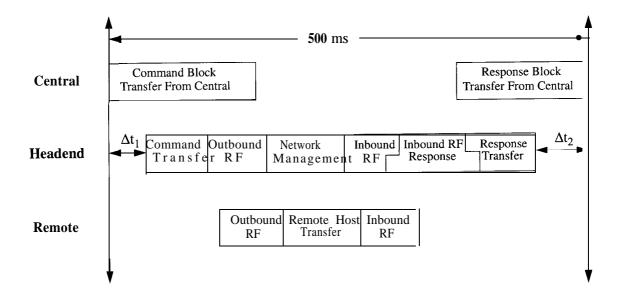


Figure 8: Command/Response Timeline

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) & c1e 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	Outbound	Inbound	Inbound
(fixed)	(over the air)	(Fixed)	(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	Coax length	Loss in Coax
	(MHz)	(feet)	(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	Cre	oss 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,	Sawtelle Bl
	San Diego Fwy S/B Ramps	
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

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

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

Table 10: Multi-hop link throughput in Cell 3

would contain N *CMD TX* (Command 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	Total no.	CMD	CMD	RSP	RSP	Success
#	from Headend	of frames	TX	RX	TX	RX	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,

	Total no. of	Reconfiguration Rate		
Cell	frames measured	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

	no. of tests	Total no. of	Total no. of	Reconfig. Rate
Cell	performed	frames measured	DEL UPDT messages	(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

Ī		no. of tests	Total no. of	Total no. of	Reconfig. Rate
	Cell	performed	frames measured	DEL UPDT messages	(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.

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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)

	Average Link Quality			
Frequency #	RSSI	Byte Throughput	BER	BER
			(received bytes)	(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)

	Average Link Quality				
Frequency #	RSSI	Byte Throughput	BER	BER	
			(received bytes)	(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)

	Average Link Quality				
Frequency #	RSSI	Byte Throughput	BER	BER	
			(received bytes)	(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)

	Average Link Quality				
Frequency #	RSSI	Byte Throughput	BER	BER	
			(received bytes)	(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)

	Average Link Quality				
Frequency #	RSSI	Byte Throughput	BER	BER	
			(received bytes)	(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)

	Average Link Quality			
Frequency #	RSSI	Byte Throughput	BER	BER
	,		(received bytes)	(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)

		Average Link Quality			
Frequency #	RSSI	Byte Throughput	BER	BER	
			(received bytes)	(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	
$\overline{#4}$ (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)

	Average Link Quality			
Frequency #	RSSI	Byte Throughput	BER	BER
			(received bytes)	(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)

	Average Link Quality				
Frequency #	RSSI	Byte Throughput	BER	BER	
			(received bytes)	(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)

1	Average Link Quality			}
Frequency #	RSSI	Byte Throughput	BER	BER
	}		(received bytes)	(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)

	Average Link Quality			
Frequency #	RSSI	Byte Throughput	BER	BER
			(received bytes)	(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)

	Average Link Quality			
Frequency #	RSSI	Byte Throughput	BER	BER
			(received bytes)	(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)

	Average Link Quality			
Frequency #	RSSI	Byte Throughput	BER	BER
			(received bytes)	(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)

	Average Link Quality			
Frequency #	RSSI	Byte Throughput	BER	BER
<u></u>			(received bytes)	(total bytes)
#1 (906 MHz)	$1\overline{42}$	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)

		Average Link Quality			
Frequency #	RSSI	Byte Throughput	BER	BER	
		<u>li</u>	(received bytes)	(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%	1.23 e-02	3. <u>55</u> e-01	
#7 (924 MHz)	15	12.9%	4.79e-04	8.71e-01	

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

		Average Link Quality				
Frequency #	RSSI	Byte Throughput	BER	BER		
			(received bytes)	(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)

		Average Link Quality				
Frequency #	RSSI	Byte Throughput	BER	BER		
)i			(received bytes)	(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)

		Average Link Quality			
Frequency #	RSSI	Byte Throughput	BER	BER	
			(received bytes)	(total bytes)	
#1 (906 MHz)	143	36.0%	9.91e-03	6.42e-01	
#2 (912 MHz)	78	7.2%	1.70e-02	9. 32 e-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)

		Average Link Quality				
Frequency #	RSSI	Byte Throughput	BER	BER		
			(received bytes)	(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)

		Average Link Quality				
Frequency #	RSSI	Byte Throughput	BER	BER		
			(received bytes)	(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)

		Average Link Quality				
Frequency #	RSSI	Byte Throughput	BER	BER		
			(received bytes)	(total bytes)		
#1 (906 MHz)	0	0.0%	0.00c + 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)

		Average Link Quality				
Frequency #	RSSI	Byte Throughput	BER	BER		
			(received bytes)	(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)

		Average Link Quality				
Frequency #	RSSI	Byte Throughput	BER	BER		
			(received bytes)	(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)

]	Average Link Quality				
Frequency #	RSSI	Byte Throughput	BER	BER		
			(received bytes)	(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)

		Average Link Quality				
Frequency #	RSSI	Byte Throughput	BER	BER		
			(received bytes)	(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)

		Average Link Quality				
Frequency #	RSSI	Byte Throughput	BER	BER		
			(received bytes)	(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)

		Average Link Quality				
Frequency #	RSSI	Byte Throughput	BER	BER		
			(received bytes)	(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)

jj		Average Link Quality				
Frequency #	RSSI	Byte Throughput	BER	BER		
))			(received bytes)	(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)

I		Average Link Quality			
Frequency #	RSSI	Byte Throughput	BER	BER	
			(received bytes)	(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)

		Average Link Quality				
Frequency #	RSSI	Byte Throughput	BER	BER		
			(received bytes)	(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)

		Average Link Quality				
Frequency #	RSSI	Byte Throughput	BER	BER		
			(received bytes)	(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)

		Average Link Quality				
Frequency #	RSSI	Byte Throughput	BER	BER		
		_	(received bytes)	(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)

		Average Link Quality				
Frequency #	RSSI	Byte Throughput	BER	BER		
		_	(received bytes)	(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)

		Average Link Quality				
Frequency #	RSSI	Byte Throughput	BER	BER		
			(received bytes)	(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)

		Average Link Quality				
Frequency #	RSSI	Byte	Throughput	BER	BER	
				(received 1	oytes) (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)

		Average Link Quality				
Frequency #	RSSI	Byte Throughput	BER	BER		
			(received bytes)	(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)

		Average Link Quality				
Frequency #	RSSI	Byte Throughput	BER	BER		
		_	(received bytes)	(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)

		Average Link Quality				
Frequency #	RSSI	Byte Throughput	BER	BER		
			(received bytes)	(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%	$5.\overline{20}e-05$			
#6 (921 MHz)	182	99.2%	0.00e+00			
#7 (924 MHz)	180	99.4%	9.90e-07			

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

		Average Link Quality				
Frequency #	RSSI	Byte Throughput	BER	BER		
			(received bytes)	(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)

	Average Link Quality				
Frequency #	RSSI	Byte Throughput	BER	BER	
			(received bytes)	(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)

		Average Link Quality				
Frequency #	RSSI	Byte Throughput	BER	BER		
			(received bytes)	(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)

		Average Link Quality			
Frequency #	RSSI	Byte Throughput	BER	BER	
			(received bytes)	(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)

		Average Link Quality				
Frequency #	RSSI	Byte Throughput	BER	BER		
			(received bytes)	(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)

		Average Link Quality				
Frequency #	RSSI	Byte Throughput	BER	BER		
<u> </u>			(received bytes)	(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)

		Average Link Quality			
Frequency #	RSSI	Byte Throughput]BER	BER	
			(received bytes)	(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)

		Average Link Quality				
Frequency #	RSSI	Byte Throughput	BER	BER		
			(received bytes)	(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)

		Average Link Quality			
Frequency #	RSSI	Byte Throughput	BER	BER	
			(received bytes)	(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)

[Average Link Quality				
Frequency #	RSSI	Byte Throughput	BER	BER		
			(received bytes)	(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)

		Average Link Quality				
Frequency #	RSSI	Byte Throughput	BER	BER		
			(received bytes)	(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)

		Average Link Quality				
Frequency #	RSSI	Byte Throughput	BER	BER		
			(received bytes)	(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)

		Average Link Quality				
Frequency #	RSSI	Byte Throughput	BER	BER		
			(received bytes)	(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)

[Average Link Quality				
Frequency #	RSSI	Byte Throughput	BER	BER		
). 	ĺ		(received bytes)	(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	6.36 e-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)

		Average Link Quality				
Frequency #	RSSI	Byte Throughput	BER	BER		
			(received bytes)	(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)

		Average Link Quality			
Frequency #	RSSI	Byte Throughput	BER	BER	
l)			(received bytes)	(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)

[1	Average Link Quality				
Frequency #	RSSI	Byte Throughput	BER	BER		
			(received bytes)	(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)

		Average Link Quality				
Frequency #	RSSI	Byte Throughput	BER	BER		
			(received bytes)	(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)

		Average Link Quality				
Frequency #	RSSI	Byte Throughput	BER	BER		
			(received bytes)	(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)

		Average Link Quality				
Frequency #	RSSI	Byte Throughput	BER	BER		
			(received bytes)	(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)

		Average Link Quality			
Frequency #	RSSI	Byte Throughput	BER	BER	
			(received bytes)	(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)

	Average Link Quality				
Frequency #	RSSI	Byte Throughput	BER	BER	
			(received bytes)	(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)

		Average Link Quality				
Frequency #	RSSI	Byte Throughput	BER	BER		
			(received bytes)	(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)

		Average Link Quality				
Frequency #	RSSI	Byte Throughput	BER	BER		
			(received bytes)	(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)

		Average Link Quality			
Frequency #	RSSI	Byte Throughput	BER	BER	
			(received bytes)	(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)

		Average Link Quality				
Frequency #	RSSI	Byte Throughput	BER	BER		
			(received bytes)	(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)

I		Average Link Quality			
Frequency #	RSSI	Byte	Throughput BER	BER	
			(received bytes)	(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)

		Average Link Quality			
Frequency #	RSSI	Byte	Throughput	BER	BER
				(received bytes)	
#1_(906_MHz)	Ò	0.0%		0.00e+00	1.00e+00
#2(909 MHz)	0	0.0%		0.00e+00	1.00e+00
#1_(906_MHz) H #2(909MHz) H _, #3(912MHz)	0	0.0%		0.00e+00	1.00e+00
#4 (915 MHz)		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)

		Average Link Quality				
Frequency #	RSSI	Byte Throughput	BER	BER		
:			(received bytes)	(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)

1		Average Link Quality				
Frequency #	RSSI	Byte Throughput	BER	BER		
			(received bytes)	(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)

		Average Link Quality			
Frequency #	RSSI	Byte Throughput	BER	BER	
	l		(received bytes)	(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)

		Average Link Quality			
Frequency #	RSSI	Byte Throughput	BER	BER	
			(received bytes)	(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)

		Average Link Quality			
Frequency #	RSSI	Byte Throughput	BER	BER	
			(received bytes)	(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)

		Average Link Quality				
Frequency #	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)

		Average Link Quality			
Frequency #	RSSI	Byte Throughput	BER	BER	
1	}		(received bytes)	(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)

		Average Link Quality				
Frequency #	RSSI	Byte Throughput	BER	BER		
			(received bytes)	(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)

	Average Link Quality				
Frequency #	RSSI	Byte Throughput	BER	$\overline{\mathrm{BER}}$	
			(received bytes)	(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)

		Average Link Quality				
Frequency #	RSSI	Byte Throughput	BER	BER		
1			(received bytes)	(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)

	Average Link Quality				
Frequency #	RSSI	Byte Throughput	BER	BER	
			(received bytes)	(total bytes)	
#1 (906 MHz),	Q	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)

		Average Link Quality				
Frequency #	RSSI	Byte Throughput	BER	BER		
			(received bytes)	(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)

		Average Link Quality				
Frequency #	RSSI	Byte Throughput	BER	BER		
			(received bytes)	(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)

		Average Link Quality				
Frequency #	RSSI	Byte Throughput	BER	BER		
			(received bytes)	(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)

		Average Link Quality				
Frequency #	RSSI	Byte Throughput	BER	BER		
			(received bytes)	(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)

	Average Link Quality				
Frequency #	RSSI	Byte Throughput	BER	BER	
			(received bytes)	(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)

		Average Link Quality				
Frequency #	RSSI	Byte Throughput	BER	BER		
			(received bytes)	(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)

		Average Link Quality				
Frequency #	RSSI	Byte Throughput	BER	BER		
		_	(received bytes)	(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)

		Average Link Quality				
Frequency #	RSSI	Byte Throughput	BER	BER		
			(received bytes)	(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)

		Average Link Quality				
Frequency #	RSSI	Byte	Throughput	BER	BER	
				(received bytes)	(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)

		Average	Link Quality	
Frequency #	RSSI	Byte Throughput	BER	BER
			(received bytes)	(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)

		Average	Link Quality	
Frequency #	RSSI	Byte Throughput	BER	BER
			(received bytes)	(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)

		Average	Link Qualit	-11
Frequency #	RSSI	Byte Throughput	BER	BER
			(received bytes)	(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)

		Average	Link Quality	
Frequency #	RSSI	Byte Throughput	BER	BER
			(received bytes)	(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)

		Average	Link Quality	
Frequency #	RSSI	Byte Throughput	BER	BER
			(received bytes)	(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)

		Average	Link Quality	
Frequency #	RSSI	Byte Throughput	BER	BER
			(received bytes)	(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)

		Average	Link Quality	
Frequency #	RSSI	Byte Throughput	BER	BER
			(received bytes)	(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)

		Average	Link Quality	
Frequency #	RSSI	Byte Throughput	BER	BER
			(received bytes)	(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)

		Average	Link Quality	
Frequency #	RSSI	Byte Throughput	BER	BER
			(received bytes)	(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)

		Average	Link Quality	
Frequency #	RSSI	Byte Throughput	BER	BER
			(received bytes)	(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

~ .	. =		200	W - 4 - 3	F1	1	?mnmod	60 -						
==== Sta							07	08	09	10	11	12	13	14
Radio#	01	. 02	03	04	05	06_		60	60	60		12 60	60	60
CMD TX RSP RX	60 45	60 53	60 56	60 53	60 56	60 55	60 57	60	59	60	59	60	50	60
DEL UD ENT RO	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		57	60	<u></u> - 55	60	-= <u>-</u>	60	60	60	60		
RSP RX	60	58	60	57	59	50	56	60 0	60 0	54 0	58 0	60 0		
DEL UD ENT RQ	0	8	0	8	8	1 1	0	ŏ	ŏ	ŏ	ŏ	ŏ		
==== Sta	rt Fra	ame 5:	1660,	Total	Ela	psed	Frames	120	====					
Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
	60 57	60	60	51 43	60	60	60	60	<u>60</u>	60	60 59	60	60 47	60 60 0
CMD TX RSP RX DEL UD	57 0	59 0	59 0	43 1	58 0	56 0	58 0	59 0	57 0	60 0	0	60 0	0	ő
ENT RQ	ŏ	Ŏ	Ŏ	ī	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	60 60	60 58	60 60	60 60	60 60	60 57	60 57	60 58	60 60	60 55	60 57	60 57		
DEL UD	0	0	Ō	0	ŏ	Ö	Ö	0	0	0	0	0		
ENT RQ	0	0	0	0	U	U	v	Ū	Ū	•	·	•		
==== Sta	art Fra	ame 5	1720.	Tota]	Ela	nsed	Frames	180	====					
			,			F								
Radio#	01	02	03_	04	05	06	07	08	_09_	10	11	12_	13	14
CMD TX	01 60	02 60	<u>03</u>	<u>04</u> 60	05 60	<u>06</u> 60	07	08	<u>09</u>	10 60 60	<u>11</u> 60 60	60 60	13 60 49	60 60
CMD TX RSP RX	01 60 50 0	02 60 54 0	03 60 59 0	04 60 58 0	05 60 60 0	06 60 56 0	07 60 57 0	08 60 59 0	09 60 59 0	60 60 0	60 60 0	60 60 0	60 49 0	60 60
CMD TX RSP RX DEL UD ENT RQ	01 60 50 0	02 60 54 0	60 59 0	04 60 58 0	05 60 60 0	06 60 56 0	60 57 0	60 59 0	60 59 0	60 60 0	60 60 0	60 60 0	60 49	
CMD TX RSP RX DEL UD ENT RQ Radio#	01 60 50 0 0	02 60 54 0 0	03 60 59 0 0	04 60 58 0 0	05 60 60 0 0	06 60 56 0 0	07 60 57 0 0	08 60 59 0 0	09 60 59 0 0	60 60 0 0	60 60 0 0	60 60 0 0	60 49 0	60 60
CMD TX RSP RX DEL UD ENT RQ Radio#	01 60 50 0 0 15 60 60	02 60 54 0 0 16 60 59	03 60 59 0 0 17 60 59	04 60 58 0 0 18 60 60	05 60 60 0 0 19	06 60 56 0 0 20 60 47	07 60 57 0 0 21 60 56	08 59 0 0 22 60 57	60 59 0 23 60 60	60 60 0 0 24 60 53	60 60 0 0 25 60 56	60 60 0 0 26 60 56	60 49 0	60 60
CMD TX RSP RX DEL UD ENT RQ Radio# CMD TX RSP RX DEL UD	01 60 50 0 0 15	02 60 54 0 0 16	03 60 59 0 0 17	04 60 58 0 0 18	05 60 60 0 0 19	06 60 56 0 0 20	07 60 57 0 0 21 60	08 60 59 0 0	60 59 0 0 23 60	60 60 0 0 24 60	60 60 0 0 0	60 60 0 0 26	60 49 0	60 60
CMD TX RSP RX DEL UD ENT RQ Radio# CMD TX RSP RX DEL UD ENT RQ	01 60 50 0 0 15 60 60 0	02 60 54 0 0 16 60 59 0	03 60 59 0 0 17 60 59 0	04 60 58 0 0 18 60 60	05 60 60 0 0 19 60 55 0	06 56 0 0 20 60 47 0	07 60 57 0 0 21 60 56 0	08 60 59 0 0 22 60 57 0	60 59 0 0 23 60 60	60 60 0 0 24 60 53	60 60 0 0 25 60 56	60 60 0 0 26 60 56	60 49 0	60 60
CMD TX RSP RX DEL UD ENT RQ Radio# CMD TX RSP RX DEL UD ENT RQ ==== Sta	01 60 50 0 0 15 60 60 0	02 60 54 0 0 16 60 59 0	03 60 59 0 17 60 59 0	04 60 58 0 0 18 60 60 0 0	05 60 60 0 19 60 55 0	06 60 56 0 20 60 47 0	07 60 57 0 0 21 60 56 0	08 60 59 0 0 22 60 57 0	60 59 0 0 23 60 60	60 60 0 0 24 60 53	60 60 0 0 25 60 56	60 60 0 0 26 60 56	60 49 0	60 60
CMD TX RSP RX DEL UD ENT RQ Radio# CMD TX RSP RX DEL UD ENT RQ ==== Sta	01 60 50 0 0 15 60 0 0 0	02 60 54 0 0 16 60 59 0 0	03 60 59 0 17 60 59 0 0 1780,	04 60 58 0 0 18 60 60 0 0	05 60 0 0 19 60 55 0 0	06 60 0 0 20 60 47 0 0	07 60 57 0 0 21 60 56 0 0	08 60 59 0 0 22 60 57 0 0 240 08	09 59 0 0 23 60 60 0	60 60 0 0 24 60 53 0 0	60 60 0 0 25 60 56 0 0	60 60 0 0 26 60 56 0	60 49 0 0	60 60 0 0
CMD TX RSP RX DEL UD ENT RQ Radio# CMD TX RSP RX DEL UD ENT RQ ==== Sta	01 60 50 0 0 15 60 60 0 0 art Fr	02 60 54 0 0 16 60 59 0 0 ame 5	03 60 59 0 0 17 60 59 0 0 1780,	04 60 58 0 0 18 60 60 0 0 Total	05 60 0 19 60 55 0 0 L E1a 05	06 60 56 0 20 60 47 0 0 apsed 60 60 57	07 60 57 0 0 21 60 56 0 0 Frames	08 60 59 0 0 22 60 57 0 0 240 08 60 60	09 60 59 0 0 23 60 60 0 0	60 60 0 0 24 60 53 0 0	60 60 0 0 25 60 56 0	60 60 0 0 26 60 56 0	60 49 0 0	60 60 0 0
CMD TX RSP RX DEL UD ENT RQ Radio# CMD TX RSP RX DEL UD ENT RQ ==== Sta	01 60 50 0 0 15 60 60 0 0	02 60 54 0 0 16 60 59 0 0	03 60 59 0 0 17 60 59 0 0	04 60 58 0 0 18 60 60 0 0 Tota:	05 60 0 19 60 55 0 0 1 E1a 05	06 60 0 0 20 60 47 0 0	07 60 57 0 0 21 60 56 0 0	08 60 59 0 0 22 60 57 0 0 240 08	09 59 0 0 23 60 60 0 0	60 60 0 0 24 60 53 0 0	60 60 0 0 25 60 56 0 0	60 60 0 0 26 60 56 0 0	60 49 0 0	14 60 60 0 0
CMD TX RSP RX DEL UD ENT RQ Radio# CMD TX RSP RX DEL UD ENT RQ ==== Sta Radio# CMD TX RSP RX DEL UD	01 60 50 0 0 15 60 0 0 0 0 art Fr 01 60 51	02 60 54 0 0 16 60 59 0 0	60 59 0 0 17 60 59 0 0 1780,	04 60 58 0 0 0 18 60 60 0 0 Tota 60 58 0 0	05 60 0 0 19 60 55 0 0	06 56 0 0 20 47 0 0 apsed 60 56 0	07 60 57 0 0 21 60 56 0 0 0 Frames 07 60 57	08 60 59 0 0 22 60 57 0 0 240 08	09 60 59 0 0 23 60 60 0 0	60 60 0 0 24 60 53 0 0	60 60 0 0 25 60 56 0 0	60 60 0 0 26 60 56 0 0	60 49 0 0	14 60 0 0
CMD TX RSP RX DEL UD ENT RQ Radio# CMD TX RSP RX DEL UD ENT RQ ==== Sta Radio# CMD TX RSP RX DEL UD ENT RQ Radio#	01 60 50 0 0 15 60 60 0 0 art Fr 01 60 51 0 0	02 60 54 0 0 16 60 59 0 0 ame 5 02 60 55 0 0	03 60 59 0 0 17 60 59 0 0 1780, 03 60 58 0 0	04 60 58 0 0 18 60 60 0 0 Total 04 60 58 0 0	05 60 60 0 19 60 55 0 0 1 E1a 05 60 59 0	06 60 56 0 20 60 47 0 0 apsed 60 57 0 0	07 60 57 0 0 21 60 56 0 0 Frames 07 60 57 0 0	08 60 59 0 0 22 60 57 0 0 8 60 60 60 0 22	09 59 0 0 23 60 60 0 0 0 0 23 60 60 0 0 23 59	60 60 0 0 24 60 53 0 0	60 60 0 0 25 60 56 0 0	60 60 0 0 26 60 56 0 0	60 49 0 0	14 60 0 0
CMD TX RSP RX DEL UD ENT RQ Radio# CMD TX RSP RX DEL UD ENT RQ ==== Sta Radio# CMD TX RSP RX DEL UD ENT RQ ENT RQ Radio# Radio# Radio#	01 60 50 0 0 15 60 60 0 0 art Fr 01 60 50 0	02 60 54 0 0 16 60 59 0 0 0 ame 5 02 60 55 0 0	03 60 59 0 0 17 60 59 0 0 1780,	04 60 58 0 0 18 60 60 0 0 Tota: 04 60 58 0 0	05 60 60 0 19 60 55 0 0 1 E1a 05 60 59 0	06 60 56 0 20 60 47 0 0 apsed 60 57 0 0	07 60 57 0 0 21 60 56 0 0 Frames 07 60 57 0 0	08 60 59 0 0 22 60 57 0 0 240 08 60 60 60 0 22	09 60 59 0 0 23 60 60 0 0	60 60 0 0 24 60 53 0 0	60 60 0 0 25 60 56 0 0	60 60 0 26 60 56 0 0	60 49 0 0	14 60 0 0

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

** Data from file 10291333.log

==== Sta	rt Fra	me 51	600,	Total	Elap	sed F	rames	60 =	== =					
Radio#	01	02	03	04	05	06	07	_08	09	10	_11	12	13	14
CMD RX RSP TX DEL UD	57 57 0	55 57 0	57 0	60 0	0 58 0	0	55 57 0	6 3 0	55 57 0	60 0	0 8 0	0 1 0	60 50 0	0 0 0
ENT RQ	ŏ	ŏ	ŏ	ŏ	ŏ	ŏ	Ŏ	Ō	0	0	0	0	0	Ó
Radio#	15	16	17	18	19_	20_	21	_22	23	_24	25	26		
CMD RX RSP TX	0	4 4	60 60	0	0	0	60 56	60 60	0	60 54 0	60 58 0	60 60 0		
RSP TX DEL UD ENT RQ	0	0	0	0	0	0	0	0	ŏ	ŏ	ŏ	ŏ		
==== Sta	rt Fra	me 51	1660,	Total	Elaj	sed 1	Frames	120	====					
Radio#	01	02	03	04	05	06	07	08	09	10	11	12_	13	14
CMD RX	59	59	_0	37 51	0	o O	59	3	59 59	0 59	0 4	0	59 46	0
RSP TX DEL UD	59 0	60 0	59 0	0	60 0	0	59 0	Õ	0	0	Ŏ	ŏ	ŏ	Ŏ
ENT RU	0	0	0	1	0	0	0 21	0 22	0 23	24	25	26	Ů	Ŭ
Radio#	<u>15</u>	<u>16</u> _	17_	<u>18</u>	. <u>.19</u> _	<u>20</u> _	<u>21</u>	==-	<u>23</u>	- <u>-23</u>		<u></u> 59		
CMD RX RSP TX	0	0	60 59	0	8	Ō	56	60 57	ŏ	5 <u>4</u>	59 56 0	56 0		
DEL UD ENT RQ	8	8	8	0	0	0	8	0	ŏ	ŏ	ŏ	ŏ		
==== Sta	art Fra	ame 5	1720,	Total	Ela	psed	Frame	s 180	====					
==== Sta Radio#	ort Fra	ame 5 02	1720, 03	Total	Ela 05	psed 06	Frame:	s 180 08	== = =	10	11_	12	<u>13</u>	14
Radio# CMD RX	01 56	<u>02</u>	03	<u>04</u> 56	05 0	<u>06</u> 0	<u>07</u> _ 56	<u>08</u>	09	- -	0		60	
Radio# CMD RX RSP TX DEL UD	01 56 56 0	02 55 55 0	03 0 58 0	04 56 60 0	05 0 60 0	06 0 0	56 55 0	3 0 0	56 55 0	60 0	0	0	60 48 0	0
Radio# CMD RX RSP TX DEL UD ENT RQ	01 56 56 0	02 55 55 0 0	03 0 58 0 0	56 60 0	05 0 60 0 0	06 0 0 0	56 55 0 0	3 0 0 0	56 55 0	0 60 0	0 0 0 0	0	60 48	
Radio# CMD RX RSP TX DEL UD ENT RQ Radio#	01 56 56 0 0	02 55 55 0 0 16	03 0 58 0 0 17	04 56 60 0 0	05 0 60 0 0	06 0 0 0 0 0	07 56 55 0 0	08 3 0 0 0 0	09 56 55 0 0	0 60 0 0	0 0 0 0 0	0 0 0 0 26	60 48 0	0
Radio# CMD RX RSP TX DEL UD ENT RQ Radio# CMD RX RSP TX	01 56 56 0 0 15	02 55 55 0 0 16	03 58 0 0 17 60 59	04 56 60 0 0 18	05 60 0 0 19	06 0 0 0 0 20	07 56 55 0 0 21 60 56	08 3 0 0 0 22 60 57	09 56 55 0 0 23	0 60 0 0 24 60 53	0 0 0 0 25 60 56	0 0 0 0 26 60 56	60 48 0	0
Radio# CMD RX RSP TX DEL UD ENT RQ Radio# CMD RX	01 56 56 0 0 15	02 55 55 0 0 16	03 0 58 0 0 17 60	04 56 60 0 0 18	05 0 60 0 0 19	06 0 0 0 0 20	07 56 55 0 0 21	08 3 0 0 0 22 60	09 56 55 0 0 23	0 60 0 0 24 60	0 0 0 0 0 25	0 0 0 0 0 26	60 48 0	0
Radio# CMD RX RSP TX DEL UD ENT RQ Radio# CMD RX RSP TX DEL UD ENT RQ	01 56 56 0 0 15 0	02 55 55 0 0 16 0 0	03 58 0 0 17 60 59 0	04 56 60 0 0 18	05 0 60 0 0 19 0 0	06 0 0 0 0 20	07 56 55 0 0 21 60 56 0	08 0 0 0 22 60 57 0	09 56 55 0 0 23 0 0	0 60 0 0 24 60 53 0	0 0 0 0 25 60 56	0 0 0 0 26 60 56	60 48 0	0
Radio# CMD RX RSP TX DEL UD ENT RQ Radio# CMD RX RSP TX DEL UD ENT RQ	01 56 56 0 0 15 0	02 55 55 0 0 16 0 0	03 58 0 0 17 60 59 0	04 56 60 0 0 18	05 0 60 0 0 19 0 0	06 0 0 0 0 20	07 56 55 0 0 21 60 56 0	08 0 0 0 22 60 57 0	09 56 55 0 0 23 0 0	0 60 0 0 24 60 53 0	0 0 0 0 25 60 56	0 0 0 0 26 60 56	60 48 0	0
Radio# CMD RX RSP TX DEL UD ENT RQ Radio# CMD RX RSP TX DEL UD ENT RQ ==== Sta	01 56 56 0 0 15 0 0	02 55 55 0 0 16 0 0 0 ame 5	03 0 58 0 0 17 60 59 0 0	04 56 60 0 0 18 0 0 0 Total	05 0 60 0 19 0 0 0 1 Ela	06 0 0 0 0 20 0 0 0 0 0 0	07 56 55 0 0 21 60 56 0 0 Frame	08 3 0 0 0 22 60 57 0 0 s 240 08	09 56 55 0 0 23 0 0 0 0	0 60 0 0 24 60 53 0	0 0 0 0 0 25 60 56 0	0 0 0 0 0 -26 -60 56 0	60 48 0 0	0 0 0 0
Radio# CMD RX RSP TX DEL UD ENT RQ Radio# CMD RX RSP TX DEL UD ENT RQ ==== Sta Radio# CMD RX RSP TX	01 56 56 0 0 15 0 0 0 art Fr	02 55 55 0 0 16 0 0 0 0	03 0 58 0 0 17 60 59 0 0	04 56 60 0 0 18 0 0 0	05 0 60 0 0 19 0 0 0 0	06 0 0 0 0 20 0 0 0 0 0 0 0 0	07 56 55 0 0 21 60 56 0 0 Frame 07 60 58	08 3 0 0 0 22 60 57 0 0 8 240 08	09 56 55 0 0 23 0 0 0 0 0 0 9 59 58	60 0 0 24 60 53 0 0	0 0 0 0 25 60 56 0 0	0 0 0 0 0 26 60 56 0 0	60 48 0 0	0 0 0 0
Radio# CMD RX RSP TX DEL UD ENT RQ Radio# CMD RX RSP TX DEL UD ENT RQ ==== Sta Radio# CMD RX	01 56 56 0 0 15 0 0 0 0 0 0 0 0 0 0 0 0 0	02 55 55 0 0 16 0 0 0 0 ame 5 59 0 0	03 0 58 0 0 17 60 59 0 0 1780, 03	04 56 60 0 0 18 0 0 0 0 0 0 Tota 52 60 0 0	05 0 60 0 19 0 0 0 0 1 E1a 05	06 0 0 0 20 0 0 0 0 0 0 0 0 0 0 0 0 0 0	07 56 55 0 0 21 60 56 0 0 Frame 07 60 58 0 0	08 3 0 0 22 60 57 0 0 8 240 08 0	09 56 55 0 0 23 0 0 0 0 0 0 0 0 55 0 0 0 0 0 0 0 0 0 0	0 60 0 0 24 60 53 0 0	0 0 0 0 25 60 56 0 0	0 0 0 0 0 -26 -60 56 0 0	60 48 0 0	0000
Radio# CMD RX RSP TX DEL UD ENT RQ Radio# CMD RX RSP TX DEL UD ENT RQ ==== Sta Radio# CMD RX RSP TX DEL UD ENT RQ Radio# CMD RX RSP TX DEL UD ENT RQ Radio#	01 56 56 0 0 15 0 0 0 0 0 0 0 0 0 0 0 0 0	02 55 55 0 0 16 0 0 0 0 0 0 0 0 0 16 0 0 0 0 0 0	03 0 58 0 0 17 60 59 0 0 1780,	04 56 60 0 18 0 0 0 0 Tota 04 52 60 0 0	05 0 60 0 19 0 0 0 0 1 E1a 05 0 60 0	06 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	07 56 55 0 21 60 56 0 0 Frame 07 60 58 0 0	08 3 0 0 22 60 57 0 0 8 240 08 0 0 22 22 22 24 25 26 27 27 27 27 27 27 27 27 27 27	09 56 55 0 23 0 0 0 0 0 0 0 0 23 23 23 25 26 27 27 28 28 28 28 28 28 28 28 28 28 28 28 28	0 60 0 0 24 60 53 0 0	0 0 0 0 25 60 56 0 0	0 0 0 0 26 60 56 0 0	60 48 0 0	0 0 0 0
Radio# CMD RX RSP TX DEL UD ENT RQ Radio# CMD RX RSP TX DEL UD ENT RQ ==== Sta Radio# CMD RX RSP TX DEL UD ENT RQ Radio# CMD RX RSP TX RSP TX RSP TX RSP TX	01 56 56 0 0 15 0 0 0 0 0 0 0 15 0 0 0 0 0 0 0 0 0 0 0 0 0	02 55 55 0 0 16 0 0 0 0 0 0 0 0 16 0 0 0 0 0 0 0	03 0 58 0 0 17 60 59 0 0 1780, 03 0 58 0 0 17 60 60	04 56 60 0 18 0 0 0 0 Tota 04 52 60 0 0 18	05 0 0 0 0 19 0 0 0 0 1 E1a 05 0 0 0 0	06 0 0 0 20 0 0 0 0 0 0 0 0 0 0 0 0 0 0	07 56 55 0 21 60 56 0 0 Frame 07 658 0 0 21 60 56 0 0	08 3 0 0 0 22 60 57 0 0 s 240 0 0 1 0 0 0 22 60 60	09 56 55 0 0 23 0 0 0 0 0 0 59 58 0 0 23	0 60 0 0 24 60 53 0 0 10 0 60 0 0 24 60 60 60 60	0 0 0 0 25 60 56 0 0 0	0 0 0 0 0 26 60 56 0 0	60 48 0 0	0 0 0 0
Radio# CMD RX RSP TX DEL UD ENT RQ Radio# CMD RX RSP TX DEL UD ENT RQ ==== Sta Radio# CMD RX RSP TX DEL UD ENT RQ Radio# CMD RX RSP TX DEL UD ENT RQ Radio# CMD RX CMD RX CMD RX	01 56 56 0 0 15 0 0 0 0 0 0 0 0 0 0 0 0 0	02 55 55 0 0 16 0 0 0 0 0 ame 5 9 59 59 0 0	03 0 58 0 0 17 60 59 0 0 1780, 03 0 58 0 0	04 56 60 0 18 0 0 0 Tota 04 52 60 0 0	05 0 0 0 0 19 0 0 0 0 1 E1 a 0 0 0 0 19	06 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	07 56 55 0 21 60 56 0 0 Frame 07 60 58 0 0	08 3 0 0 0 22 60 57 0 0 8 240 08 0 0 22 26 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	09 56 55 0 23 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 60 0 0 24 60 53 0 0	0 0 0 0 25 60 56 0 0	0 0 0 0 0 26 60 56 0 0 0	60 48 0 0	0 0 0 0

==== Star	rt Fra	me 51	840.	Total	Elar	sed F	rames	300	====						==== Sta
Radio#	01	02	03	04	05	06	07	80	09	10	11	12	13	14	Radio#
CMD TX RSP RX DEL UD ENT RQ	51 31 1 0	60 41 0 0	60 60 0	60 51 0	60 60 0	60 60 0	60 59 0	60 60 0	59 48 1 1	60 60 0	60 60 0	60 60 0	60 53 0	60 59 0	CMD RX RSP TX DEL UD ENT RQ
Radio#	15	16	17	18	19	20	21	22	23	24	25	26			Radio#
CMD TX RSP RX DEL UD ENT RQ	60 60 0	60 60 0	60 60 0	60 52 0 0	60 58 0 0	59 59 0 0	60 58 0 0	59 60 0 0	60 60 0	60 60 0	60 60 0	60 60 0			CMD RX RSP TX DEL UD ENT RQ
==== Sta	rt Fra	me 51	1900,	Total	Elaj	psed 1	Frames	360	====						==== Sta
Radio#	01	02	03	04	05	06	07	08	09	10_	11_	12	13	14	Radio#_
CMD TX RSP RX DEL UD ENT RQ	60 58 0	60 44 0 0	60 59 0	51 36 1 1	60 57 0	60 57 0	60 59 0	60 59 0	60 59 0	60 60 0	59 59 0	60 60 0	58 46 1 1	60 60 0	CMD RX RSP TX DEL UD ENT RQ
Radio#	15	16	17	18	19	20	21	22_	23	24	25	26			Radio#_
CMD TX RSP RX DEL UD ENT RQ	60 60 0	60 57 0 0	60 60 0	54 45 1 0	60 60 0	44 33 1 6	60 55 0 0	60 60 0	60 60 0	60 59 0 0	60 60 0 0	60 60 0 0			CMD RX RSP TX DEL UD ENT RQ
==== Sta	rt Fra	ame 5	1960.	Tota	l Ela	psed	Frame	s 420	====						==== Sta
Radio#	01	02	03	04	05	06	07	08	09	10	11	12_	13	14	Radio#_
CMD TX RSP RX DEL UD ENT RQ	53 38 1 0	60 45 0	60 57 0	60 47 0	60 60 0	60 58 0	60 57 0	60 58 0 0	60 56 0	60 60 0	60 59 0	60 59 0 0	60 60 0	60 60 0	CMD RX RSP TX DEL UD ENT RQ
Radio#	15	16	17	18	19	20	21	_22_	23	24	25_	26			Radio#_
CMD TX RSP RX DEL UD ENT RQ	60 60 0	60 60 0	60 60 0	60 60 0	60 60 0	60 59 0	60 59 0	60 59 0	60 60 0	60 58 0 0	60 58 0 0	60 59 0			CMD RX RSP TX DEL UD ENT RQ
==== Sta	rt Fr	ame 5	2020,	, Tota	l Ela	psed	Frame	s 480	====	:					==== St
Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14	Radio#_
CMD TX RSP RX DEL UD ENT RQ	52 38 1 0	44 29 2 0	51 37 1	42 26 2	60 53 0 0	60 57 0 0	49 37 1 0	60 60 0	53 38 1 1	60 60 0	60 60 0	60 60 0 0	60 59 0 0	60 59 0 0	CMD RX RSP TX DEL UD ENT RQ
Radio#	15	16	17	18	19	20	21	22	23	24	25	26			Radio# CMD RX RSP TX
						60	60	60	60	60	60	60			

==== Star	rt Fra	me 51	840.	Total	Elap	sed I	rames	300	====					
Radio#	01	02	03	04	05	06	07	08	09	10	_11	_12	13	14
CMD RX RSP TX DEL UD ENT RQ	43 44 0 1	49 41 0 0	0 53 0	60 0	0 60 0	0	50 51 0 0	0 0 0	23 23 0 0	60 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 DEL UD ENT RQ	0 0 0	0	60 59 0 0	0 0 0	0	0 0 0	60 57 0 0	60 59 0 0	0 0 0	60 59 0 0	60 59 0 0	60 59 0		
==== Sta	rt Fra	ume 5	1900,	Total	Elap	sed	Frames	360	====					
Radio#	01	02	03	04	05	06	07	08_	09	10	11	<u>12</u>	13	_14
CMD RX RSP TX DEL UD ENT RQ	59 59 0	59 46 0 0	0 59 0	12 51 0 1	58 0 0	0 0 0	59 59 0	0 0 0	59 59 0	60 0 0	0 4 0 0	0 0 0	000	0 0 0
Radio#	15	16	17	18	19	20	21	22	23	24_	25	26		
CMD RX RSP TX DEL UD ENT RQ	0	0 0 0 0	60 60 0	0	0 0 0	0	60 54 0 0	60 60 0	0	60 59 0	60 60 0	60 60 0 0		
==== Sta	rt Fra	ame 5	1960,	Total	Ela	psed	Frames	420	====					
==== Sta Radio#	rt Fra	ame 5 02	1960, 03	Total 04	. Ela:	psed 06	Frames 07	420 08	09	10	11_	<u>12</u>	13	_14
						_				10 0 60 0	0 0 0 0		0 0 0 0	-14 0 0 0
Radio# CMD RX RSP TX DEL UD	01 48 49 0	53 47 0	03 0 52 0	24 60 0	05 60 0	06 0 0	07 53 51 0	08 0 0	09 53 50 0	0 60 0 0	0 0 0 0 0	0 0 0 0	0	0
Radio# CMD RX RSP TX DEL UD ENT RQ	01 48 49 0 1	02 53 47 0 0	03 0 52 0 0	24 60 0	05 0 60 0	06 0 0 0	53 51 0 0	08 0 0 0	53 50 0	60 0	0 0 0 0	0 0 0 0	0	0
Radio#CMD RX RSP TX DEL UD ENT RQ Radio#CMD RX RSP TX DEL UD	01 48 49 0 1 15 0 0	02 53 47 0 0 16 0 0	03 0 52 0 0 17 60 60 0	04 60 0 0 18 0 0	05 0 60 0 0 19 0 0	06 0 0 0 0 20 0 0	07 53 51 0 0 21 60 59 0	08 0 0 0 0 22 60 59 0	09 53 50 0 0 23 0	0 60 0 0 24 60 58	0 0 0 0 25 60 58	0 0 0 0 26 60 59	0 0 0	0000
Radio# CMD RX RSP TX DEL UD ENT RQ Radio# CMD RX RSP TX DEL UD ENT RQ	01 48 49 0 1 15 0 0	02 53 47 0 0 16 0 0	03 0 52 0 0 17 60 60 0	04 60 0 0 18 0 0	05 0 60 0 0 19 0 0	06 0 0 0 0 20 0 0	07 53 51 0 0 21 60 59 0	08 0 0 0 0 22 60 59 0	09 53 50 0 0 23 0	0 60 0 0 24 60 58	0 0 0 0 25 60 58	0 0 0 0 0 26 60 59 0	0 0 0 0	0 0 0 0
Radio# CMD RX RSP TX DEL UD ENT RQ Radio# CMD RX RSP TX DEL UD ENT RQ	01 48 49 0 1 15 0 0 0	02 53 47 0 0 16 0 0	03 0 52 0 0 17 60 60 0 0	04 24 60 0 0 18 0 0 0	05 0 60 0 0 19 0 0 0	06 0 0 0 0 20 0 0 0 0 0 0 0 0 0 0 0 0 0	07 53 51 0 21 60 59 0 0 Frames 07 49 49 0 0	08 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	09 53 50 0 0 0 23 0 0 0 0 0 0 0 0	60 60 0 24 60 58 0 0	0 0 0 0 25 60 58 0 0	0 0 0 0 0 26 60 59 0 0	0 0 0	0000
Radio# CMD RX RSP TX DEL UD ENT RQ Radio# CMD RX RSP TX DEL UD ENT RQ ==== Sta Radio# CMD RX RSP TX CMD RX RSP TX	01 48 49 0 1 15 0 0 0 0 0 0 art Fr 01 50 51 0	02 53 47 0 0 16 0 0 0 0 0 0 0 0	03 0 52 0 0 17 60 60 0 0 52020 03	04 24 60 0 0 18 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	05 0 60 0 19 0 0 0 0 1 E1a 05 58	06 0 0 0 0 20 0 0 0 0 0 0 0 0 0 0 0 0 0	07 53 51 0 0 21 60 59 0 0 Frames 07 49 49	08 0 0 0 0 0 22 60 59 0 0 0 8 480 08	09 53 50 0 0 23 0 0 0 0 0 0	60 0 0 24 60 58 0 0	0 0 0 0 25 60 58 0 0	0 0 0 0 0 26 60 59 0 0	0 0 0 0 0	0 0 0 0

==== Sta	rt Fra	ame 52	2080,	Total	Elaj	psed	Frames	540	====					
Radio#	01	02	03	04	05_	06	07	08	09	10	11_	12	13_	14
CMD TX RSP RX DEL UD ENT RQ	60 57 0 0	60 56 0 0	60 60 0	60 56 0	60 59 0	60 52 0 0	60 58 0 0	60 60 0	60 49 0 0	60 60 0	60 60 0	60 60 0	60 60 0	60 60 0
Radio#	15	16	17_	18	19	20	21	22	23	24	25_	26		
CMD TX RSP RX DEL UD ENT RQ	60 60 0 0	60 59 0 0	60 58 0 0	60 60 0	60 60 0	60 59 0 0	60 59 0 0	60 59 0	60 60 0 0	60 58 0 0	60 57 0 0	60 54 0 0		
==== Sta	rt Fra	ame 5	2140,	Total	Ela	psed	Frames	600	====					
Radio#	01	02	03	04	05	06	07	08	09	10	11	12_	13	14
CMD TX RSP RX DEL UD ENT RQ	60 60 0	60 60 0	60 59 0	60 58 0 0	60 60 0	60 59 0	60 60 0	60 60 0	60 44 0 0	60 60 0	60 60 0	60 60 0	60 54 0 0	60 59 0
Radio#	15	16	17	18	19	20	21	22	23	24_	25	26		
CMD TX RSP RX DEL UD ENT RQ	60 60 0	60 56 0 0	60 60 0	60 59 0 0	60 58 0 0	60 51 0 0	60 59 0	60 59 0 0	60 60 0	60 43 0 0	44 23 2 0	44 19 2 0		
=======	Test	Data	Summ	ary =	====	==								
Radio#	01	02	03	04	05	06	07	08	09	10_	11	12	13_	14
CMD TX RSP RX DEL UD ENT RQ	576 485 3 0	584 496 2 0	591 564 1	564 486 4 3	600 582 0 0	600 567 0 0	589 559 1 0	600 595 0 0	592 529 2 2	600 599 0 0	599 596 0 0	600 598 0 0	596 521 2 2	600 597 0 0
Radio#	15	16	17	18_	19	20	21	22	23	24	25	26		
CMD TX RSP RX DEL UD ENT RQ	600 600 0	600 577 0	600 596 0	591 573 1 0	600 584 0 0	578 524 2 7	600 574 0 0	599 591 0 0	599 600 0	600 557 0 0	584 547 2 0	584 544 2 0		

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

==== Sta	rt Fra	me 52	080,	Total	Elap	sed l	Frames	540	====					
Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX RSP TX DEL UD ENT RQ	57 57 0 0	56 56 0	0 5 4 0 0	57 60 0 0	59 0 0	0 0 0	60 60 0	0 0 0	57 19 0 0	60 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 DEL UD ENT RQ	0 0 0	0 0 0	60 58 0 0	0 0 0	0 0 0	0	60 59 0 0	60 59 0	0 0 0	60 58 0 0	60 57 0 0	60 54 0 0		
==== Sta	art Fra	ume 52	2140,	Total	Elap	sed	Frames	600	====					
Radio#	01	02	03	04	05	06	07	08	09	10	11_	12	13	14
CMD RX RSP TX DEL UD ENT RQ	60 60 0	60 60 0	0 56 0 0	60 60 0	60 0 0	0 0 0	60 60 0	1 0 0	60 24 0 0	60 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 RSP TX DEL UD ENT RQ	0 0 0	0 0 0 0	60 60 0	0 0 0	0	0 0 0	60 59 0	60 59 0 0	0 0 0	60 43 0 0	19 7 0 0	19 7 0 0		
======	= Test	Data	Summ	ary ==	====	==								
Radio#	01	02	03	04	05	06	07	08	09	10_	11	12_	13_	14
CMD RX RSP TX DEL UD ENT RQ	549 552 0 3	547 521 0 2	556 0 1	328 564 0 4	593 0 0	0 0 0	561 559 0 0	14 6 0 0	531 445 0 0	599 0 0	0 20 0 0	0 1 0 0	218 168 0 0	0
Radio#	15	16	17	18	19	20	21	22	23	24	25	26		
CMD RX RSP TX DEL UD ENT RQ	0 0 0	4 4 0 0	600 595 0	0 0 0	0 0 0	1 0 0 0	600 572 0 0	600 590 0	0 0 0	600 556 0 0	558 530 0 0	558 531 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

==== Stan	rt Fra	me 36	800,	Total	Elap	sed I	rames	60 =	===					
Radio#	01	02	03	04	05_	06	07	08	09	10_	11	12	13_	14
CMD TX RSP RX DEL UD ENT RQ	60 57 0 0	60 57 0 0	60 60 0	60 55 0 0	60 59 0	60 56 0 0	60 59 0	60 57 0 0	58 46 1 1	60 60 0	60 59 0	60 60 0	60 60 0	60 50 0
Radio#	15	16	17	18	19_	20_	21	_22	23	24	<u> 25</u>	26		
CMD TX RSP RX DEL UD ENT RQ	60 60 0 0	60 60 0	60 60 0	52 47 1 0	60 58 0 0	60 60 0 0	60 60 0	60 60 0	60 60 0 0	60 60 0	60 60 0	59 60 0 0		
==== Sta	rt Fra	ame 36	860,	Total	Ela	psed 1	Frames	120	====					
Radio#	01	02	03	04	05	06	07	08	09	10	11_	12_	13_	14
CMD TX RSP RX DEL UD ENT RQ	60 60 0	60 58 0 0	60 60 0	60 60 0	60 60 0	60 54 0 0	60 60 0	60 58 0 0	60 57 0	59 60 0	60 60 0	59 60 0 0	60 59 0	60 56 0 0
Radio#	15	16	17	18	19_	20	21	22_	23	24	25	26		
CMD TX RSP RX DEL UD ENT RQ	60 60 0	60 59 0	60 59 0	60 59 0 0	54 43 1 1	60 60 0	60 60 0	60 60 0	60 60 0	60 59 0	60 60 0	60 60 0		
==== Sta	rt Fra	ame 3	6920,	Total	Ela	psed	Frames	180	====					
Radio#	01	02	03	04	05	06	07	08	09	10	11	12_	13	14
CMD TX RSP RX DEL UD ENT RQ	60 59 0	60 58 0 0	60 59 0	60 51 0 0	60 60 0	60 54 0 0	60 60 0	59 60 0	60 60 0	60 60 0	60 60 0	60 60 0	60 60 0 0	60 51 0 0
Radio#	15	16	17	18	19	20	21	_22_	23	24_	25	26		
CMD TX RSP RX DEL UD ENT RQ	60 59 0 0	60 59 0 0	60 59 0	60 59 0	60 59 0	60 60 0	60 59 0 0	60 60 0	60 60 0	60 51 0 0	60 57 0 0	60 60 0		
==== Sta	rt Fr	ame 3	6980	, Total	Ela	psed	Frames	3 240	====					
Radio#	01	02	03	04	05	06	07	08	09	10_	11_	12	13	14
CMD TX RSP RX DEL UD ENT RQ	60 59 0 0	60 59 0 0	60 60 0	60 57 0	60 60 0	60 58 0 0	60 60 0 0	60 60 0	60 60 0	60 60 0	60 60 0	60 60 0	60 60 0	60 45 0 0
Radio#	15	16	17	18	19	20	21	22	23_	24	25	26		
CMD TX RSP RX DEL UD ENT RQ	60 60 0	60 59 0 0	60 59 0 0	60 60 0	60 59 0	60 59 0 0	60 59 0 0	60 59 0	60 60 0	60 59 0	60 59 0 0	60 59 0		

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

** Data from file 11051107.log

==== Sta	rt Fra	me 36	800,	Total	Elap	sed F	rames	60 =	===					
Radio#	01	02	03	04	05	06	07	08	09	10	_11	_12	_13	_14
CMD RX RSP TX DEL UD ENT RQ	58 0 0	59 59 0 0	59 0 0	58 0 0	1 0 0	2 1 0 0	30 0 0	12 13 0 0	35 34 0 0	15 0 0	0 0 0	1 0 0	0 0 0	1 0 0 0
Radio#	15	16	17	18	19	20_	21	22	_23	<u> 24</u>	25	26		
CMD RX RSP TX DEL UD ENT RQ	1 0 0 0	1 0 0 0	1 0 0 0	1 0 0 0	1 0 0 0	1 0 0 0	0 0 0	1 0 0 0	0 0 0	0 0 0	1 0 0 0	1 0 0 0		
==== Sta	rt Fra	.me 36	860,	Total	Elap	sed I	rames	120	====					
Radio#	01	02	03	04	05	06	07	08	09	10	<u> 11</u>	12	13	14
CMD RX RSP TX DEL UD ENT RQ	60 0 0	58 58 0 0	0 59 0 0	60 0 0	0 1 0 0	1 0 0	26 0 0	13 13 0 0	57 57 0 0	0 18 0 0	0 0 0	0 1 0 0	0 0 0	0
Radio#	15	16	17	18	19	20	21	_22	23	24	<u> 25</u>	26		
CMD RX RSP TX DEL UD ENT RQ	0 1 0 0	0 0 0	0 0 0	0	0 0 0	0 0 0	0 2 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0		
==== Sta	art Fra	ame 36	5920,	Total	Elaj	sed :	Frames	180	====					
Radio#	01	02	03	04	05	06	07	08_	09	10	11	12_	13_	14
CMD RX RSP TX DEL UD ENT RQ	60 0 0	59 59 0	0 59 0	0 59 0 0	0 1 0 0	1 1 0 0	36 0 0	15 16 0 0	60 59 0	0 19 0 0	0 0 0 0	0 1 0 0	0 0 0	0
Radio#	15_	<u>16</u> _	17_	18	<u>-19</u> -	20_	21		23	$-\frac{24}{0}$	<u></u> 0	20		
CMD RX RSP TX DEL UD ENT RQ	0 0 0	0 0 0	0 2 0 0	0 0 0	0 0 0	0 0 0	0 3 0 0	0	0	0	0	ŏ		
==== St	art Fr	ame 3	6980,	Tota:	l Ela	psed	Frames	240	====					
Radio#	01	02	03	04	05	06	07	08	09	10	11_	12_	13	14
CMD RX RSP TX DEL UD ENT RQ	59 0 0	60 60 0	55 0 0	58 0 0	1 0 0 0	0 0 0	0 34 0 0	10 0 0	56 54 0 0	10 0 0	1 0 0 0	1 0 0 0	1 0 0 0	1 (
Radio#_	15	16	17	18	19	20	21	_22_	23_	24	25	26		
CMD RX RSP TX DEL UD ENT RQ	1 0 0 0	0 0 0	0 1 0 0	000	0 0 0	0 0 0	0 2 0 0	0 0 0	0 0 0	0	0 0 0	0 0 0		

====	Star	t Fra	me 37	040,	Total	Elap	sed	Frames	300	====					
<u>Radi</u>	o#	01	02	03	04	05	06	07	08	09	10	_11	_12	_13	14
DEL 1	TX RX UD RQ	60 60 0	60 60 0	60 60 0	60 55 0 0	60 60 0	60 57 0 0	60 60 0	60 58 0 0	60 60 0 0	60 60 0	60 60 0	60 60 0	60 60 0	60 55 0 0
Radi	o#	15	16	17_	18	19	20	21	22_	23	24	25	26		
RSP	TX RX UD RQ	60 60 0	60 60 0	60 59 0 0	60 45 0 0	60 60 0	60 60 0	60 60 0 0	60 60 0	60 60 0	60 59 0	60 60 0	60 60 0 0		
====	Star	t Fra	me 37	100,	Total	Elaj	sed	Frames	360	====					
Radi	o#	01	02	03	04	05	06	07	_08_	09	10	11	12_	13	14
DEL	TX RX UD RQ	60 56 0	60 54 0 0	60 56 0	60 44 0 0	60 58 0 0	60 53 0 0	60 59 0	60 60 0	60 57 0	60 60 0	60 59 0	60 60 0	60 59 0	60 58 0 0
Radi		_15	16	17	18	_19_	20	21	22_	23	<u>24</u>	25	26		
DEL	TX RX UD RQ	60 60 0	60 58 0 0	60 58 0 0	56 52 1 1	60 58 0 0	60 60 0	60 60 0	60 59 0	60 60 0	60 60 0	60 60 0	60 60 0		
====	Star	t Fra	ume 37	7160,	Total	Ela	psed	Frames							
Radi		01	02	03	04	05	06	07		09	10	11		13	14
CMD RSP DEL ENT	TX RX UD RQ	60 57 0 0	60 57 0 0	60 58 0 0	51 40 1 0	60 57 0 0	60 51 0	60 58 0 0	60 56 0	60 58 0 0	60 60 0	60 59 0	60 60 0	60 60 0	60 55 0 0
Radi	o#	15	16	17	18	_19_	20		22_	23	24	25	26		
CMD RSP DEL ENT	TX RX UD RQ	60 60 0	60 54 0 0	60 53 0 0	60 56 0 0	60 55 0 0	60 57 0	0	60 59 0 0	60 60 0	59 49 0 0	60 57 0 0	59 57 0 0		
====	= Star	t Fra	ame 3	7220,	Tota]	Ela	psed	Frames							
Rad	i o#	01	02	03	04	05	06		08	09_	10_	<u>11</u> -	<u>12</u> -	<u>13</u> _	14
CMD RSP DEL ENT	TX RX UD RQ	60 60 0	60 60 0	60 55 0 0	60 57 0 0	60 60 0	60 54 0 0	60	60 57 0 0	60 56 0 0	60 60 0	60 59 0	60 60 0 0	60 60 0 0	60 57 0 0
Rad	io#	15	16	17	18	19	20		22_	23	24	25_	26		
CMD RSP DEL ENT	TX RX UD RQ	60 60 0	60 60 0	60 60 0	59 60 0	60 59 0 0	60 60 0	60	60 60 0	60 60 0	60 59 0 0	60 60 0	60 60 0		
===:	= Star	rt Fr	ame 3	7280	, Tota	l Ela	psec	d Frame:	s 540) ====					
Rad	io#	01	02	03	04	05	06	-	08	09	10	11	12_	13_	14
CMD RSP DEL ENT	TX RX UD RQ	60 55 0 0	60 54 0 0	60 56 0 0	60 53 0 0	60 58 0 0	60 52 0) 0	60 51 0 0	60 55 0 0	60 59 0 0	60 58 0 0	60 60 0	60 60 0	60 57 0 0
Rad	io#	15	16	17	18_	19	20		22	23	24	25_	26		
CMD RSP DEL ENT	TX RX UD RQ	60 60 0	60 60 0	60 60 0	60 60 0 0	60 60 0	60 60 0	60	60 59 0 0	60 60 0	60 58 0 0	60 59 0 0	60 59 0		

== =	Star	t Fra	me 37	040,	Total	Elap:	sed F	rames	300	====					
Radio		01	02	03	04	05	06	07	08	09	10	11	<u>12</u>	13	<u>14</u>
DEL U	X X ID IQ	60 0	60 60 0	60 0 0	0 58 0 0	0	0 3 0 0	31 0 0	19 16 0 0	59 60 0	0 20 0 0	0	0 2 0 0	0 0 0	0 0 0
Radio	#	15	16	17	18	19	20_	21	_22	23	_ 24	<u> 25</u>	_26		
RSP TOEL U	X TX JD Q	0 0 0	0 0 0	0 1 0 0	0	0 0 0	0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0		
====	Star	t Fra	me 37	100,	Total	Elap	sed F	rames	360	====					
Radi	o#	01	02	03	04	05	06	07	_08_	09	_10	_11	12	_13	_14
DEL 1	RX TX JD RQ	58 0 0	57 57 0 0	59 0 0	60 0 0	0 2 0 0	1 0 0	35 0 0	21 20 0 0	57 57 0 0	0 23 0 0	0000	0 1 0 0	0 0 0	0 0 0
Radi		15	16	17	18	_19	_20_	<u>21</u>	22	23	24	25	<u>26</u> 0		
CMD RSP DEL ENT	RX TX UD RQ	0 0 0	0 0 0	0 1 0 0	0	0 0 0	0	0 1 0 0	0	0 0 0	0 0 0	0	0		
====	Star	t Fra	ume 37	7160,	Total	Elap	sed 1	Frames	420	====					
Radi	<u>o#</u> _	01	02	03	04	05	06	07	08	09	10	11	12	13	
RSP DEL	RX TX UD RQ	58 0 0	58 58 0 0	55 0 0	47 0 1	1 0 0	0 4 0 0	0 29 0 0	15 14 0 0	55 53 0	16 0 0	1 0 0 0	1 0 0	1 0 0 0	1 0 0 0
Radi	<u>o#</u>	15	16	17	18	19	20	21	22_	23	24_	25	26		
DEL	RX TX UD RQ	1 0 0 0	1 0 0 0	0 1 0 0	0 0 0	0 0 0	1 0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0		
====	Sta	rt Fra	ame 3	7220,	Total	Ela	psed	Frame	s 480	====					
Radi		01	02	03	04	05	06	07	08	09_	10	_ <u>_11</u> _	12_	13_	14
CMD RSP DEL ENT	RX TX UD RQ	60 0 0	60 60 0	56 0 0	59 0 0	1 0 0	3 0 0	27 0 0	15 10 0 0	58 51 0 0	19 0 0	0 0 0	1 0 0	0 0 0	0 0 0
Radi	o#	15	16	17	18	19	20	21	22	23	24	25_	26		
RSP DEL	RX TX UD RQ	1 0 0 0	1 0 0 0	1 0 0 0	1 0 0 0	1 0 0 0	1 0 0 0	1 0 0 0	1 0 0	0 0 0	1 0 0	0 0 0	1 0 0 0		
====	= Sta	rt Fr	ame 3	7280,	Tota	l Ela	psed	Frame	s 540) ====					
Radi	<u>io#</u>	01	02	03	04	05	06	07	08	09	10	11	12_	13_	14
CMD RSP DEL ENT	RX TX UD RQ	60 0 0	59 59 0	57 0 0	60 0 0	1 0 0	1 0 0 0	38 0 0	19 14 0 0	55 53 0	20 0 0	1 0 0 0	0 0 0	0 0 0	1 0 0 0
Rad		15	16	17	18_	19	20	21	22	23	24	25	- <u>26</u>		
CMD RSP DEL ENT	RX TX UD RQ	1 0 0 0	1 0 0 0	1 0 0 0	1 0 0 0	1 0 0 0	1 0 0 0	1 0 0	0 0 0	1 0 0 0	0 0 0	0 0 0	0 0 0		

	O.L.	F	27	7240	Tatal	Flar	and I	Gramas	600						
==== Radi		01	տе <i>ՏՐ</i> 02	03	04	05	06	Frames 07	08	09	10	11	12	13	14
CMD RSP DEL	TX RX UD RQ	60 58 0	60 57 0	51 37 1	60 57 0	60 59 0	60 56 0	60 60 0	60 59 0	57 41 1 0	60 60 0	60 52 0 0	60 60 0	60 60 0	60 51 0
Radi	-	15	16	17	18	19	20_	21	22	23	24	25	26		
DEL	TX RX UD RQ	60 60 0	60 51 0 0	60 46 0 0	60 53 0 0	60 45 0 0	60 55 0 0	60 60 0	60 60 0	60 60 0	60 48 0 0	60 60 0	60 60 0		
====	Sta	art Fra	ame 3	7400,	Total	Elaj	psed	Frames	660	====					
Radi	o#_	01	02	03	04	05	06	07	08	09	10	11	12_	13	14
DEL	TX RX UD RQ	60 50 0 0	60 50 0	51 40 1 1	60 53 0 0	60 55 0 0	60 56 0	60 60 0	60 57 0 0	49 35 0 3	60 60 0	60 52 0 0	60 60 0	60 59 0 0	60 57 0 0
Radi	o#_	15	16	17	18	19	20	21	_22	23	24	25	26		
DEL	TX RX UD RQ	60 60 0	51 44 1 1	49 36 2 0	52 32 1 3	44 30 2 2	60 53 0 0	60 58 0 0	60 58 0 0	60 59 0	60 58 0 0	60 58 0 0	60 58 0 0		
====	= St	art Fra	ame 3	7460,	Total	Ela	psed	Frames	720	====					
Radi	io#_	01_	02	03	04	05	06	07	08_	09	10	11	12	13	14
CMD RSP DEL ENT	TX RX UD RQ	60 58 0 0	60 58 0 0	60 59 0	60 57 0	60 60 0	60 54 0 0	60 60 0 0	60 60 0	60 45 0 0	60 60 0 0	60 60 0	60 60 0	60 60 0	60 58 0 0
Radi	<u>io#</u> _	15_	16_	17	18	_19_	20_	21	_22_	23	24	25	26		
CMD RSP DEL ENT	TX RX UD RQ	60 60 0	60 59 0	60 58 0 0	53 41 1 1	60 59 0	60 58 0 0	60 60 0	60 60 0	60 60 0	60 58 0 0	60 60 0	60 60 0		
====	= St	art Fr	ame 3	7520,	Tota]	l Ela	psed	Frames	780						
Rad	io#_	01	02	03	04	05	06	07	08	09	10_	11	12_	13_	14
CMD RSP DEL ENT	TX RX UD RQ	60 58 0 0	60 58 0 0	60 59 0 0	60 60 0	60 60 0	60 59 0 0	60 60 0	60 60 0	60 47 0 0	60 60 0	60 60 0	60 60 0	60 60 0	60 59 0 0
Rad	io#_	15_	16	17	18	19	20	21		23_	24_	25	26		
CMD RSP DEL ENT	TX RX UD RQ	60 60 0	60 59 0 0	60 60 0	60 60 0										
===	= St	art Fr	ame 3	7580,	Tota	l Ela	psed	Frame							
Rad		01	02	03	04	05	06	07	08	09	10_	11	12	13_	14
CMD RSP DEL ENT		60 57 0 0	60 56 0	60 48 0 0	60 55 0 0	60 58 0 0	60 57 0 0	60 59 0 0	60 56 0 0	52 33 1 0	60 59 0	60 57 0	60 59 0 0	59 59 0 0	60 59 0
Rad		15	16	17	18	19	20	21	22	23	24-	25_	26		
CMD RSP DEL ENT	TX RX UD RQ	60 59 0	60 58 0 0	60 59 0 0	60 55 0 0	60 59 0	60 59 0 0	60 59 0	60 59 0	60 59 0 0	60 59 0 0	60 59 0 0	60 59 0		

==== Sta	rt Fra	me 37	340.	Total	Elap	sed F	rames	600	====					
Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX RSP TX DEL UD ENT RQ	0 59 0	59 59 0	0 49 0 1	0 59 0 0	0 0 0	1 5 0	1 44 0 0	21 19 0 0	45 44 0 0	20 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 DEL UD ENT RQ	0 0 0 0	0 0 0	0 1 0 0	0 0 0	0 0 0	0 0 0	0 2 0 0	0000	0 0 0	0 0 0	0	0		
==== Sta	rt Fra	me 37	400,	Total	Elap	sed F	rames	660	====					
Radio#	01	02	03	04	05	06	07	08	09	10_	11	12	_13	14
CMD RX RSP TX DEL UD ENT RQ	60 0 0	60 60 0	49 0 1	5 ¹ 0 0	1 0 0 0	2 1 0 0	27 0 0	21 17 0 0	0000	19 0 0	1 0 0 0	1 0 0 0	1 0 0 0	0 0 0
Radio#	15	16	17	<u>18</u>	19	20			23	24	25	<u>26</u> 1		
CMD RX RSP TX DEL UD ENT RQ	1 0 0 0	2 0 0 0	1 0 0	1 0 0 0	1 0 0 0	1 0 0 0	1 2 0 0	1 0 0 0	1 0 0 0	1 0 0 0	1 0 0 0	0 0 0		
==== Sta	art Fra	ame 37	7460,	Tota]	Elap	sed I	rames	720	====					
Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	
CMD RX RSP TX DEL UD ENT RQ	$\begin{smallmatrix} 1\\ 60\\ 0\\ 0\\ \end{smallmatrix}$	60 60 0	0 59 0	60 0 0	0 2 0 0	1 0 0 0	32 0 0	22 19 0 0	0 0 0	20 0 0	0	0000	0	0 0 0
Radio#	15	16	17_	18	19_	20_	<u>21</u>	22	23	24	25	26		
CMD RX RSP TX DEL UD ENT RQ	0 0 0	0000	0 1 0 0	000	0 0 0	0	0 2 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0		
==== Sta	art Fr	ame 3°	7520,	Tota	l Ela	psed	Frame	s 780						
Radio#	01	02	03	04	05	06	07_	08	09_	10_	11	12_	13_	14
CMD RX RSP TX DEL UD ENT RQ	58 0 0	58 58 0 0	44 0 0	60 0 0	1 0 0 0	2 1 0 0	25 0 0	19 11 0 0	1 0 0 0	12 0 0	0 0 0	1 0 0	1 0 0 0	1 (
Radio#_	15	16_	17	18_	19_	20_	21	22_	23	24	25_	26		
CMD RX RSP TX DEL UD ENT RQ	1 0 0	1 0 0 0	1 0 0 0	1 0 0 0	0 0 0	0 0 0	1 0 0	0	0 0 0	0	0 0 0	0		
==== St	art Fr	ame 3	7580	, Tota	l Ela	psed	Frame	s 840) = ===	:				
Radio#_	01	02	03	04	05	06	07	08	09	10	11	12	13	
CMD RX RSP TX DEL UD ENT RQ	59 0 0	58 58 0 0	59 0 0	60 0 0	1 0 0	0 2 0 0	31 0 0	11 11 0 0	19 17 0 0	12 0 0	0 0 0	1 0 0	0 0 0	
Radio#	15	16	17	18	19	20	21	22	23	24	<u>25</u> _	26		
CMD RX RSP TX DEL UD ENT RQ	0 1 0 0	0 0 0	0 2 0 0	0 0 0	0 0 0	0 0 0	0 1 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0		

==== Star	t Fra	me 37	640,	Total	Elap	sed l	Frames	900	====					
Radio#	01	02	03_	04	05	06	07	08	09	10	11	12	13_	14
CMD TX RSP RX DEL UD ENT RQ	60 57 0	60 57 0	51 47 1 0	60 58 0 0	60 58 0 0	60 57 0 0	60 60 0	60 60 0	26 5 3 5	60 60 0	60 57 0 0	60 60 0	60 60 0 0	60 56 0 0
Radio#	15	16	17	18	19	20	21	_22	23	24_	25_	26		
CMD TX RSP RX DEL UD ENT RQ	60 60 0	60 50 0 0	60 59 0 0	60 47 0 0	60 58 0 0	60 59 0 0	60 60 0	60 60 0	60 60 0	60 52 0 0	60 60 0	60 59 0 0		
==== Star	rt Fra	ame 3'	7700,	Total	L Ela	psed	Frames	960	====					
Radio#	01	02	03	04	05	06	07	08	09	10_	11	12	13	14
CMD TX RSP RX DEL UD ENT RQ	60 52 0	60 50 0	60 53 0 0	60 52 0	60 54 0 0	60 5 4 0 0	60 59 0	60 59 0	60 54 0 0	60 60 0	60 54 0 0	60 60 0	60 60 0	60 53 0 0
Radio#	15	16	17	18	19	20	21	22	23	24	25	26		
CMD TX RSP RX DEL UD ENT RQ	60 60 0	60 43 0 0	60 59 0	60 43 0 0	60 59 0	60 59 0	60 59 0	60 59 0 0	60 59 0	60 56 0	60 59 0	60 59 0		
======	Test	Data	Summ	ary =	====	==								
Radio#	01	02	03	04	05	06	07	_08_	09	10_	11	12_	13_	14
CMD TX RSP RX DEL UD ENT RQ	960 913 0 0	960 903 0	933 867 3 2	951 864 1 0	960 936 0 0	960 882 0 0	960 954 0 0	959 928 0 0	902 769 6 9	959 958 0 0	960 926 0 0	959 959 0 0	959 956 0 0	960 877 0 0
Radio#	15	16	17	18	19_	20	21	22	23_	24	25_	26		
CMD TX RSP RX DEL UD ENT RQ	960 958 0 0	951 894 1 1	949 904 2 0	932 829 4 5	938 881 3 3	960 939 0 0	960 954 0 0	960 952 0 0	960 957 0 0	959 904 0 0	960 948 0 0	958 950 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

====	Star	t Fra	me 37	640,	Total	Elap	sed F	rames	900	====					
Radio		01	02	03	04	05	06	07	08	09	10	11	12	13_	14
RSP T DEL U	RX TX JD RQ	60 0 0	60 60 0	50 0 1	60 0 0	2 0 0 0	2 2 0 0	33 0 0	15 17 0 0	1 0 0	1 18 0 0	1 0 0 0	0 0 0	1 0 0 0	1 0 0 0
Radio	o#	15	16	17	18	_19		21	22		_ _24	25	26		
DEL U	RX FX JD RQ	1 1 0 0	1 0 0 0	1 0 0 0	1 0 0 0	1 0 0 0	1 0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	1 0 0 0	1 0 0 0		
====	Star	t Fra	ame 37	7700,	Total	Elap	sed I	rames	960	====					
Radio		01	02	03	04_	05	06	07_	08	09	10	11	12	13_	14
RSP DEL U	RX TX UD RQ	3 59 0 0	59 59 0	57 0 0	0 59 0	1 0 0	1 3 0 0	26 0 0	16 14 0 0	0 0 0	2_{0}^{1}	1 0 0 0	1 2 0 0	1 0 0 0	1 0 0 0
Radi	o#	15	16	17	18	19	20	21	22	23	24_	25	26		
RSP	RX TX UD RQ	1 1 0 0	1 0 0 0	0 0 0 0	0 0 0	0 0 0	1 0 0 0	0 1 0 0	0 0 0	1 0 0 0	0	0 0 0	0		
====	====	Test	Data	Summ	ary ==	====	==								
Radi	o#	01	02	03	04	05	06	07	08	09	10_	<u>11</u> _	12_	13_	14
DEL	RX TX UD RQ	948 0 0	944 944 0 0	886 0 3	934 0 1	11 11 0 0	18 27 0 0	17 504 0	263 234 0 0	559 5 4 0 0 0	282 0 0	10 0 0	10 12 0 0	9 0 0	9 0 0
Radi	o#	15	16	17	18_	19	20	21_	22	23	24_	25	26		
RSP DEL	RX TX UD RQ	9 5 0	900	6 11 0 0	6 0 0 0	6 0 0	8 0 0 0	19 0 0	4 0 0 0	8 0 0 0	4 0 0 0	4 0 0 0	4 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

==== Sta	rt Fra	me 5	1600,	Total	Elap	sed 1	Frames	60 :	====					
Radio#	01	02	03	04	05	06_	07	08_	09	_10_	11	_12	13	14
CMD TX RSP RX	60 45	60 53	60 56	60 53	60 56	60 55	60 57	60 60	60 59	60 60	60 59	60 60	60 50	60 60
DEL UD	0	ő	ő	0	Ö	ő	0	0	0	8	8	8	8	0
ENT RQ Radio#	15	16	17	18	19	20	21	22	23	24	25	26		
CMD TX	<u></u> 5	- <u></u> -	60		60		60	60	60	60	60	60		
RSP RX DEL UD	6ŏ	58 0	6ŏ	57 57 0	59 0	55 50 1	56 0	60	60 0	54 0	58 0	60 0		
ENT RQ	ŏ	ŏ	ŏ	ŏ	ŏ	ī	ŏ	Ō	Ō	0	0	0		
==== Sta	art Fra	ame 5	1660,	Total	Ela	psed	Frames	120	====					
Radio#	01	02	03	04	05	06	07	08	09	10	11_	12	13_	14
CMD TX	60	60	60	51 43	60 58	60 56	60 58	60 59	60 57	60 60	60 59	60 60	60 47	60 60
RSP RX DEL UD	57 0	59 0	59 0	1	0	90	0	ő	8	ő	ő	Ö	Ö	0
ENT RQ	0	0	0 17	1 18	19	20	21	22	23	24	25	26	·	·
Radio#	<u>15</u>	<u>16</u> _ 60	60	60	60	<u>40</u> -	60	60	60	60	60	60		
RSP RX	60	5 <u>8</u>	6ŏ	6ŏ	6ŏ	57 0	57 0	58 0	60 0	55	57 0	57 0		
DEL UD ENT RQ	0	ŏ	ŏ	ŏ	ŏ	ŏ	ŏ	ŏ	Ŏ	Ŏ	Ō	Ō		
==== Sta	art Fra	ame 5	1720.	Total	Ela	psed	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 57	60 59	60 59	60 60	60 60	60 60	60 49	60 60
RSP RX DEL UD	50 0	54 0	59 0	58 0	60 0	56 0	Ö	0	0	ŏ	ŏ	ŏ	ŏ	6ŏ O
ENT RQ	0	0	0	0	0 19	0 20	0 21	0 22	23	24	25	26	v	v
Radio#_	15	<u>16</u> -	17 60	<u>18</u>	60	60	41		60	23 - 60	<u>25</u> -	60		
CMD TX RSP RX	60 60	60 59	59	60	55	47	56 0	60 57 0	6ŏ	53 0	56 0	56 0		
DEL UD ENT RQ	0	8	0	0	8	8	ŏ	ŏ	ŏ	ŏ	ŏ	ŏ		
==== St	art Fr	ame 5	1780,	Tota	l Ela	psed	Frames	s 2 4 0) ====					
Radio#	01	02	03	04	05	06	07	08	09	10	_11_	12	13	14
CMD TX RSP RX	<u>6</u> 0	60	60	60	60	60	60	60	60 60	60 59	60 60	60 59	58 4 3	60 60
RSP RX DEL UD	51 0	55 0	58 0	58 0	59	57 0	57 0	60 0	0	0	0	ő	1	ŏ
ENT RQ	0	0	0	0	10	0	0	0 22	0 23	0 2 4	0 25	26	1	Ū
Radio#_	<u>15</u> -	16	17	<u>18</u> _ 60	<u>19</u> 60	20 60	²¹	60	²³ - 59	23 -	60	60		
CMD TX RSP RX	60 60	60 60	60 59	60	54	60	58	59 0	60	59	59	59 0		
DEL UD	8	0	8	8	0	0	8	ŏ	ŏ	ŏ	ŏ	ŏ		

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

** Data from file 10291326.log

==== Star	rt Fra	me 51	600,	Total	Elap	sed F	rames	60 =	===					
Radio#	01	02	03	04	05	06	07	08	09	10	_11	12	13	14
CMD RX RSP TX DEL UD ENT RQ	60 49 0	60 57 0	60 0 0	38 60 0	3 57 0 0	60 57 0 0	60 60 0	45 60 0 0	60 60 0	0 0 0	50 0 0	60 0 0	60 50 0	0 59 0 0
Radio#	15	16	17	18	19	20	21	22	23	_2 <u>4</u>	25	26		
CMD RX RSP TX DEL UD ENT RQ	0 5 0 0	2 2 0 0	0 0 0 0	5 2 0 0	60 58 0 0	39 38 0 0	57 60 0 0	0 54 0 0	0	57 50 0 0	56 52 0 0	56 54 0 0		
==== Sta	rt Fra	ume 51	1660,	Total	Elaj	psed l	Frames	120	====					
Radio#	01	02	03	04	05	06	07	08	09	10	11	12_	13	14
CMD RX RSP TX DEL UD ENT RQ	60 58 0 0	60 60 0	0 60 0	38 51 0 1	0 56 0 0	60 58 0 0	60 60 0	46 60 0	60 60 0	0 0 0	0 45 0 0	60 0 0	58 47 0 0	60 0 0
Radio#	15_	16	17	18	19	20	21	22_	23_	24_	25	26		
CMD RX RSP TX DEL UD ENT RQ	0 15 0 0	14 8 0 0	0 0 0	18 10 0 0	60 60 0	0 0 0	59 60 0 0	0 58 0 0	0	59 56 0	56 57 0 0	55 57 0 0		
==== Sta	rt Fra	ame 5	1720,	Tota:	l Ela	psed	Frames	180	====					
Radio#	01	02	03	04	05	06	07	08	09	10	<u> 11</u>	12_	<u> 13</u>	14
CMD RX RSP TX DEL UD ENT RQ	58 48 0 0	58 53 0 0	0 58 0 0	58 59 0 0	0 56 0 0	60 57 0 0	58 58 0 0	60 60 0	58 60 0 0	0 0 0	55 0 0	0 59 0 0	59 48 0 0	59 0 0
Radio#	15	16_	17	18_	19	20	21	22	23	<u> 24</u>	25_			
CMD RX RSP TX DEL UD ENT RQ	36 0 0	17 13 0 0	0 0 0	40 30 0 0	60 55 0 0	000	59 58 0 0	57 0 0	0	59 52 0 0	59 56 0	59 56 0		
==== Sta	art Fr	ame 5	1780,	Tota	l Ela	psed	Frames	5 240	====					
Radio#	01	02	03	04	05	06	07_	80	09	10_	11_	12_	13	14
CMD RX RSP TX DEL UD ENT RQ	60 53 0 0	60 58 0 0	$\begin{smallmatrix} 60\\0\\0\\0\end{smallmatrix}$	52 60 0 0	60 0 0	60 60 0	60 60 0 0	60 60 0	60 60 0	0 0 0	59 0 0	60 0 0	43 30 0 0	6C 6C C
Radio#	15	16	17	18	19	20	21_	22	23	24	25	26		
CMD RX RSP TX DEL UD ENT RQ	32 0 0	0 0 0	0 2 0 0	17 22 0 0	60 54 0 0	0 0 0	60 59 0 0	60 0 0	0 2 0 0	60 60 0 0	60 60 0	60 60 0		

====	Sta	rt Fra	me 51	840,	Total	Elap	sed	Frames	300	====					
Radi	<u>o#</u>	01	02	03	04	05	06	07	08	09	10	_11	<u>12</u>	13	14
DEL '	TX RX UD RQ	51 31 1 0	60 41 0 0	60 60 0	60 51 0 0	60 60 0	60 60 0	60 59 0	60 60 0	59 48 1 1	60 60 0 0	60 60 0	60 60 0	60 53 0 0	60 59 0
Radi	·	15	16	17	18	19	20	21	22	23	24	25	26		
RSP	TX RX UD RQ	60 60 0	60 60 0	60 60 0	60 52 0 0	60 58 0 0	59 59 0	60 58 0 0	59 60 0	60 60 0	60 60 0	60 60 0	60 60 0		
====	Sta	rt Fra	me 5:	1900,	Total	Elaj	sed	Frames	360	====					
Radi	<u>o#</u>	01	02_	03	04	05	06	07	_08_	09	10	11	12_	13	14
DEL	TX RX UD RQ	60 58 0 0	60 44 0 0	60 59 0	51 36 1 1	60 57 0	60 57 0 0	60 59 0	60 59 0	60 59 0	60 60 0	59 59 0	60 60 0	58 46 1 1	60 60 0
Radi	<u>•#</u>	15	16	17	18	19	20	21	_22_	23	24	<u> 25</u>	26		
DEL Ent	-	60 60 0	60 57 0 0	60 60 0	54 45 1 0	60 60 0	44 33 1 6	60 55 0 0	60 60 0	60 60 0	60 59 0	60 60 0	60 60 0		
====	Sta	rt Fra	ume 5	1960,	Total	Ela		Frames							
Radi		01	02	03	04	05	06	07	_08_	09	10	11		13	14
DEL	TX RX UD RQ	53 38 1 0	60 45 0 0	60 57 0 0	60 47 0 0	60 60 0	60 58 0 0	60 57 0 0	60 58 0 0	60 56 0 0	60 60 0	60 59 0	60 59 0	60 60 0	60 60 0
Radi	o#	15	16	17	18	19	20	21	_22_	23	24	<u>25</u>	26		
CMD RSP DEL ENT	TX RX UD RQ	60 60 0	60 60 0	60 60 0	60 60 0	60 60 0	60 59 0	60 59 0 0	60 59 0	60 60 0	60 58 0 0	60 58 0 0	60 59 0		
====	• Sta	art Fra	ame 5	2020,	Total	Ela	psed	Frames	480	====					
Radi	io#_	01	02	03	04	05	06	07	80	09	10_	11	12_	13_	14
CMD RSP DEL ENT	TX RX UD RQ	52 38 1 0	44 29 2 0	51 37 1 1	42 26 2 1	60 53 0 0	60 57 0 0	49 37 1 0	60 60 0	53 38 1 1	60 60 0	60 60 0	60 60 0	60 59 0 0	60 59 0
Rad		15	16_	17	18	19	20	<u>21</u>	22	23	24	25_			
CMD RSP DEL ENT	TX RX UD RQ	60 60 0	60 50 0 0	60 60 0	60 60 0	60 60 0	60 49 0 0	60 57 0 0	60 60 0	60 60 0	60 58 0 0	60 59 0 0	60 60 0		
===:	= Sta	art Fr	ame 5	2080	, Tota	l Ela	psed	Frame	s 54 0) ====					
Rad	io#	01	02	03	04	05	06	07	08	09	10_	11	12_	13_	14
CMD RSP DEL ENT	TX RX UD RQ	60 57 0 0	60 56 0	60 60 0	60 56 0 0	60 59 0	60 52 0 0	60 58 0 0	60 60 0	60 49 0 0	60 60 0	60 60 0	60 60 0 0	60 60 0	60 60 0
Rad	io#_	15	_16	_17	18_	19	20	21_	22	23	24_	25	26		
CMD RSP DEL ENT	TX RX UD RQ	60 60 0	60 59 0 0	60 58 0 0	60 60 0 0	60 60 0	60 59 0 0	60 59 0 0	60 59 0	60 60 0	60 58 0 0	60 57 0 0	60 54 0 0		

====	Star	t Fra	me 51	840.	Total	Elap	sed F	rames	300	====					
Radio		01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD F RSP T DEL U	X TX JD Q	50 31 0 0	59 41 0 0	0 60 0	0 60 0	0 60 0	60 60 0	59 59 0	60 60 0	27 49 0 1	0 0 0	59 0 0	0 60 0 0	4 6 0 0	60 0 0
Radio	#	15	16	17	18	19	20	21	_22	<u>23</u>	_ 24	_25	_26		
CMD I RSP T DEL U ENT I	RX TX JD RQ	0 30 0 0	0 0 0	0 0 0	7 6 0 0	60 59 0	0000	60 60 0	0 59 0 0	0 0 0	60 59 0 0	60 59 0	60 59 0 0		
====	Sta	rt Fra	me 51	900,	Total	Elap	sed F	rames	360	====					
Radi	<u>o#</u>	01	02	03	04	05	06	07	_08	09	10		12	_13	_14
DEL	RX TX UD RQ	59 58 0 0	59 45 0 0	59 0 0	12 51 0 1	58 0 0	60 59 0	59 59 0 0	60 60 0	59 59 0	0	60 0 0	60 0	1 0 0 0	60 0 0
Radi	<u>o#</u>	<u> 15</u>	16	17_	18	19	20_	<u>21</u>	_22	23	24	25	26		
DEL	RX TX UD RQ	17 0 0	0 0 0	0	6 3 0	60 60 0	21 21 0 0	60 60 0 0	60 0 0	0 0 0	60 59 0	60 60 0	60 60 0		
====	Sta	rt Fra	ume 51	1960,	Total	Elap	sed l	rames	420	====					
Radi	<u>o#_</u> _	01	02	03	04	05	06	07	08	09	10	- <u>-1</u> 1	12	13	14
RSP DEL	RX TX UD RQ	52 40 0 0	59 47 0 0	59 0 0	25 60 0 0	60 0 0	60 60 0	59 59 0	59 59 0 0	59 58 0 0	0 0 0	60 0 0	60 0 0	21 17 0 0	0 60 0
Radi	<u>o#</u>	15	16	17_	18	19	20_	21	22	23	24	- <u>-25</u>	26		
DEL	RX TX UD RQ	22 0 0	0 0 0	0 4 0 0	24 16 0 0	60 60 0	0 0 0	59 60 0	60 0 0	0 1 0 0	59 59 0	59 59 0 0	59 60 0 0		
====	Sta	rt Fra	ame 5	2020,	Tota]	L Ela	psed	Frames	480	====					
Radi	o#_	01	02	03	04	05	06	07	08	09	10_	11	12_	13_	14
DEL	RX TX UD RQ	50 50 0 0	42 40 0 2	51 0 1	31 42 0 2	57 0 0	59 60 0 0	49 50 0 3	57 60 0 0	50 51 0 1	0 0 0	59 0 0	60 0 0	1 4 0 0	6((
Radi	io#_	15	16	17	18	19	20	21_	22_	23_	24	25	26		
CMD RSP DEL ENT	RX TX UD RQ	24 0 0	0 0 0	0 5 0 0	16 12 0 0	59 60 0 0	0 0 0	60 59 0 0	60 0 0	0 0 0	60 58 0 0	60 59 0 0	59 60 0		
====	= Sta	art Fr	ame 5	2080,	Tota	l Ela	psed	Frame	s 540) == ==					
Rad	io#_	01	02	03	04	05	06	07	08	09_	10_	11	12	13_	1
CMD RSP DEL ENT	RX TX UD RQ	55 57 0 0	54 56 0 0	60 0 0	55 60 0 0	59 0 0	60 56 0 0	60 60 0	55 60 0 0	55 57 0 0	0 0 0	55 0 0	59 0 0	0 0 0	6
Rad	io#_	15	16	17	18	19	20	21	22	23_	24	25_	26		
CMD RSP DEL ENT	RX TX UD RQ	0 8 0 0	0 0 0	0 0 0	9 7 0 0	60 60 0	0 0 0	60 59 0 0	57 0 0	0 0 0	60 56 0	59 55 0 0	59 52 0 0		

==== Sta	rt Fra	ame 52	2140,	Total	Elaj	psed	Frames	600	====					
Radio#	01	02	03	04	05	06	07	08	09	10	11	12_	13	14
CMD TX RSP RX DEL UD ENT RQ	60 60 0	60 60 0	60 59 0	60 58 0 0	60 60 0	60 59 0	60 60 0	60 60 0	60 44 0 0	60 60 0	60 60 0	60 60 0	60 54 0 0	60 59 0
Radio#	15	16	17	18	19	20	21	22	23_	24_	25_	<u> 26</u>		
CMD TX RSP RX DEL UD ENT RQ	60 60 0	60 56 0 0	60 60 0	60 59 0	60 58 0 0	60 51 0 0	60 59 0 0	60 59 0 0	60 60 0	60 43 0 0	44 23 2 0	44 19 2 0		
======	Test	Data	Summ	ary ==	====	==								
======= Radio#	Test 01	Data	Summ 03	ary == 04	0 5	== 06	07	08	09_	10	11	12_	13	14
				04 564			07 589 559 1 0	08 600 595 0	09 592 529 2	10 600 599 0	11 599 596 0	12 600 598 0	13 596 521 2 2	<u>14</u> 600 597 0
Radio# CMD TX RSP RX DEL UD	01 576 485	02 584 496	03 591	04 564 486	05 600 582 0	06 600 567 0	589 559 1	600 595 0	592 529 2	600 599 0	599 596 0	600 598 0	596 521	600 597

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

==== Star	t Fra	ame 52	2140,	Total	Elaj	psed	Frames	600	====					
Radio#	01	02	03_	04	05	06	07	08	09	10_	11	12_	13_	14
CMD RX RSP TX DEL UD ENT RQ	60 60 0	60 60 0	0 60 0	60 60 0	60 0 0	60 60 0	60 60 0	56 60 0	60 59 0	0 0 0	57 0 0	60	0 0 0	60 0 0
Radio#	15	16	17	18	19	20	21	22_	23	24	25	26		
CMD RX RSP TX DEL UD ENT RQ	0 6 0 0	0 0 0 0	0 0 0	3 0 0	60 59 0	0 0 0	60 60 0 0	57 0 0	0 0 0	60 41 0 0	19 7 0 0	19 7 0 0		
======	Test	Data	Summ	ary ==	====	==								
======= Radio#	Test 01	Data 02	Summ 03	ary == 04	0 5	== 06	07	08	09	10	11	12_	13	14
				•			07 584 585 0 3	08 558 599 0	09 548 573 0 2	10 0 0 0	<u>11</u> 0 559 0		13 247 202 0 0	<u>14</u> 0 598 0
Radio# CMD RX RSP TX DEL UD	01 564 504 0	02 571 517 0	03 587	369 563 0	05 583 0	06 599 587 0	584 585 0	558 599 0	548 573 0	0	559 0	598 0	247 202 0	598 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

==== Sta	art Fra	me	Ο,	Total	Elap	sed	Frames	60	====					
Radio#	01	02	03	04	05	06	07	80_	09	10	11	12	13	14
CMD TX RSP RX DEL UD ENT RQ	60 56 0 0	60 56 0 0	60 54 0 0	60 56 0	53 40 1 1	60 54 0 0	60 56 0	60 56 0	60 47 0 0	60 60 0	60 58 0 0	60 60 0	60 53 0	60 59 0
Radio#	15	16	17	18	19	20	21	_22_	23	24	25	26		
CMD TX RSP RX DEL UD ENT RQ	60 60 0	57 40 1 0	60 56 0 0	60 56 0	60 56 0	60 39 0 0	60 56 0 0	60 55 0 0	60 39 0 0	60 55 0 0	60 55 0 0	60 55 0 0		
==== Sta	art Fra	ıme	60,	Total	Elap	sed	Frames	120	====					
Radio#	01	02	03_	04	05	06	07	08	09	10_	11	12	13	14
CMD TX RSP RX DEL UD ENT RQ	60 49 0 0	59 50 0	60 52 0 0	60 50 0	60 50 0	60 48 0 0	60 50 0	60 50 0	60 45 0 0	60 60 0	60 59 0	60 59 0	60 59 0	60 58 0 0
Radio#	15	16	17	18	19	_20	21	_22_	23	24_	25	26		
CMD TX RSP RX DEL UD ENT RQ	60 50 0 0	55 46 0 1	60 51 0 0	60 45 0 0	60 51 0	57 35 1 1	60 45 0 0	60 50 0	60 40 0 0	60 50 0	60 49 0 0	60 50 0		
==== St	art Fra	ame	120,	Total	Ela	psed	Frames	180) ====					
==== St. Radio#_	art Fra	ame 02_	120, 03	Total	Ela ₁	psed 06	Frames	180 08	09	10	11_	12	13	14
										10 60 60 0	60 60 0 0	60 60 0 0	13 60 60 0 0	60 58 0
Radio#_ CMD TX RSP RX DEL UD	01 60 42 0	02 60 42 0	03 60 56 0	-04 60 42 0	05 60 41 0	06 60 41 0	07 60 42 0	08 60 42 0	09 60 35 0 0	60 60 0	60 60 0 0	60 60 0 0	60 60 0	60 58 0
Radio# CMD TX RSP RX DEL UD ENT RQ	01 60 42 0 0	02 60 42 0	60 56 0	04 60 42 0	60 41 0	06 60 41 0	07 60 42 0 0	60 42 0	09 60 35 0	60 60 0	60 60 0	60 60 0	60 60 0	60 58 0
Radio#_ CMD TX RSP RX DEL UD ENT RQ Radio#_ CMD TX RSP RX DEL UD	01 60 42 0 0 0 15 60 58 0	02 60 42 0 0 16 60 40 0	03 60 56 0 0 17 60 42 0	04 60 42 0 0 18 60 42 0	05 60 41 0 0 19 60 42 0	06 60 41 0 0 20 60 37 0	07 60 42 0 0 0 21 60 42 0	08 60 42 0 0 22 60 40 0	09 35 0 0 23 58 39 1	60 60 0 0 24 60 40 0	60 60 0 0 25 60 40	60 60 0 0 26 60 40 0	60 60 0 0	60 58 0 0
Radio# CMD TX RSP RX DEL UD ENT RQ Radio# CMD TX RSP RX DEL UD ENT RQ	01 60 42 0 0 0 15 60 58 0	02 60 42 0 0 16 60 40 0	03 60 56 0 0 17 60 42 0	04 60 42 0 0 18 60 42 0	05 60 41 0 0 19 60 42 0	06 60 41 0 0 20 60 37 0	07 60 42 0 0 0 21 60 42 0	08 60 42 0 0 22 60 40 0	09 60 35 0 0 23 58 39 1 1	60 60 0 0 24 60 40 0	60 60 0 0 25 60 40	60 60 0 0 26 60 40 0	60 60 0 0	60 58 0 0
Radio#_ CMD TX RSP RX DEL UD ENT RQ Radio#_ CMD TX RSP RX DEL UD ENT RQ	01 60 42 0 0 0 15 60 58 0 0	02 60 42 0 0 16 60 40 0	03 60 56 0 0 17 60 42 0	04 60 42 0 0 18 60 42 0 0	05 60 41 0 0 19 60 42 0 0	06 60 41 0 0 20 60 37 0 0	07 60 42 0 0 21 60 42 0 0	08 60 42 0 0 22 60 40 0 0 8 240 0 8 60 48 0 0	09 60 35 0 0 23 58 39 1 1 0 09 52 31 0	60 60 0 0 24 60 40 0 0	60 60 0 0 25 60 40 0 0	60 60 0 0 26 60 40 0 0	60 60 0 0	60 58 0 0
Radio#_ CMD TX RSP RX DEL UD ENT RQ Radio#_ CMD TX RSP RX DEL UD ENT RQ ==== St Radio#_ CMD TX RSP RX DEL UD	01 60 42 0 0 15 60 58 0 0 0 art Fr:	02 60 42 0 0 16 60 40 0 0	03 60 56 0 0 17 60 42 0 0 180,	04 60 42 0 0 18 60 42 0 0 Total 04 60 47 0	05 60 41 0 0 19 60 42 0 0 E1a 05 60	06 41 0 0 20 60 37 0 0 psed 46 60 46 60	07 60 42 0 0 21 60 42 0 0 Frames 07 60 47 7	08 60 42 0 0 22 60 40 0 0 23 60 40 0 0 0 0 40 0 0 0 0 0 0 0 0 0 0 0	09 60 35 0 0 23 58 39 1 1 0 0 9 52 31 1	60 60 0 0 24 60 40 0 0	60 60 0 0 25 60 40 0 0	60 60 0 0 26 60 40 0 0	60 60 0 0	60 58 0 0

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

** Data from file 10291528.log

==== Sta	rt Fra	me	Ο,	Total	Elap	sed F	rames	60 =	===					
Radio#	01	02	03	04	05	06	07	_08	09	10	_11	_12	13	14
CMD RX RSP TX DEL UD ENT RQ	56 56 0	56 56 0	57 0 0	56 56 0	45 0 1	56 56 0	56 56 0	56 56 0	49 51 0 0	60 0 0	60 0 0	60 0 0	0 53 0 0	0 58 0 0
Radio#	15	16	17_	18	19	20_	21	22	23	24	25	_26		
CMD RX RSP TX DEL UD ENT RQ	0 49 0 0	0 0 0	56 57 0 0	48 50 0 0	57 57 0 0	40 0 0	51 50 0 0	56 56 0	0000	56 56 0	56 56 0	56 56 0		
==== Sta	rt Fra	ame	60,	Total	Elaj	sed l	Frames	120	====					
Radio#	01	02	03	04	05	06	07	08	09	10	11	12_	13	14
CMD RX RSP TX DEL UD ENT RQ	50 48 0 0	50 51 0	0 57 0 0	50 49 0 0	50 51 0 0	50 50 0	50 50 0	51 51 0 0	46 46 0	60 0 0	0 60 0	0 58 0 0	59 0 0	0 59 0
Radio#	15	16	17_	18	19_	20	21	_22_	23	24	25	<u> 26</u>		
CMD RX RSP TX DEL UD ENT RQ	47 0 0	25 24 0 0	51 51 0 0	42 49 0 0	51 51 0 0	14 38 0 1	47 49 0 0	50 50 0	0 0 0	50 50 0 0	50 49 0 0	50 50 0		
•														
==== Sta	art Fra	ame	120,	Tota]	Ela	psed	Frames	180	====					
==== Sta Radio#	ort Fra	ame	120, 03	Tota] 04	Ela 05	psed 06	Frame:	180 08	====	10_	11	<u>12</u>	13_	14
			•			_				10 0 60 0	0 60 0	0 60 0	13 0 60 0	-14 0 58 0
Radio# CMD RX RSP TX DEL UD	01 42 42 0	02 42 42 0	03 0 57 0	42 42 42 0	05 42 42 0	06 42 41 0	07 42 42 0	08 42 42 0	09 38 39 0	0 60 0 0	0 60 0 0	0 60 0 0	0 60 0	0 58 0
Radio# CMD RX RSP TX DEL UD ENT RQ	42 42 0 0	42 42 0 0	0 57 0 0	42 42 0 0	05 42 42 0 0	06 42 41 0 0	07 42 42 0 0	08 42 42 0 0	38 39 0 0	0 60 0	0 60 0	0 60 0	0 60 0	0 58 0
Radio# CMD RX RSP TX DEL UD ENT RQ Radio# CMD RX RSP TX DEL UD	01 42 42 0 0 0 15 	02 42 42 0 0 16	03 57 0 0 17 -17 42 42 0	-04 -42 42 0 0 0 -18 -41 44 0 0	05 42 42 0 0 19 42 42 42 0 0	06 42 41 0 0 20 5 39 0	07 42 42 0 0 0 21 44 44 0	08 42 42 0 0 22 42 40 0	09 38 39 0 0 23 9 9	0 60 0 0 24 42 40 0	0 60 0 0 25 42 40 0	0 60 0 0 26 42 40 0	0 60 0	0 58 0 0
Radio# CMD RX RSP TX DEL UD ENT RQ Radio# CMD RX RSP TX DEL UD ENT RQ	01 42 42 0 0 0 15 	02 42 42 0 0 16	03 0 57 0 0 17 42 42 0 0	-04 -42 42 0 0 0 -18 -41 44 0 0	05 42 42 0 0 19 42 42 42 0 0	06 42 41 0 0 20 5 39 0	07 42 42 0 0 0 21 44 44 0 0	08 42 42 0 0 22 42 40 0	09 38 39 0 0 23 9 9 0 0	0 60 0 0 24 42 40 0	0 60 0 0 25 42 40 0	0 60 0 0 26 42 40 0	0 60 0 0	0 58 0 0
Radio# CMD RX RSP TX DEL UD ENT RQ Radio# CMD RX RSP TX DEL UD ENT RQ	01 42 42 0 0 15 0 57 0 0	02 42 42 0 0 16 0 0	03 0 57 0 0 17 42 42 0 0 180,	04 42 42 0 0 18 41 44 0 0	05 42 42 0 0 19 42 42 0 0	06 42 41 0 0 20 5 39 0 0	07 42 42 0 0 21 44 44 0 0	08 42 42 0 0 0 22 40 0 0 0 8 240 8 48 48 0 0	09 38 39 0 0 23 9 9 0 0 0 39 39 39 0 1	0 60 0 0 24 42 40 0 0	0 60 0 0 25 42 40 0 0	0 60 0 0 0 26 42 40 0 0	0 60 0	0 58 0 0
Radio# CMD RX RSP TX DEL UD ENT RQ Radio# CMD RX RSP TX DEL UD ENT RQ ==== Sta Radio# CMD RX RSP TX DEL UD	01 42 42 0 0 0 15 0 57 0 0 art Fr 01 48 48	02 42 42 0 0 16 0 0 0 ame 02 48 48	03 0 57 0 0 17 42 42 0 0 180,	04 42 42 0 0 18 41 44 0 0 Total	05 42 42 0 0 19 42 42 0 0 0 1 E1a 48 48	06 42 41 0 0 20 5 39 0 0 0 expsed 48 48 48	07 42 42 0 0 21 44 40 0 0 Frame 07 48 48	08 42 42 0 0 0 22 40 0 0 0 8 240 0 0 0 8 48 48 48 6	09 38 39 0 0 23 9 9 0 0	0 60 0 0 24 42 40 0 0	0 60 0 0 25 42 40 0 0	0 60 0 0 26 42 40 0 0	0 60 0 0	0 58 0 0

==== St	art Fra	me	240,	Total	Elap	sed	Frames	300	====					
Radio#_	01	02	03	04	05	06	07	80	09	10	11	12	13	_14
CMD TX RSP RX DEL UD ENT RQ	60 59 0	60 59 0	60 57 0 0	60 59 0 0	60 55 0 0	60 54 0	60 59 0	60 55 0 0	60 54 0 0	60 60 0	60 59 0 0	60 60 0	60 59 0	60 58 0 0
Radio#	15	16	17	18	19	20	21	22_	23	24	25	26		
CMD TX RSP RX DEL UD ENT RQ	60 60 0	60 55 0 0	60 58 0 0	60 59 0 0	60 58 0 0	54 50 1 1	60 59 0 0	57 53 1 0	60 57 0 0	51 47 1 0	45 41 1 0	46 37 1 0		
==== St	art Fra	ıme	300,	Total	Elap	sed	Frames	360	====					
Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX RSP RX DEL UD ENT RQ	60 59 0 0	60 59 0	60 59 0	60 59 0 0	59 48 1 1	60 55 0 0	60 59 0	60 60 0	60 58 0	60 60 0	60 59 0	60 59 0	60 60 0	60 60 0
Radio#	15_	16	17_	18	_19	20	21	_22_	23	24	<u> 25</u>	26		
CMD TX RSP RX DEL UD ENT RQ	60 60 0 0	60 58 0 0	60 60 0	60 60 0 0	60 60 0	60 58 0 0	60 60 0 0	60 60 0	60 60 0	60 60 0	60 60 0	60 58 0 0		
==== St	art Fra	ame	360,	Total	Elaj	sed	Frames	420	====					
Radio#	01	02	03	04	05	06	07	_08_	09	10	11	12	13	-14
CMD TX RSP RX DEL UD ENT RQ	60 60 0 0	60 59 0 0	60 57 0	60 60 0	60 48 0 0	60 54 0 0	60 0	60 59 0	60 57 0 0	60 60 0	60 58 0 0	60 60 0	60 60 0	60 59 0
Radio#	15_	16	17	18	19_	20		22_	23	24_	25	26		
CMD TX RSP RX DEL UD ENT RQ	60 60 0	60 57 0 0	60 59 0 0	60 54 0 0	60 59 0	60 59 0	0	60 60 0	60 60 0	60 60 0	60 60 0	60 58 0 0		
==== S	tart Fra	ame	420,	Total	Ela	psed	Frames	480						
Radio#	01	02	03	04	05	06		08	09	10_	<u>11</u> -	12	13	14
CMD TX RSP RX DEL UD ENT RQ	60 57 0 0	60 57 0 0	60 59 0 0	60 58 0 0	52 41 1 1	60 51 0	58 0 0	60 59 0	59 58 0	60 59 0	60 58 0 0	59 59 0	60 57 0 0	60 57 0 0
Radio#	15_	16	<u>. 17</u>	18	19	20		22_	23	24	<u>25</u> _	- <u>26</u> 60		
CMD TX RSP RX DEL UD ENT RQ	59 60 0 0	60 55 0 0	60 59 0 0	51 33 1 1	60 58 0 0	60 58 0	38	60 55 0 0	60 58 0 0	60 54 0 0	60 55 0 0	51 0 0		
==== S	tart Fr	ame	480,	Total	. Ela	psec	i Frames	540	====					
Radio#	01	02	03	04	05	06		80	09	10	11	12	13_	14
CMD TX RSP RX DEL UD ENT RQ	60 58 0 0	60 58 0 0	59 57 0	60 58 0 0	60 59 0	60 52 0) 0	60 58 0 0	52 42 1 0	60 58 0 0	60 59 0 0	60 59 0	60 58 0 0	60 59 0 0
Radio#	15	16	17	18	19_	20		22	23	24 _	25	26		
CMD TX RSP RX DEL UD ENT RQ	60 59 0 0	60 58 0 0	60 58 0 0	60 46 0 0	60 58 0 0	60 59 0	58 0	60 59 0	60 59 0 0	60 56 0 0	60 57 0 0	60 54 0 0		

====	Star	t Fra	me	240,	Total	Elap	sed 1	Frames	300	====					
Radio	#	01	02	03	04	05	06	07	08	09	10	_11	12	13	<u>14</u>
CMD R RSP T DEL U	X X ID IQ	59 59 0	59 59 0	0 59 0	59 59 0 0	38 55 0 0	59 58 0	59 59 0 0	58 58 0	58 56 0	0 58 0 0	60 0 0	60 0 0	59 0 0	60 0 0
Radio	#	15	16	17	18	19	20	21	22	23	_24	25	26		
DEL U	X IX ID LQ	0 49 0 0	0 0 0	58 58 0 0	50 53 0 0	59 58 0 0	53 0 1	56 53 0 0	49 0 1	0 0 0	41 42 0 0	34 37 0 0	36 31 0 0		
====	Stai	rt Fra	me	300,	Total	Elap	sed	Frames	360	====					
Radio	#	01	02	03_	04	05	06	07	08	09	10	11	12	13	14
DEL U	RX FX JD RQ	59 59 0	59 60 0	60 0 0	59 59 0	30 49 0 1	59 59 0 0	59 59 0	60 60 0	60 58 0 0	60 0 0	60 0 0	59 0 0	60 0	60 0 0
Radio	o#	15	16	17	18	19	20	21	22_	23	24	25	26		
DELU	RX IX UD RQ	53 0 0	0	60 60 0	53 55 0	60 60 0	57 0 0	55 55 0 0	52 0 0	0 0 0	53 52 0 0	52 52 0 0	52 51 0 0		
====	Sta	rt Fra	ame	360,	Total	Ela	psed	Frames	420	====					
Radi	o#	01	02	03	04	05	06	07	08	09	10	11	12_	13_	14
RSP DEL 1	RX TX UD RQ	60 60 0	60 59 0 0	58 0 0	60 60 0	53 0 0	60 59 0	60 60 0	59 59 0	59 57 0 0	60 0 0	59 0 0	60 0 0	60 0 0	0 59 0 0
Radi	<u>o#</u>	15	16	17	18	19	20	21	22_	23	24_	25	26		
DEL	RX TX UD RQ	57 0 0	0 0 0	59 60 0 0	57 0 0	60 60 0	0 59 0	55 54 0 0	0 58 0 0	0 0 0	59 58 0 0	59 58 0 0	59 56 0 0		
====	Sta	rt Fr	ame	420,	[Total	l Ela	psed	Frames	480	====					
Radi	o#	01	02	03	04	05	06	07	08	09	10_	11	12_	13_	14
CMD RSP DEL ENT	RX TX UD RQ	60 58 0 0	60 59 0 0	58 0 0	60 59 0 0	22 47 0 1	60 59 0	60 60 0	60 60 0	59 59 0	60 0 0	60 0 0	60	58 0 0	59 0 0
Radi		15	16	17	18	19	20	21	22	23_	24	25_	26		
DEL	RX TX UD RQ	42 0 0	0 0 0	60 60 0	39 0 1	60 59 0	56 0 0	48 47 0 0	0 44 0 0	0	45 41 0 0	42 43 0 0	42 39 0 0		
====	: Sta	rt Fr	ame	480	, Tota	l Ela	psed	Frames	s 5 4 0	====					
Radi		01	02	03	04	05	06	07	08	09_	10	11	12_	13_	14
DEL	RX TX UD RQ	59 58 0 0	59 59 0	56 0 0	59 58 0 0	59 59 0	59 59 0	59 59 0	59 59 0 0	43 42 0 0	59 0 0	59 0 0	59 0 0	58 0 0	0 58 0 0
Radi		15	16	17	18_	19	20	21	22_	23	24	25	26		
DEL	RX TX UD RQ	30 0 0	000	59 59 0 0	32 0 0	59 59 0	57 0 0	0	0 43 0 0	0 0 0	47 37 0 0	41 40 0 0	42 34 0 0		

====	C+	t Emp	m a	E40	Total	Flan	has	Frames	600	====					
Eadio		01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD T RSP R DEL U	X X ID IQ	60 60 0	60 59 0	60 55 0	60 60 0	60 60 0	60 56 0	60 60 0	60 60 0	60 54 0	60 60 0	60 60 0	60 60 0	60 60 0	60 59 0
Radio	#	15	16	17	18	19	20	21	22	23	24	25	26		
RSP R DEL U	X LX JD LQ	60 60 0	60 55 0	60 60 0	60 43 0 0	60 60 0	60 58 0 0	60 60 0	60 59 0 0	60 59 0 0	60 58 0 0	60 59 0	60 59 0 0		
====	Star	t Fra	me	600,	Total	Elap	sed	Frames	660	====					
Radio	<u>#</u>	01	02	03	04	05	06	07	08	09	10	11	12	13	14
DEL U	rx XX JD XQ	60 59 0	60 58 0 0	60 56 0 0	60 60 0	60 60 0	60 55 0 0	60 60 0	60 60 0	60 53 0 0	60 60 0	60 57 0 0	60 60 0	60 58 0 0	60 60 0
Radio	o#	15	16	17	18	19	20	21	22_	23	24	25	26		
DELU	rx RX JD RQ	60 60 0	60 55 0 0	60 60 0	57 45 1 0	60 60 0	60 56 0	60 60 0 0	60 60 0	60 60 0 0	54 39 1 0	54 33 2 0	60 52 0 0		
====	Star	t Fra	me	660,	Total	Elap	psed	Frames	720	====					
Radio	o#	01	02	03	04	05	06	07	08	09	10	11_	12	13	14
DEL U	TX RX UD RQ	60 60 0	60 60 0	60 53 0 0	60 60 0	60 60 0	60 54 0 0	60 60 0 0	60 60 0	60 52 0 0	60 60 0	60 59 0	60 60 0	60 60 0	60 59 0
Radi	o#	15	16	17	18	19_	20	21	_22_	23	24_	25_	26		
DEL 1	TX RX UD RQ	60 59 0	60 58 0 0	60 60 0	48 33 1 1	60 60 0	60 51 0 0	60 59 0 0	60 60 0	60 60 0	59 38 1 0	58 50 0 0	60 51 0 0		
====	Stai	t Fra	me	720,	Total	Ela	psed	Frames	780	====					
Radi	o#	01	02	03	04	05	06	07	_08_	09	10_	11	12_	13	14
RSP DEL	TX RX UD RQ	60 60 0	60 59 0	60 51 0 0	60 60 0	60 60 0	60 55 0 0	60 60 0	60 58 0 0	60 52 0 0	60 60 0	60 58 0 0	60 60 0	60 57 0 0	60 60 0
Radi	o#	15_	16	17	18	_19_	20	21	22_	23	24	25	26		
DEL	TX RX UD RQ	60 60 0	60 53 0 0	60 59 0 0	60 60 0	60 59 0	60 57 0	59 46 1 0	60 60 0	60 60 0	29 18 1 0	29 18 1 0	21 9 1 0		
====	Sta	rt Fra	ame	780,	Tota]	L Ela	psed	Frames	840	====					
Radi	<u>o#</u>	01	02	03	04	05	06	07	_08_	09	10_	11	12_	13_	14
DEL	TX RX UD RQ	60 60 0	60 58 0 0	60 58 0 0	60 60 0	60 60 0	60 55 0 0	60 60 0 0	60 60 0 0	60 46 0 0	60 60 0 0	60 60 0	60 60 0	60 59 0	60 60 0
Radi	o#	15	16	17	18_	19	20	21	22	23_	24_	25_	26		
RSP DEL	TX RX UD RQ	60 60 0 0	60 55 0 0	60 59 0	60 57 0 0	60 59 0	60 59 0	60 0	60 60 0	60 60 0	0	0	16 6 1 0		

a.			F40	Takal	Flan	and I	rames	600	====					
==== Star			03	04	05 05	06	07	08	09	10	11	12	13	14
Radio#	01 60	02_	<u>03</u>	60	60	60	60	60 60		0	0	0	0	
CMD RX RSP TX	60	60 59	55	60	60	59	60	6Ŏ O	58 53 0	60	6Ŏ 0	60 0	60 0	59 0 0
DEL UD ENT RQ	0	8	0	0	0	0	8	ŏ	ŏ	ŏ	ŏ	ŏ	ŏ	Ŏ
Radio#	15	16_	17	18	19	20	21	22	23	24	25	26		
CMD RX	.0	o	60	.0	60	0 54	60	0 26	0	24 19	15 20	21 18		
CMD RX RSP TX DEL UD	10	8	60 0	18 0	60 0	0	60 0	0	0	0	0	18		
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0		
==== Star	rt Fra	me	600,	Total	Elap	sed	Frames	660	====					
Radio#	01	02_	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX RSP TX	60	60	0 57	60	60	60 58	60 60	60 60	57 53	0 60	0 59	60 60	0 58	0 59 0 0
RSP TX DEL UD	59 0	58 0	56	60 0	60 0	0	0	0	0	0	0	0	0	ò
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	U	U
Radio#	<u> 15</u>	16	17	18	19_	20	21	22_	23	24	<u>25</u>	26		
CMD RX RSP TX	0 10	0	60 60	$^{0}_{24}$	60 60	0 54	60 60	0 31	0	21 16	${f 1}_{f 0}^7$	$\begin{array}{c} 14 \\ 14 \end{array}$		
DEL UD	ŏ	ŏ	Ö	0	0	0	0	0	0	0	0	0		
ENT RQ	U	U	U	U	v	v	v	·	·	•				
==== Sta	rt Fra	ame	660,		_	•	Frames		====			40	4.2	1.4
Radio#	01	02	03	04	05	06	07	08	09			12	13	<u>14</u> 0
CMD RX RSP TX	60 60	60 60	0 49	60 60	60 60	60 60	60 60	60 60	41 44	0 60	0 59	60 60	60 60	59 0 0
DEL DD	0	0	ŏ	ŏ	ŏ	ő	0	0	0	0	0	0	0	8
ĔŇŤ ŘŐ	0	0	17	18	19	20	21	22	23	24	25	26		
Radio#	15	16_	<u>-</u> 1′-	6	60	2	60		0	35				
CMD RX RSP TX DEL UD	0 13	0	60	24	60	55	59	39	ŏ	19 0	33 28 0	35 25 0		
DEL UD Ent rq	0	8	8	0 1	0	8	0	8	ŏ	ŏ	ŏ	ŏ		
•	7		700	Toto	. Ela	nead	Frame	780	====					
==== Sta	rt Fr. 01	ame 02	720, 03	04	05	06	07	08	09	10	11	12	13	14
Radio#	60	60	0	60	60	60	60	60	53	0		0	0	0
RSP TX	60	59	5Ŏ	60	60	59 0	60 0	60 0	48	60 0	60 0	60 0	57 0	6Ŏ 0
DEL UD ENT RQ	8	0	0	0	0	ŏ	ŏ	ŏ	ŏ	ŏ	ŏ	ŏ	Ō	Ō
Radio#_	15	16	17	18	19	20	21	22	23	24	25	26		
CMD RX	0 7	0	60	57 58	60	57	39 26	0 34	0	15 12	$\frac{15}{12}$	10 5		
RSP TX DEL UD ENT RQ	0	0	59 0	0	59 Q	0	0	0	Ŏ	10	ő	ŏ		
ENT RQ	0	0	0	0	0	0	0	0	0	U	U	U		
==== Sta	rt Fr	ame	780,	Tota	l Ela	psed	Frame	s 840) ====					
Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13_	14
CMD RX	60	60	0 54	60	60 60	60 57	60 60	60 60	50 48	60 60	60 60	60 60	0 59	58 0 0
RSP TX DEL UD	60 0	58 0	0	60 0	0	0	0	Ō	0	ŏ	ő	ŏ	0	0
ENT RQ	0	0	0	0	10	0	0	0 22	23	24	25	26	•	·
Radio#	15	16	17	18_		<u>20</u> 0	21	<u>22</u> . 0	<u></u> 0		. <u>-</u> _23	9		
CMD RX RSP TX	12 0	0	60 59	59 58	60 59	53	0 5	37	ö	ŏ	ö	6 0		
DEL UD ENT RQ	0	0	0	0	0	0	0	0	ŏ	ŏ	ŏ	ŏ		

==== Start Frame		ame	840,	Total	Elap	sed	Frames	900	====					
Radio#	01	02_	03	04	05	06	07	08	09	10	11_	12_	13_	14
CMD TX RSP RX DEL UD ENT RQ	60 59 0	60 58 0	60 55 0 0	60 59 0	60 59 0	59 49 0 0	60 59 0 0	60 60 0	60 51 0 0	60 60 0	60 60 0	60 59 0	60 59 0 0	60 60 0
Radio#	15	16	17	18	19	20	21	22_	23	24_	25	26		
CMD TX RSP RX DEL UD ENT RQ	60 60 0	60 56 0	60 60 0	60 58 0 0	60 60 0	60 60 0	60 58 0 0	60 60 0	60 60 0	23 18 0 0	9 7 0 0	11 7 0 0		
==== Start Frame			900,	Total	Ela	psed	Frames	960	====					
Radio#	01	02	03	04	05_	06	07	08	09	10	11	12	13	14
CMD TX RSP RX DEL UD ENT RQ	60 60 0	60 60 0	59 58 0 0	60 60 0	59 60 0	60 55 0 0	60 60 0	60 59 0	60 57 0 0	60 60 0	60 58 0 0	60 60 0	60 59 0	60 59 0
Radio#	15	16	17	18	19	20	21	22	23	24	25_	26		
CMD TX RSP RX DEL UD ENT RQ	60 60 0 0	60 57 0	60 60 0	60 58 0 0	60 60 0	60 57 0 0	60 59 0 0	60 60 0	60 60 0	60 51 0 0	60 50 0	59 44 1 0		
======	Test	Data	Summ	ary ==	====	==								
Radio#	01	02	03	04	05	06	07	08	09_	10_	11_	12_	13_	14
CMD TX RSP RX DEL UD ENT RQ	960 905 0 0	959 899 0 0	958 891 0 0	960 908 0 0	943 848 3 3	959 834 0 0	959 908 0 0	960 904 0 0	943 792 2 0	960 957 0 0	960 940 0 0	959 954 0 0	960 936 0 0	960 943 0 0
Radio#	15	16	17	18	19	20	21	22	23	24	25	26		
CMD TX RSP RX DEL UD ENT RQ	959 942 0 0	952 840 1 1	960 908 0 0	936 796 3 2	960 908 0	948 833 3 4	950 856 2 0	957 890 1 0	958 882 1 1	816 683 4 0	775 655 5 0	784 644 5 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	Elap	sed	Frames	900	====						
Radio#	01	02	03	04	05	06	07	08_	09	10	11	<u> 12</u>	13	14
CMD RX RSP TX DEL UD ENT RQ	59 59 0	59 58 0 0	0 59 0	59 59 0	59 59 0 0	59 59 0	59 59 0	60 60 0	52 55 0	0 60 0	60 0 0	59 0 0	0 59 0 0	59 0 0
Radio#	15	16	17	18	19	20	21	22_	23	24	25	<u> 26</u>		
CMD RX RSP TX DEL UD ENT RQ	0 5 0 0	0 0 0	60 60 0	59 60 0	60 60 0	53 0 0	0 0 0	0 33 0 0	0 0 0	8 6 0 0	1 4 0 0	3 2 0 0		
==== Star	900,	Total	Elap	sed	Frames	960	====							
Radio#	01	02	03	04	05	06	07	08	09	10	11	12_	13	14
CMD RX RSP TX DEL UD ENT RQ	60 60 0	60 60 0	0 57 0 0	60 60 0	60 60 0	60 58 0	60 60 0	60 60 0	57 57 0 0	60 0 0	60 0 0	60 0 0	59 0 0	59 0 0
Radio#	15	16	17	18	19	20	21	22	23	24	25_	26		
CMD RX RSP TX DEL UD ENT RQ	0 4 0 0	0	60 60 0	59 60 0	60 59 0	47 0 0	0 0 0	23 0 0	0 0 0	21 14 0 0	14 16 0 0	12 13 0 0		
======	Test	Data	Summ	Summary =======										
Radio#	01	02	03	04	05	06	07	80	09	10	11	12_	13_	14
CMD RX RSP TX DEL UD ENT RQ	912 906 0	912 905 0 0	899 0 0	912 909 0 0	713 868 0 3	912 899 0	912 0	913 913 0 0	819 805 0 1	957 0 0	956 0 0	955 0 0	937 0 0	942 C C
Radio#	15	16	17	18	19	20	21	22	23	24	25	26		
CMD RX RSP TX DEL UD ENT RO	499 0	25 24 0 0	913 913 0 0	527 728 0 2	916 911 0 0	30 812 0 4	669	198 655 0 1	31 31 0 0	565 502 0 0	489 488 0 0	502 453 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

==== Sta	art Fra	me 36	800,	Total	Elap	sed	Frames	60 =	===					
Radio#	01	02	03	04	05	06	07	08	09	10	11	12_	13	14
CMD TX RSP RX DEL UD ENT RQ	60 57 0 0	60 57 0 0	60 60 0	60 55 0 0	60 59 0 0	60 56 0	60 59 0	60 57 0 0	58 46 1 1	60 60 0	60 59 0	60 60 0	60 60 0	60 50 0
Radio#	15	16	17	18	19	20	21	22	23	24	25	26		
CMD TX RSP RX DEL UD ENT RQ	60 60 0 0	60 60 0	60 60 0	52 47 1 0	60 58 0 0	60 60 0	60 60 0	60 60 0	60 60 0	60 60 0	60 60 0	59 60 0 0		
==== St	art Fra	ume 30	6860,	Total	Elap	sed	Frames	120	=== =					
Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX RSP RX DEL UD ENT RQ	60 60 0 0	60 58 0 0	60 60 0	60 60 0 0	60 60 0	60 54 0 0	60 60 0	60 58 0 0	60 57 0	59 60 0	60 60 0	59 60 0	60 59 0	60 56 0
Radio#_	15	16	17	18	19	20	21	22_	23	_24	25	26		
CMD TX RSP RX DEL UD ENT RQ	60 60 0 0	60 59 0	60 59 0	60 59 0	54 43 1	60 60 0	60 60 0	60 60 0	60 60 0	60 59 0 0	60 60 0	60 60 0		
==== St	art Fra	ame 3	6920,	Total	Elaj	psed	Frames	180	====					
Radio#	01	02	03	04	05	06	07	08_	09	10	11_	12	13	14
CMD TX RSP RX DEL UD ENT RQ	60 59 0 0	60 58 0	60 59 0	60 51 0 0	60 60 0	60 54 0 0	60 60 0 0	59 60 0	60 60 0	60 60 0	60 60 0	60 60 0	60 60 0	60 51 0 0
Radio#	15	16	17	18	19_	20	21	22	23	24	25	26		
CMD TX RSP RX DEL UD ENT RQ	60 59 0	60 59 0 0	60 59 0 0	60 59 0	60 59 0	60 60 0	60 59 0	60 60 0	60 60 0	60 51 0 0	60 57 0 0	60 60 0		
==== St	art Fr	ame 3	6980	Total	Ela	psed	Frames	240	=== =					
B 11 "			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			F								
Radio#	01	02	03	04	05	06	07	08	09	10	11	12_	13_	14
Radio#_ CMD TX RSP RX DEL UD ENT RQ									60 60 0	60 60 0 0	60 60 0 0	60 60 0	60 60 0 0	60 45 0
CMD TX RSP RX DEL UD	01 60 59 0	02 60 59 0	03 60 60 0	04 60 57 0	05 60 60 0	06 60 58 0	07 60 60 0	08 60 60 0	60 60 0	60 60 0	60 60 0	60 60 0	60 60 0	60 45 0

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

** Data from file 11051119.log

==== Sta	rt Fra	me 36	800,	Total	Elap	sed I	Frames	60 =	===					
Radio#	01	02	03	04	05	06	07	08	09	10	11	12_	_13	14
CMD RX RSP TX DEL UD ENT RQ	59 57 0	59 57 0 0	39 60 0	33 57 0 0	34 59 0	60 59 0	60 60 0	24 0 0 0	48 49 0 1	31 0 0 0	29 60 0 0	28 60 0	27 16 0 0	27 51 0 0
Radio#	15	16	17	18	19	20	21	22_	23	24	25	26		
CMD RX RSP TX DEL UD ENT RQ	27 39 0 0	26 0 0 0	24 0 0 0	23 0 0 0	25 59 0 0	25 0 0 0	57 45 0 0	56 50 0	25 53 0 0	58 52 0 0	56 54 0 0	54 54 0 0		
==== Sta	rt Fra	ume 36	860,	Total	Elap	psed 1	Frames	120	====					
Radio#	01	02	03	04	05	06	07	80	09	10	11	12_	13	14
CMD RX RSP TX DEL UD ENT RQ	59 60 0	58 57 0	5 60 0	9 60 0	5 60 0	60 59 0	60 60 0	3 0 0 0	59 59 0 0	3 2 0 0	$\begin{smallmatrix} 1\\60\\0\\0\\0\end{smallmatrix}$	60 0 0	1 7 0 0	56 0 0
Radio#	15	16	17_	18	19_	20_	21	22_	23	24_	25	26		
CMD RX RSP TX DEL UD ENT RQ	4 ¹ 7 0 0	1 0 0 0	1 0 0 0	1 0 0 0	48 0 1	1 0 0 0	31 33 0 0	30 35 0	39 0 0	34 31 0 0	33 38 0 0	29 36 0 0		
==== Sta	rt Fra	ame 30	6920,	Total	Ela	psed	Frames	180	====					
==== Sta Radio#	rt Fra	ame 30	6920, 03	Total	Ela:	psed 06	Frames	180 08	=== =	10	11	<u>12</u>	13	14
										10 8 0 0	8 60 0	6 60 0	13 4 17 0 0	14 4 53 0 0
Radio# CMD RX RSP TX DEL UD	01 59 57 0	02 59 56 0	03 17 60 0	04 21 59 0	05 13 58 0	06 60 60 0	07 60 60 0	08 1 0 0	09 60 60 0 0	8 0 0 0 0	8 60 0 0 25	6 60 0 0	4 17 0	53 0
Radio# CMD RX RSP TX DEL UD ENT RQ	01 59 57 0 0	02 59 56 0	17 60 0	04 21 59 0	05 13 58 0 0	06 60 0 0	60 60 0 0	08 0 0 0	60 60 0 0	8 0 0	8 60 0	6 60 0	4 17 0	53 0
Radio# CMD RX RSP TX DEL UD ENT RQ Radio# CMD RX RSP TX DEL UD	01 59 57 0 0 15 42 0	02 59 56 0 0 16	03 17 60 0 0 17 1 0 0	04 21 59 0 0 18 0 0	05 13 58 0 0 19 0 58 0	06 60 60 0 0 20	07 60 60 0 0 21 42 31 0	08 1 0 0 0 22 39 42 0	09 60 60 0 0 23 1 40	8 0 0 0 24 43 29 0	8 60 0 0 25 42 41 0	6 60 0 0 26 38 42 0	4 17 0	53 0 0
Radio# CMD RX RSP TX DEL UD ENT RQ Radio# CMD RX RSP TX DEL UD ENT RQ	01 59 57 0 0 15 42 0	02 59 56 0 0 16	03 17 60 0 0 17 1 0 0	04 21 59 0 0 18 0 0	05 13 58 0 0 19 0 58 0	06 60 60 0 0 20	07 60 60 0 0 21 42 31 0	08 1 0 0 0 22 39 42 0	09 60 60 0 0 23 1 40	8 0 0 0 24 43 29 0 0	8 60 0 0 25 42 41 0	6 60 0 0 26 38 42 0 0	4 17 0 0	4 53 0 0
Radio# CMD RX RSP TX DEL UD ENT RQ Radio# CMD RX RSP TX DEL UD ENT RQ	01 59 57 0 0 15 2 42 0 0	02 59 56 0 0 16 2 0 0	03 17 60 0 0 17 1 0 0 0	04 21 59 0 0 18 0 0	05 13 58 0 0 19 0 58 0	06 60 0 0 20 20 0 0 0	07 60 60 0 0 21 42 31 0 0	08 1 0 0 0 22 39 42 0 0	09 60 0 0 0 23 1 40 0	8 0 0 0 24 43 29 0	8 60 0 0 25 42 41 0 0	660 00 00 26 388 422 00 0	17 0 0	53 0 0
Radio# CMD RX RSP TX DEL UD ENT RQ Radio# CMD RX RSP TX DEL UD ENT RQ ==== Sta Radio# CMD RX RSP TX DEL UD ENT RQ	01 59 57 0 0 15 2 42 0 0 0 art Fr. 01 59 58 0	02 59 56 0 0 16 2 0 0 0 ame 3	03 17 60 0 0 17 1 0 0 0 6980,	04 21 59 0 0 18 0 0 0 0 Total	05 13 58 0 0 19 0 58 0 0 0 Ela 05 35 59	06 60 0 0 20 20 0 0 0 0 0 0 0 0 0 0	07 60 60 0 0 21 42 31 0 0 Frames 07 60 60 0	08 1 0 0 0 22 39 42 0 0 0 8 240 08 20 1 0	09 60 60 0 0 23 1 40 0 0 0 0 0 0 0	8 0 0 0 24 43 29 0 0	8 60 0 0 25 42 41 0 0	60 00 00 26 38 42 00 0	13 26 5 0	14 26 48 0

==== Star	rt Fra	me 37	040.	Total	Elar	sed F	'rames	300						
Radio#	01	02	03	04	05	06	07	80	09	10	11	12	13	14
CMD TX RSP RX DEL UD ENT RQ	60 60 0	60 60 0	60 60 0	60 55 0	60 60 0	60 57 0	60 60 0	60 58 0	60 60 0	60 60 0	60 60 0	60 60 0	60 60 0	60 55 0 0
Radio#	15	16	17	18	19	20_	21	22	23	24	25	26		
CMD TX RSP RX DEL UD ENT RQ	60 60 0	60 60 0	60 59 0 0	60 45 0	60 60 0	60 60 0	60 60 0	60 60 0	60 60 0	60 59 0	60 60 0	60 60 0		
==== Sta	rt Fra	ume 37	100,	Total	Elap	sed I	rames	360	====					
Radio#	01	02	03	04	05_	06	07	08	09	10_	11	12	13_	14
CMD TX RSP RX DEL UD ENT RQ	60 56 0	60 54 0 0	60 56 0	60 44 0 0	60 58 0 0	60 53 0	60 59 0 0	60 60 0	60 57 0 0	60 60 0	60 59 0	60 60 0	60 59 0 0	60 58 0 0
Radio#	15	16_	17	18	19	20_	21	22	23	24	25	26		
CMD TX RSP RX DEL UD ENT RQ	60 60 0	60 58 0 0	60 58 0 0	56 52 1 1	60 58 0 0	60 60 0	60 60 0	60 59 0	60 60 0	60 60 0	60 60 0	60 60 0		
==== Sta	rt Fra	ame 37	7160,	Total	Ela	psed 1	Frames	420	====					
Radio#	01	02	03	04	05	06	07	08	09	10_	11	12_	13_	14
CMD TX RSP RX DEL UD ENT RQ	60 57 0 0	60 57 0 0	60 58 0 0	51 40 1 0	60 57 0 0	60 51 0 0	60 58 0 0	60 56 0	60 58 0	60 60 0	60 59 0	60 60 0	60 60 0	60 55 0 0
Radio#	15	16_	17	18	19	20	21	22	23	24_	25	26		
CMD TX RSP RX DEL UD ENT RQ	60 60 0	60 54 0 0	60 53 0 0	60 56 0	60 55 0	60 57 0 0	60 60 0	60 59 0	60 60 0	59 49 0	60 57 0 0	59 57 0		
== == Sta	rt Fr	ame 3	7220,	Total	Ela	psed	Frames	480	====					
Radio#	01	02	03	04	05	06_	07	_08_	09_	10	11	12_	13_	14
CMD TX RSP RX DEL UD ENT RQ	60 60 0	60 60 0	60 55 0 0	60 57 0 0	60 60 0	60 54 0 0	60 60 0	60 57 0 0	60 56 0 0	60 60 0	60 59 0 0	60 60 0	60 60 0	60 57 0 0
Radio#	15	16	_17	18	19	20	21_	22_	23_	24	25_	26		
CMD TX RSP RX DEL UD ENT RQ	60 60 0	60 60 0	60 60 0	59 60 0	60 59 0	60 60 0	60 60 0	60 60 0	60 60 0	60 59 0	60 60 0	60 60 0		
==== Sta	art Fr	ame 3	7280,	Tota	l Ela	psed	Frame	s 54 0	====					
Radio#	01	02	03	04	05	06	07	08	09	10_	11	12	13_	14
CMD TX RSP RX DEL UD ENT RQ	60 55 0 0	60 54 0 0	60 56 0	60 53 0 0	60 58 0 0	60 52 0 0	60 60 0	60 51 0 0	60 55 0	60 59 0	60 58 0 0	60 60 0	60 60 0	60 57 0 0
Radio#	15	16	17	18	19	20	21_	22	23	24	25	26		
CMD TX RSP RX DEL UD ENT RQ	60 60 0	60 59 0	60 60 0	60 58 0 0	60 59 0 0	60 59 0 0								

==== Star	t Fra	me 37	040,	Total	Elap	sed F	rames	300	====					
Radio#	01	02	03	04	05	06	07	_08	09	10	_11	12	_13	14
CMD RX RSP TX DEL UD ENT RQ	60 59 0	60 59 0	38 60 0	26 56 0	28 59 0	60 59 0	60 60 0	14 1 0 0	60 60 0	23 0 0	21 60 0 0	20 60 0 0	19 12 0 0	18 55 0 0
Radio#	15	16	17	18	19	20	21	22	23	24	25	26		
CMD RX RSP TX DEL UD ENT RQ	18 46 0 0	18 0 0 0	11 0 0 0	17 0 0 0	11 59 0 0	16 0 0 0	47 38 0 0	44 56 0 0	16 51 0 0	53 51 0 0	53 54 0 0	50 54 0 0		
==== Sta	rt Fra	ume 37	100,	Total	Elap	sed F	rames	360	====					
Radio#	01	02	03	04	05	06	07	08	09	10	11	<u> 12</u>	13	14
CMD RX RSP TX DEL UD ENT RQ	58 56 0	57 55 0 0	35 59 0	30 59 0 0	23 57 0 0	60 60 0	60 59 0	11 0 0 0	59 59 0	20 0 0	20 59 0 0	20 60 0	19 10 0 0	18 59 0
Radio#	15	16	17	18	19	20	21	22	23	24	25	26		
CMD RX RSP TX DEL UD ENT RQ	18 56 0 0	18 0 0 0	9 0 0	10 0 0 0	57 0 0	17 0 0 0	57 47 0 0	55 57 0	17 53 0 0	59 57 0 0	59 57 0 0	59 57 0 0		
==== Sta	rt Fra	ame 37	7160,	Total	Ela	psed l	Frames	420	====					
Radio#	01	02	03	04	05	06	07	08_	09	10	11	12	13	14
CMD RX RSP TX DEL UD ENT RQ	55 57 0 0	55 57 0 0	20 59 0	12 47 0 1	13 57 0 0	60 58 0 0	60 59 0 0	3 0 0	58 58 0 0	10 0 0 0	59 0 0	60 0 0	4 9 0 0	55 0 0
Radio#	15	16	17	18	19	20	21_	22	23_	24_	<u>25</u> _	<u> 26</u>		
CMD RX RSP TX DEL UD ENT RQ	56 0 0	3 0 0	3 0 0	3 0 0	55 0 0	3 0 0	49 47 0 0	47 50 0 0	52 0 0	55 39 0 0	53 51 0 0	53 50 0 0		
==== Sta	rt Fr	ame 3	7220,	Total	l Ela	psed	Frame	s 480	====					
Radio#	01	02	03	04	05	06	07	_08_	09	10	11	12_	13	14
CMD RX RSP TX DEL UD ENT RQ	58 59 0	58 59 0	33 59 0 0	14 58 0 0	29 59 0	60 60 0	60 60 0	7 1 0 0	58 58 0 0	20 2 0 0	15 60 0 0	15 60 0 0	13 9 0 0	12 57 0 0
Radio#	15	16	17_	18	19	20	21	22_	23_	24	25	26		
CMD RX RSP TX DEL UD ENT RQ	11 39 0 0	11 0 0 0	4 0 0 0	4 0 0 0	59 0 0	9 0 0	54 52 0 0	51 60 0 0	54 0 0	56 54 0 0	55 57 0 0	53 58 0 0		
==== Sta	art Fr	ame 3	7280,	Tota	l Ela	psed	Frame	s 540	=== =					
Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX RSP TX DEL UD ENT RQ	60 56 0 0	60 55 0 0	49 60 0	30 56 0 0	45 58 0 0	60 59 0	60 60 0	16 1 0 0	58 58 0 0	35 2 0 0	33 58 0 0	33 60 0 0	28 15 0 0	27 57 0 0
Radio#	15	16	17	18	19	20	21	22	23	24	25	26		
CMD RX RSP TX DEL UD ENT RQ	26 32 0 0	26 0 0 0	15 0 0 0	14 0 0 0	14 57 0 0	23 0 0 0	54 52 0 0	49 52 0 0	20 57 0 0	50 50 0	49 56 0 0	49 55 0 0		

====	St	art Fra	ame 3	7340,	Total	Elap	sed	Frames	600	====					
Radi		01	02	03	04	05	06	07	08	09	10	_11	12	13	_14
CMD RSP DEL ENT	TX RX UD RQ	60 58 0 0	60 57 0 0	5 <u>1</u> 37 1 1	60 57 0 0	60 59 0	60 56 0 0	60 60 0	60 59 0	57 41 1 0	60 60 0	60 52 0 0	60 60 0	60 60 0	60 51 0 0
Radi	0#	15	16	17_	18	19	20	21	22	23	24	25	26		
CMD RSP DEL ENT	TX RX UD RQ	60 60 0	60 51 0 0	60 46 0 0	60 53 0 0	60 45 0 0	60 55 0 0	60 60 0 0	60 60 0	60 60 0	60 48 0 0	60 60 0	60 60 0		
====	: St	art Fra	ame 3	7400,	Total	Elaj	psed	Frames	660	====					
Radi	0#	01	02	03	04	05	06	07	_08_	09	10	11	12_	13	14
DEI.	TX RX UD RQ	60 50 0	60 50 0	51 40 1 1	60 53 0 0	60 55 0 0	60 56 0	60 60 0 0	60 57 0	49 35 0 3	60 60 0	60 52 0 0	60 60 0	60 59 0	60 57 0
Radi		15	16	17_	18	19	20	21	_22_	23	24	25	26		
CMD RSP DEL ENT	TX RX UD RQ	60 60 0	51 44 1 1	49 36 2 0	52 32 1 3	44 30 2 2	60 53 0	60 58 0 0	60 58 0 0	60 59 0 0	60 58 0 0	60 58 0 0	60 58 0 0		
====	= S1	tart Fr	ame 3	7460,	Total	Ela	psed	Frames	720	====					
Radi	io#	01	02	03	04	05	06	07	_08_	09	10	11_	12_	13	14
CMD RSP DEL ENT	TX RX UD RQ	60 58 0 0	60 58 0	60 59 0	60 57 0 0	60 60 0	60 54 0 0	60 60 0	60 60 0	60 45 0 0	60 60 0	60 60 0	60 60 0	60 60 0	60 58 0 0
Rad	io#	15	16	17	18	19_	20	21	_22_	23	24_	25_	26		
CMD RSP DEL ENT	TX RX UD RQ	60 60 0	60 59 0 0	60 58 0 0	53 41 1 1	60 59 0	60 58 0 0	60 60 0	60 60 0	60 60 0	60 58 0 0	60 60 0	60 60 0		
===:	= S	tart Fr	ame 3	7520,	Tota]	L Ela	psed	Frames	780	====					
Rad	io#	01	02	03	04	05	06	07	08	09	10_	11	12_	13_	14
CMD RSP DEL ENT	TX RX UD RQ	60 58 0 0	60 58 0 0	60 59 0 0	60 60 0	60 60 0	60 59 0	60 0	60 60 0	60 47 0 0	60 60 0	60 60 0	60 60 0 0	60 60 0	60 59 0
Rad		15	16	17	18	19	20		_22_	23_	24	25_	26		
CMD RSP DEL ENT	TX RX UD RQ	60 60 0	60 60 0	60 60 0	60 60 0	60 60 0	60 60 0	60 0	60 60 0	60 60 0	60 59 0	60 60 0	60 60 0		
===	= S	tart Fr	ame 3	37580,	Tota:	l Ela	ıpsed	Frames							
Rad		01	02	03	04	05	06		08	09	10_	11-	12	13_	14
CMD RSP DEL ENT	TX RX UD RQ	60 57 0 0	60 56 0	60 48 0 0	60 55 0 0	60 58 0 0	60 57 0 0	0	60 56 0 0	52 33 1 0	60 59 0 0	60 57 0 0	60 59 0	59 59 0 0	60 59 0 0
Rad	<u>io#</u>		16	17	18	19	20		22_	23	24	25	26		
CMD RSP DEL ENT	TX RX UD RQ		60 58 0 0	60 59 0	60 55 0 0	60 59 0	60 59 0	60 59 0	60 59 0	60 59 0 0	60 59 0 0	60 59 0 0	60 59 0		

==== Sta	rt Fra	me 37	340,	Total	Elap	sed F	rames	600	====					
Radio#	01	02	03	04	05	06	07	08	09	10	11	<u> 12</u>	<u> 13</u>	_14
CMD RX RSP TX DEL UD ENT RQ	57 58 0 0	57 56 0	46 49 0 1	35 59 0 0	50 58 0 0	60 60 0	60 60 0	31 5 0	51 51 0 0	45 6 0 0	42 58 0 0	42 60 0	38 19 0 0	36 51 0 0
Radio#	15	16	17	18	19	_20_	21	22	_23	<u> 24</u>	_25	_26		
CMD RX RSP TX DEL UD ENT RQ	34 49 0 0	34 0 0 0	26 0 0 0	26 0 0 0	25 58 0 0	31 0 0 0	59 52 0 0	59 54 0 0	29 54 0 0	58 45 0 0	56 56 0 0	55 55 0 0		
==== Sta	rt Fra	me 37	400,	Total	Elap	sed I	rames	660	====					
Radio#	01	02	03	04	05	06	07	_08	09	10	_11	_12	13	14
CMD RX RSP TX DEL UD ENT RQ	58 50 0 0	58 50 0 0	35 50 0 1	26 56 0 0	39 52 0 0	60 58 0 0	60 60 0	24 1 0 0	48 49 0 7	35 2 0 0	33 58 0 0	33 60 0 0	32 4 0 0	28 57 0 0
Radio#	15	16	17	18	19	20	21	_22	23	24	<u> 25</u>	26		
CMD RX RSP TX DEL UD ENT RQ	27 39 0 0	42 30 0 0	16 0 0 0	19 0 0 0	16 37 0 2	26 0 0	55 48 0 0	55 52 0 0	25 51 0 0	55 49 0 0	54 51 0 0	54 52 0 0		
==== Sta	rt Fra	ame 37	460,	Total	Elap	sed 1	Frames	720	====					
Radio#	01	02	03	04	05	06	07	08_	09	10	11	12	13	14
CMD RX RSP TX DEL UD ENT RQ	60 57 0 0	60 57 0 0	39 60 0	40 60 0 0	35 59 0 0	60 59 0	60 60 0	19 2 0 0	60 60 0 0	30 2 0 0	26 60 0	25 60 0 0	25 34 0 0	24 59 0
Radio#	15	16	17	18	19	20	21	_22_	23_	24_	25_	_26		
CMD RX RSP TX DEL UD ENT RQ	24 50 0 0	24 0 0 0	15 0 0 0	13 0 0 0	15 60 0 0	22 0 0 0	59 57 0	59 60 0	21 59 0 0	60 57 0	60 60 0	60 60 0		
==== Sta	art Fra	ame 3'	7520,	Total	Ela	psed	Frames	780	====					
Radio#_	01	02	03	04	05	06	07	08_	09_	10	11	12_	13_	14
CMD RX RSP TX DEL UD ENT RQ	59 56 0 0	59 56 0 0	50 60 0 0	53 60 0 0	48 58 0 0	60 60 0	60 60 0	33 1 0 0	59 59 0 0	46 1 0 0	44 60 0 0	43 60 0	43 36 0 0	43 59 0
Radio#	15	16	17	18	19	20	21_	22	23	24	25_			
CMD RX RSP TX DEL UD ENT RQ	40 60 0 0	38 0 0 0	31 0 0 0	31 0 0 0	29 60 0	38 0 0	59 54 0 0	58 60 0 0	38 59 0 0	60 58 0 0	60 60 0	60 60 0		
==== St	art Fr	ame 3	7580,	Tota:	l Ela	psed	Frame	s 840	====					
Radio#	01	02	03	04	05	06	07	08	09	10	11	12_	13_	14
CMD RX RSP TX DEL UD ENT RQ	60 57 0 0	60 56 0 0	44 59 0 0	52 60 0 0	41 57 0 0	60 59 0	60 60 0 0	29 0 0 0	52 53 0 1	40 0 0 0	38 59 0 0	34 60 0 0	33 35 0 0	31 6((
Radio#	15	16	17	18_	19	20	21	22	23	2 <u>4</u> _	25	26		
CMD RX RSP TX DEL UD ENT RQ	31 56 0 0	30 0 0 0	29 0 0 0	29 0 0 0	29 60 0 0	30 0 0 0	58 56 0 0	58 57 0 0	30 57 0 0	60 57 0 0	59 57 0 0	59 57 0 0		

==== Sta	rt Fra	ame 3'	7640,	Total	Elaj	psed	Frames	900	====					
Radio#	01	02	03	04	05	06	07	08_	09	10	11_	12	13	14
CMD TX RSP RX DEL UD ENT RQ	60 57 0 0	60 57 0	51 47 1 0	60 58 0 0	60 58 0 0	60 57 0 0	60 60 0	60 60 0	26 5 3 5	60 60 0	60 57 0	60 60 0	60 60 0	60 56 0
Radio#	15	16	17	18	19_	20	21	22	23	24	25_	26		
CMD TX RSP RX DEL UD ENT RQ	60 60 0	60 50 0	60 59 0	60 47 0 0	60 58 0 0	60 59 0 0	60 60 0	60 60 0	60 60 0	60 52 0 0	60 60 0	60 59 0		
==== Sta	rt Fra	ame 3	7700,	Total	Ela	psed	Frames	960	====					
Radio#	01	02	_03_	04	05	06	07	08	09	10	11	12	13	14
CMD TX RSP RX DEL UD ENT RQ	60 52 0 0	60 50 0	60 53 0 0	60 52 0 0	60 54 0	60 54 0 0	60 59 0	60 59 0	60 54 0 0	60 60 0	60 54 0 0	60 60 0	60 60 0	60 53 0
Radio#	15	16	17	18	19	20	21	22	23	24	25	26		
CMD TX RSP RX DEL UD ENT RQ	60 60 0 0	60 43 0 0	60 59 0 0	60 43 0 0	60 59 0	60 59 0	60 59 0 0	60 59 0 0	60 59 0 0	60 56 0 0	60 59 0 0	60 59 0 0		
======	= Test	Data	Summ	ary ==	====	==								
Radio#	01	02	03	04	05	06	07	80	09	10	11	12_	13_	14
CMD TX RSP RX DEL UD ENT RQ	960 913 0 0	960 903 0	933 867 3 2	951 864 1 0	960 936 0 0	960 882 0 0	960 954 0 0	959 928 0 0	902 769 6 9	959 958 0 0	960 926 0 0	959 959 0 0	959 956 0 0	960 877 0 0
Radio#	15	16	17	18	19	20	21	22_	23	24	25	26		
CMD TX RSP RX DEL UD ENT RQ	960 958 0 0	951 894 1	949 904 2 0	932 829 4 5	938 881 3 3	960 939 0 0	960 954 0 0	960 952 0 0	960 957 0 0	959 904 0 0	960 948 0 0	958 950 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

==== St	art Fra	ame 37	7640,	Total	Elap	sed :	Frames	900	====					
Radio#	01	02	03	04	05	06	07	08	09	10	11_	<u> 12</u>	13	14
CMD RX RSP TX DEL UD ENT RQ	60 60 0 0	60 60 0	50 51 0 1	41 59 0 0	45 60 0 0	59 60 0	59 60 0 0	32 0 0	21 24 0 11	42 0 0 0	40 60 0	38 60 0	38 6 0 0	38 56 0
Radio#_	15	16	17	18	19	20	21	22_	23	24	25_	26		
CMD RX RSP TX DEL UD ENT RQ	38 51 0 0	35 0 0 0	31 0 0 0	31 0 0 0	31 59 0 0	35 0 0 0	57 52 0 0	56 60 0	35 55 0 0	59 51 0 0	59 59 0 0	59 58 0 0		
== == St	art Fr	ame 3	7700,	Total	Ela	psed	Frame	s 960	====					
Radio#	01	02	03	04	05	06	07	08	09	10	<u>11</u> _	12_	13_	14
CMD RX RSP TX DEL UD ENT RQ	59 54 0 0	58 54 0 0	59 58 0	42 58 0 0	53 57 0	60 60 0	60 60 0	30 0 0 0	59 59 0 0	51 0 0 0	47 58 0 0	46 60 0 0	43 12 0 0	37 54 0 0
Radio#	15	16	17	18	19	20	21	22	23	24	25	26		
CMD RX RSP TX DEL UD ENT RQ	36 33 0 0	34 0 0 0	28 0 0 0	28 0 0 0	28 57 0 0	34 0 0 0	56 55 0 0	56 56 0 0	33 58 0 0	59 53 0 0	59 58 0 0	59 57 0 0		
=====	== Test	Data	Summ	ary =	====	==								
Radio#	01	02	03	04	05	06	07	08	09	10	11	12_	13_	<u>14</u>
CMD RX RSP TX DEL UD ENT RQ	940 911 0 0	937 902 0 0	599 924 0 3	489 922 0 1	536 927 0 0	959 949 0 0	959 958 0 0	297 13 0 0	870 876 0 20	472 21 0 0	434 949 0 0	419 960 0 0	393 246 0 0	373 887 0 0
Radio#	15	16	17	18	19	20	21	22	23	24	25	26		
CMD RX RSP TX DEL UD ENT RQ	361 742 0 0	366 30 0	264 0 0 0	269 0 0	260 903 0 3	334 0 0 0	851 775 0 0	829 859 0 0	323 849 0 0	876 790 0 0	864 866 0 0	848 863 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

==== Sta	rt Fra	.me 44	800,	Total	Elap	sed F	rames	60 =	===					
Radio#	01	02	03	04	05	06	07	08	09	10	11	12_	13_	14
CMD TX RSP RX DEL UD ENT RQ	0 0 0	0 0 0	0 0 0	0 0 0	0	60 60 0	60 60 0	60 60 0	60 60 0	60 60 0	60 60 0	60 58 0 0	60 60 0	60 59 0
Radio#	15	16	17_	18	19	20	21	22	23	24	25	26	27	28
CMD TX RSP RX DEL UD ENT RQ	60 60 0	60 60 0 0	55 46 1 1	60 60 0 0	60 60 0	60 59 0	60 60 0	60 60 0 0	0 0 0	0 0 0	0	60 0 0	0	0 0 0
Radio#	29	30	31	32										
CMD TX RSP RX DEL UD ENT RQ	60 0 0	0 0 0	60 0 0	60 0 0										
==== Sta	rt Fra	ame 44	1860,	Total	l Ela _l	sed I	Frames	120	====					
Radio#	01_	02	03	04	05	06	07	08_	09_	10	11	12_	13	14
CMD TX RSP RX DEL UD ENT RQ	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	60 60 0	60 60 0	60 59 0	60 60 0	60 60 0	60 60 0	60 59 0	60 60 0	60 58 0 0
Radio#	15	16	17	18	19	20	21_	22_	23_	24_	25	26	27	28
CMD TX RSP RX DEL UD ENT RQ	60 60 0	60 60 0	60 48 0 0	60 60 0	60 59 0	60 60 0	60 58 0 0	60 60 0	0000	0 0 0	0 0 0	60 0 0	0 0 0	0 0 0
Radio#	29	30	31_	32										
CMD TX RSP RX DEL UD ENT RQ	60 0 0	0	60 0 0	60 0 0										
==== Sta	rt Fra	ame 4	4920,	Tota	l Ela	psed 1	Frame	s 180	====					
Radio#	01	02	03	04	05	06	07	08	09	10	11_	12_	<u>13</u>	14
CMD TX RSP RX DEL UD ENT RQ	0	0 0 0	0 0 0	0 0 0	0 0 0	60 60 0	60 60 0	60 56 0	60 60 0	60 58 0 0	60 58 0 0	60 56 0 0	60 60 0	60 48 0 0
Radio#	15	16	17	18	19	20	21	22_	23_	24	25_	26	27	28
CMD TX RSP RX DEL UD ENT RQ	60 60 0	60 59 0	56 48 1 0	60 60 0	60 60 0	60 60 0	60 60 0	60 60 0	0	0	0	60 0 0	000	0 0 0
Radio#	29_	30	31	32										
CMD TX RSP RX DEL UD ENT RQ	60 0 0	000	60 0 0	60 0 0										

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

** Data from file 09041043.log

_	_				ma			60 -						
==== Star										10	4.4	12	13	14
Radio#	01	02	_03_	04	05	_06	07	08	09	_10				_ 39
CMD RX RSP TX	0	0	0	0	0	60 60	60 60	60 60	60 60	36 60	60 60	60 58	60 60	40
DEL ÚD ENT RO	Ö	Ö	0	8	0	8	0	0	0	0	0	8	0	8
Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
		36	24	31	30	28	27	24	0	0	0	23	Q	o O
CMD RX RSP TX DEL UD	38 39 0	44	Õ	Ō	0	0	0	0	0	0	0	0	0	0
ENT RQ	ŏ	ŏ	ŏ	Ō	Ō	Ó	0	0	0	0	0	0	0	0
Radio#	29	30	31_	32										
CMD RX RSP TX	20	0	19 0	19 0										
RSP TX DEL UD ENT RQ	ŏ	ŏ	ŏ	Ŏ										
•	_		_											
==== Sta	rt Fra	ume 44										40	4.2	1.4
Radio#	01	02_	03	04	05	06	07	_08_	09	10	11	12	13	<u>14</u> 47
CMD RX RSP TX	0	0	0	0	0	60 60	60 60	60 60	60 60	45 58	60 60	60 59	60 59	45
DEL ÚD ENT RQ	Ö	Ŏ	Ö	0	0	0	0	0	0	8	8	0	8	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	o	o o	0	36	o O	Ŏ
RSP TX DEL UD	44	5 <u>1</u>	0	0	0	8	0	0	0	0	0	8	0	ŏ
ENT RQ	ŏ	Ō	Ō	Ó	0	0	0	0	0	0	0	0	0	0
Radio#	29	30_	31	32										
CMD RX RSP TX	36 0	0	36 0	36 0										
RSP TX DEL UD ENT RQ	ŏ	Ŏ	Õ	Ô										
•	_	-	•			_	_							
==== Sta										40	11	12	13	14
Radio#	01	02_	03	04	05	06	07	08	09_	10_	1 1-	1 4-	1 5-	60
CMD RX RSP TX	8	8	0	0	8	60 60	60 60	60 60	60 60	60 60	60	58	60	60
DEL UD ENT RQ	0	8	0	0	0	8	0	8	0	0	0	8	8	ŏ
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	o O	o o	Ŏ	60	0	o
RSP TX DEL UD	54 0	60 0	0	0	0	8	8	8	0	0	0	0	0	0
ENT RQ	Ō	Ō	0	0	0	0	0	0	0	0	0	0	0	U
Radio#	29	30	31	32										
CMD RX RSP TX	60 0	0	59 0	59 0										
DEL UD ENT RQ	0	0	8	0										

==== Start Frame 44980, Total Elapsed Frames 240 ====	==== Start Frame 44980, Total Elapsed Frames 240 ====
Radio# 01 02 03 04 05 06 07 08 09 10 11 12 13 14	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 60	CMD RX 0 0 0 0 0 60 60 60 60 60 60 60 60 60 60
Radio# 15 16 17 18 19 20 21 22 23 24 25 26 27 28	radio# 15 10 17 10 13 20 21 21 20 20 20 20 20 20 20 20 20 20 20 20 20
CMD TX 60 60 58 60 60 60 60 60 0 0 0 0 60 0 0 0 RSP RX 59 59 47 60 60 60 60 60 60 0 0 0 0 0 0 0 0 0 0	CMD RX 60 60 58 60 60 50 50 50 50 0 0 0 0 0 0 0 0 0 0 0
Radio# 29 30 31 32	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	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 ====	==== Start Frame 45040, Total Elapsed Frames 300 ====
Radio# 01 02 03 04 05 06 07 08 09 10 11 12 13 14	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 80 88P 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 0 0 0 0	CMD RX
Radio# 15 16 17 18 19 20 21 22 23 24 25 26 27 28	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 0 0 0 0 0 0 RSP RX 58 58 48 60 60 60 60 60 60 0 0 0 0 0 0 0 0 0 0	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 0 0 0 0 0 0
Radio# 29 30 31 32	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	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 ====	==== Start Frame 45100, Total Elapsed Frames 360 ====
Radio# 01 02 03 04 05 06 07 08 09 10 11 12 13 14	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 60	CMD RX 0 0 0 0 0 59 59 59 60 59 60 60 60 60 60 RSP TX 0 0 0 0 0 60 60 60 60 60 60 54 60 60 EL UD 0 0 0 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 27 28	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 0 RSP RX 60 60 46 60 60 60 60 60 0 0 0 0 0 0 0 0	CMD RX 60 60 58 60 60 60 60 60 0 0 0 60 0 (RSP TX 57 60 0 0 0 0 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	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

==== Sta	art Fra	me 45	160,	Total	Elap	sed F	rames	420	====					
Radio#_	01	02	03	04	05	06	07	08	09	10	_11	12	13	14
CMD TX RSP RX DEL UD ENT RQ	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	60 59 0	60 59 0	60 59 0	60 59 0	60 59 0	60 59 0	60 55 0 0	60 59 0	60 59 0 0
Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	_28
CMD TX RSP RX DEL UD ENT RQ	60 59 0 0	60 59 0	60 59 0 0	60 59 0 0	60 59 0 0	60 59 0 0	60 56 0	60 59 0	0 0 0	0 0 0	0 0 0	60 0 0	0	0
Radio#_	29	30	31	32										
CMD TX RSP RX DEL UD ENT RQ	60 0 0	0 0 0	60 0 0	60 0 0										
==== St	art Fra	ume 45	220,	Total	Elaj	psed F	rames	480	====					
Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX RSP RX DEL UD ENT RQ	0 0 0	0 0 0	0 0 0	0 0 0	0	60 59 0 0	60 58 0 0	60 58 0 0	60 59 0 0	60 58 0 0	60 58 0 0	60 52 0 0	60 58 0 0	60 56 0
Radio#	15	16	17	18	19	20_	21	22	23	24	25	26_	27	28
CMD TX RSP RX DEL UD ENT RQ	60 59 0 0	60 59 0 0	59 50 1 1	60 59 0 0	60 60 0	60 60 0	60 59 0 0	60 60 0	0	0	0	60 0 0	0 0 0	0 0 0
Radio#	29	30	31	_32										
CMD TX RSP RX DEL UD ENT RQ	60 0 0	0	60 0 0	60 0 0										
==== St	art Fra	ame 4	5280,	Total	Ela	psed 1	Frame	5 5 4 0	====					
Radio#	01	02	03	04	05	06	07	80	09	10	11_	12	13	14
CMD TX RSP RX DEL UD ENT RQ	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	60 60 0	60 60 0	60 59 0 0	60 60 0	60 60 0	60 60 0	60 51 0 0	60 60 0	60 59 0 0
Radio#	15	16	17	18	19	20	21	22	23	24	25_	26	27_	28
CMD TX RSP RX DEL UD ENT RQ	60 60 0	60 60 0	60 54 0 0	60 60 0	60 60 0	60 60 0	60 60 0	60 60 0	0	0	0 0 0	60 0 0	0 0 0	0 0 0
Radio#	29	30	31	32										
CMD TX RSP RX DEL UD ENT RQ	60 0 0	0 0 0	60 0 0	60 0 0										

==== Star	rt Fra	me 45	160.	Total	Elap	sed F	rames	420	====					
Radio#	01	02	03	04	05	06	07	80	09	10	11	12	13	14
CMD RX RSP TX DEL UD ENT RQ	0	0	0	0	0 0 0 0	60 60 0	60 60 0	60 60 0	60 60 0	60 60 0	60 60 0	60 56 0	60 60 0	60 60 0
Radio#	15	16	17	18	19	20_	21	_22	23	24	25	26	27	28
CMD RX RSP TX DEL UD ENT RQ	60 51 0 0	59 60 0 0	59 0 0 0	59 0 0 0	59 0 0	59 0 0	59 0 0 0	59 0 0	0 0 0	0 0 0	0 0 0	59 0 0	0 0 0	0 0 0
Radio#	29	30	31	32										
CMD RX RSP TX DEL UD ENT RQ	59 0 0	0 0 0	59 0 0	59 0 0										
==== Sta	rt Fra	ame 45	5220,	Total	Ela	psed 1	Frames	480	====					
Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX RSP TX DEL UD ENT RQ	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	60 60 0	60 60 0	60 60 0	60 60 0	60 60 0	60 60 0	60 52 0 0	60 60 0	59 59 0
Radio#	15	16	17_	18	19	20	21	_22_	23	24	25	26	27	28
CMD RX RSP TX DEL UD ENT RQ	58 57 0 0	58 60 0 0	55 0 0 0	58 0 0 0	58 0 0 0	58 0 0	58 0 0 0	58 0 0	0 0 0	0 0 0	0	57 0 0 0	0	0
Radio#	29	30	31	32										
CMD RX RSP TX DEL UD ENT RQ	57 0 0 0	0 0 0	56 0 0	56 0 0										
==== Sta	rt Fr	ame 4	5280,	Total	l Ela	psed	Frames	5 5 4 0	====					
Radio#	01	02	03	04	05	06	07	08	09_	10	11	12_	13_	14
CMD RX RSP TX DEL UD ENT RQ	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	60 60 0	60 60 0 0	60 59 0	60 60 0	60 60 0	60 60 0	60 51 0 0	60 60 0	60 58 0 0
Radio#	15	16	17	18	19	20	21	22_	23_	24	25_	26_	27	28
CMD RX RSP TX DEL UD ENT RQ	60 60 0	60 60 0	60 0 0	59 0 0	59 0 0	59 0 0	59 0 0	59 0 0	0 0 0	0 0 0	0 0 0	59 0 0 0	0	0 0 0
Radio#	29	30	31	32										
CMD RX RSP TX DEL UD ENT RQ	59 0 0	0 0 0	59 0 0	59 0 0 0										

==== Start Frame 45340, Total Elapsed Frames 600 ====	==== Start Frame 45340, Total Elapsed Frames 600 ====
Radio# 01 02 03 04 05 06 07 08 09 10 11 12 13 14	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 8SP RX 0 0 0 0 0 60 60 59 60 60 60 43 60 53	CMD RX 0 0 0 0 0 60 60 60 60 60 60 60 60 60 60
	ENI KU U U U U U U U U U U U U U U U U U U
Radio# 15 16 17 18 19 20 21 22 23 24 25 26 27 28	RAUTO# 15 10 17 10 10 10 10 10 10 10 10 10 10 10 10 10
CMD TX 60 60 56 60 60 60 60 60 0 0 0 60 0 0 0	RSP TX 59 56 0 0 0 0 0 0 0 0 0 0 0 0
ŘŠP ŘŘ 60 55 46 60 60 60 60 60 0 0 0 0 0 0 0 0 0 0 0	DEL ÚD 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Radio# 29 30 31 32	Radio# 29 30 31 32
	CMD RX 60 0 60 60 RSP TX 0 0 0 0
ŘŠPŘX O O O O	DEL UD O O O O
DEL UD O O O O O O O O O O O O O O O O O O	ĔŇŦĸŸŲ ŎŎŌŌ
==== Start Frame 45400, Total Elapsed Frames 660 ====	==== Start Frame 45400, Total Elapsed Frames 660 ====
Radio# 01 02 03 04 05 06 07 08 09 10 11 12 13 14	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 60	CMD RX 0 0 0 0 0 60 60 60 60 60 60 60 60 60 60
pri tib o o o o o o o o o o o o o o o o o o o	
ENT RQ 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ENITE OF 10 10 10 10 10 10 10 10 10 10 10 10 10
Radio# 15 16 17 18 19 20 21 22 23 24 25 26 27 28	CWD PV 60 60 60 60 60 60 60 60 0 0 0 0 60 0 0
	RSP TX 55 60 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
ŘŠP ŘŽ 60 58 50 60 60 59 60 60 0 0 0 0 0 0 0 0 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 0 0 0
Radio# 29 30 31 32	Radio# 29 30 31 32
CMD TX 60 0 60 60	CMD RX 60 0 60 60 RSP TX 0 0 0 0
ŘŠP ŘŘ O O O O O O O O O O O O O O O O O O	DEL UD O O O O O O O O
ENT ŘQ Ŏ Ŏ Ŏ Ŏ	•
==== Start Frame 45460, Total Elapsed Frames 720 ====	==== Start Frame 45460, Total Elapsed Frames 720 ====
Radio# 01 02 03 04 05 06 07 08 09 10 11 12 13 14	Radio# 01 02 03 04 05 06 07 08 09 10 11 12 13 14
CMD TX 0 0 0 0 60 60 60 60 60 60 60 60 60 60 88P RX 0 0 0 0 59 59 59 59 59 59 58 59 56	RSP TX 0 0 0 0 0 60 60 60 60 60 59 60 60
	DEL UD 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
ENI RU	Radio# 15 16 17 18 19 20 21 22 23 24 25 26 27 28
RGU10# 10 10 11 10 10 10 10 10 10 10 10 10 10	
RSP RX 59 53 51 60 59 59 59 59 0 0 0 0 0	
DEL UD 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ĒNT ŘQ 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Radio# 29 30 31 32	Radio# 29 30 31 32
CMD TX 60 0 60 60 RSP RX 0 0 0 0	CMD RX 60 0 60 60 RSP TX 0 0 0 0
DEL UD O O O O	DEL UD O O O O ENT RQ O O O O
ĒNĪT ŘŲ O O O	

==== Sta	art Fra	ume 45	5520,	Total	Elaj	psed I	Frames	780	====					
Radio#	01	02	03	04	05_	06	07	08	09	10	11	12	13	14
CMD TX RSP RX	0	0	0	0	0	60 59	60 59	60 59	60 59	60 59	60 59	60 55	60 59	60 52
DEL UD ENT RQ	ŏ	Ŏ	Ŏ	Ŏ	Ö	0	0	0	0	0	8	8	0	8
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	0 0 0
RSP RX DEL UD	59 0	58 0	40	60	60	57 0 0	60 0	60 0 0	ŏ	ŏ	ŏ	ŏ	ŏ	ŏ
ENT RQ Radio#	0 29	0 30	0 31	0 32	0	U	U	Ü	U	v	v	v	Ü	v
CMD TX	<u></u>	0	60	60										
ŘŠP ŘX DEL UD	0	Ŏ	0	0										
ĒNT ŘQ	Ŏ	Ŏ	Ŏ	Ŏ										
==== Sta	art Fra	ame 4	5580,	Total	Ela	psed :	Frames	840	====					
Radio#	01	02	03	04	05	06	07	80	09	10_	11_	12_	13	14
CMD TX RSP RX	0	0	0	0	0	60 60	60 60	60 58	60 60	60 59	60 59	60 59	60 60	60 53
DEL UD	ŏ	ŏ	ŏ	ŏ	ŏ	ŏ	ŏ	ŏ	Ö	0	0	0	0	0
ENT RQ Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD TX	 -	 -	60	60	60	60	60	60	0	0	0	60	0	0
RSP RX DEL UD	60 0	60	43	60 0	60	60	60 0	60 0	8	8	8	0	8	0
ENT RQ	ŏ	ŏ	ŏ	ŏ	ŏ	ŏ	ŏ	ŏ	Ŏ	Ō	0	0	0	0
Radio#_	29_	30_	31	32										
CMD TX RSP RX	60 0	0	60 0	60 0										
DEL UD ENT RQ	Ô	0	8	0										
•			F.C.4.0	T-4-1	F1 -		Emama	- 000						
==== St		ame 4 02	5640, 03	10ta) 04	. E1a 05	.pseq 06	o7	08	09	10	11	12	13	14
Radio#_ CMD TX	<u>01</u> _	02-	03	0		60	60	60	60	 -	60	60	60	60
RSP RX	ŏ	ŏ	ö	ŏ	ŏ	59	59 0	5 <u>9</u>	59 0	59 0	59 0	59 0	59 0	57 0
DEL UD Ent rq	ŏ	ŏ	ŏ	ŏ	ŏ	ŏ	ŏ	ŏ	ŏ	ŏ	ŏ	ŏ	Ŏ	Ŏ
Radio#	15	16	17	18	19	20	21	22	23	24_	25_	26_	27_	28
CMD TX RSP RX	60 59	60 57	58 39	60 60	60 60	60 60	60 60	60 60	0	0	8	60 0	0	0
DEL UD ENT RQ	ő	Ö	1	ŏ	ő	Ŏ	Ŏ	ő	Ö	0	8	8	8	0
Radio#	29	30	31	32	•	,	-	-	-					
CMD TX	60	0	60	60										
RSP RX DEL UD	0	Ŏ	8	0										
ENT ŘQ	Ō	Ō	Ó	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 RSP TX DEL UD ENT RQ	0	000	0 0 0 0	0 0 0	0000	60 60 0	60 60 0	60 60 0	60 60 0	60 60 0	60 60 0	60 56 0 0	60 60 0	60 60 0
Radio#	15	16	17	18	19	20	21	22	23	24	25	<u> 26</u> .	27	28
CMD RX RSP TX DEL UD ENT RQ	60 52 0 0	60 60 0	60 0 0	59 0 0	59 0 0	59 0 0 0	59 0 0	59 0 0 0	0 0 0	0 0 0	0	59 0 0	0	000
Radio#	29	30	31	32										
CMD RX RSP TX DEL UD ENT RQ	59 0 0	0 0 0	59 0 0 0	59 0 0 0										
==== Sta	rt Fra	ame 45	5580,	Total	. Ela	psed l	Frames	s 840	====					
Radio#	01	02	03	04	05	06	07	08_	09	10	11_	12_	13	14
CMD RX RSP TX DEL UD ENT RQ	0 0 0	0 0 0	0 0 0	0000	0 0 0	60 60 0	60 60 0 0	60 60 0	60 60 0	60 60 0	60 60 0	60 59 0 0	60 60 0	60 59 0
Radio#	15	16	17	18	19	20	21	22	23	24	25	26_	27_	28
CMD RX RSP TX DEL UD ENT RQ	60 55 0 0	60 60 0	60 0 0	60 0 0	59 0 0 0	59 0 0 0	59 0 0	59 0 0	0	0 0 0	0	59 0 0	0 0 0	000
Radio#	29	30	31	32										
CMD RX RSP TX DEL UD ENT RQ	59 0 0	0 0 0	59 0 0 0	59 0 0										
==== Sta	rt Fr	ame 4	5640,	Tota	l Ela	psed	Frame	s 900	====					
Radio#	01	02	03	04	05	06	07	08	09	10_	11_	12	13_	14
CMD RX RSP TX DEL UD ENT RQ	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	60 60 0	60 60 0	60 60 0 0	60 60 0	60 60 0	60 60 0	60 60 0	60 60 0	59 60 0 0
Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD RX RSP TX DEL UD ENT RQ	59 60 0 0	59 59 0	57 0 0 0	59 0 0	59 0 0	59 0 0	59 0 0 0	59 0 0	0	0 0 0	0 0 0	59 0 0	0 0 0	0
Radio#	29	30	31	32										
CMD RX RSP TX DEL UD ENT RQ	59 0 0	0 0 0	59 0 0 0	59 0 0										

==== St	art Fra	ame 4	5700,	Total	Ela	psed	Frames	960	====					
Radio#	01	02	03	04_	05	06	07	80	09	10	11	12_	13_	14
CMD TX RSP RX DEL UD ENT RQ	0 0 0 0	0 0 0	0	0 0 0	0 0 0	60 60 0	60 60 0	60 59 0	60 60 0	60 60 0	60 60 0	60 5 4 0 0	60 60 0	60 58 0 0
Radio#	15	16	17	18	19	20	21	_22_	23	<u> 24</u>	25	26	27	28
CMD TX RSP RX DEL UD ENT RQ	60 60 0 0	60 60 0	59 46 1 0	60 60 0	60 60 0	60 58 0 0	60 60 0	60 60 0	0	0	0 0 0	60 0 0	0 0 0	0 0 0
Radio#	29	30	31	32										
CMD TX RSP RX DEL UD ENT RQ	60 0 0	0 0 0	60 0 0	60 0 0										
======	= Test	Data	Summ	ar y ==		==								
====== Radio#	= Test 01	Data 02	Summ	ary == 04	05	== 06	07_	08	09	10	11	12	13	14
				•			07 960 949 0 0	08 960 933 0	960 949 0	10 960 944 0 0	960 944 0 0	960 878 0	960 949 0	960 883 0
Radio#_ CMD TX RSP RX DEL UD	<u>01</u>	02 0 0	03 0 0	04 0 0	05 0 0	960 950 0	960 949 0	960 933 0	960 949 0	960 944 0	960 944 0	960 878 0	960 949 0	960 883 0
Radio#_ CMD TX RSP RX DEL UD ENT RQ	01 0 0 0 0	02 0 0 0	03 0 0 0	04 0 0 0 0	05 0 0 0	960 950 0	960 949 0 0	960 933 0 0	960 949 0 0	960 944 0 0	960 944 0 0	960 878 0 0	960 949 0 0	960 883 0
Radio#_CMD TX RSP RX DEL UD ENT RQ Radio#_ CMD TX RSP RX DEL UD	01 0 0 0 0 0 15 960 952	02 0 0 0 0 16 960 935 0	03 0 0 0 0 17 934 761 10	04 0 0 0 0 0 18 960 958	05 0 0 0 0 19 960 957 0	960 950 0 0 20 960 951	960 949 0 0 21 960 952 0	960 933 0 0 22 960 958	960 949 0 0 23	960 944 0 0 24	960 944 0 0 25	960 878 0 0 26 960 0	960 949 0 0 27	960 883 0 0 28

Frame range = 44800 -> 45759

Total number of frames = 960

Total number of DEL UPDT frames = 10

Total number of ENT RQST frames = 6

==== Sta	rt Fra	ame 4	5700,	Total	Elaj	psed	Frames	960	====					
Radio#	01	02	03	04	05	06	07	08	09	10	11_	12_	13_	14
CMD RX RSP TX DEL UD ENT RQ	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	60 60 0	60 60 0	60 60 0	60 60 0	60 60 0	60 60 0	60 54 0 0	60 60 0	60 58 0 0
Radio#	15	16	17	18	19	20	21	22_	23	24	25	26_	27	28
CMD RX RSP TX DEL UD ENT RQ	60 56 0	60 60 0	59 0 0	60 0 0	60 0 0	60 0 0	60 0 0	60 0 0	0 0 0	0 0 0	0 0 0	60 0 0	0 0 0	0 0 0
Radio#	29_	30	31	32										
CMD RX RSP TX DEL UD ENT RQ	60 0 0	0 0 0	60 0 0	60 0 0										
======	Test	Data	Summ	ary ==	====	==								
D = 4 : = #					~ -	06	0.77	80	09	10	11	12	13	14
Radio#	01	02	03	04	05	06	07	00						
CMD RX RSP TX DEL UD ENT RQ	01 0 0 0	0 0 0 0	03 0 0 0	0 0 0 0	05 0 0 0	959 960 0	959 959 0 0	959 958 0 0	960 959 0	919 957 0 0	960 959 0 0	960 890 0	960 958 0 0	923 913 C
CMD RX RSP TX DEL UD	0	0 0 0	0	8	0	959 960 0	959 959 0	959 958 0	960 959 0	919 957 0	960 959 0	960 890 0	960 958 0	923 913 C
CMD RX RSP TX DEL UD ENT RQ	0	0 0 0 0	0 0 0	0	0 0 0 0	959 960 0 0	959 959 0 0	959 958 0 0	960 959 0 0	919 957 0 0	960 959 0	960 890 0 0	960 958 0 0	923 913 C
CMD RX RSP TX DEL UD ENT RQ Radio# CMD RX RSP TX DEL UD	0 0 0 0 15 920 874	0 0 0 0 16 915 927 0	0 0 0 0 17 879	0 0 0 0 18 906	0 0 0 0 19 901 0	959 960 0 0 20 898	959 959 0 0 21 895 0	959 958 0 0 22 892 0	960 959 0 0 23	919 957 0 0 24	960 959 0 0 25	960 890 0 0 26 889 0	960 958 0 0 27 0	923 913 C C

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

==== Sta	rt Fra	me 56	100,	Total	Elap	sed F	rames	60 =	:== =					
Radio#	01	02	03	04	05	06	07	80	09	10_	11	12	13	14
CMD TX RSP RX DEL UD ENT RQ	0000	0 0 0	0 0 0	0 0 0	0 0 0	60 59 0 0	60 59 0 0	60 55 0	51 44 1 1	60 55 0	60 54 0 0	3 0 0	60 59 0	60 56 0
Radio#	15	16	17	18	19	20	21	22_	23	24	25	26	27	28
CMD TX RSP RX DEL UD ENT RQ	60 59 0 0	60 58 0 0	60 56 0 0	60 60 0	60 60 0	60 59 0 0	60 60 0	60 60 0	0 0 0	0 0 0	0 0 0	60 0 0	0 0 0	0 0 0
Radio#	29	30	31	32										
CMD TX RSP RX DEL UD ENT RQ	60 0 0	0 0 0	60 0 0	60 0 0										
==== Sta	rt Fra	ame 56	6160,	Tota]	Ela	psed I	Frames	120	====					
Radio#	01	02_	03	04	05_	06	07	_08_	09	10_	11	12_	13	14
CMD TX RSP RX DEL UD ENT RQ	0 0 0	0 0 0	0	0 0 0	000	60 59 0	60 59 0	60 58 0 0	60 59 0 0	60 58 0 0	60 58 0 0	60 47 0 0	60 60 0	60 58 0 0
Radio#	15	16	17	18	19	20	21	22_	23	24	25_	26	27	28
CMD TX RSP RX DEL UD ENT RQ	60 60 0	60 59 0 0	60 56 0 0	60 60 0	60 60 0	60 57 0 0	60 60 0	60 60 0	0 0 0	0 0 0	0 0 0	60 0 0	0 0 0	0 0 0
Radio#	29	30	31	32										
CMD TX RSP RX DEL UD ENT RQ	60 0 0	0 0 0	60 0 0	60 0 0										
==== Sta	rt Fra	ame 5	6220,	Tota	l Ela	psed :	Frames	180	====					
Radio#	01	02	03	04	05	06	07	08	09	10	11	12_	13_	14
CMD TX RSP RX DEL UD ENT RQ	0 0 0	0	0	0 0 0	0 0 0	60 55 0 0	60 59 0	60 58 0 0	60 58 0 0	60 58 0 0	60 58 0 0	60 54 0 0	60 59 0	60 59 0
Radio#	15	16	17	18	19	20	21	22	23	24_	25_	26	27	28
CMD TX RSP RX DEL UD ENT RQ	60 60 0	60 59 0 0	60 54 0 0	60 60 0	60 60 0	60 57 0 0	60 59 0	60 60 0	0 0 0	0 0 0	0 0 0	60 0 0	0	0 0 0
Radio#	29_	30	31	32										
CMD TX RSP RX DEL UD ENT RQ	60 0 0 0	0	60 0 0	60 0 0										

(Cell 3) HE & Radio #13: Data collected at Radio #13

** Data from file 09041213.log

==== Sta	rt Fra	une 56	100,	Total	Elap	sed F	rames	60 =	===					
Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX RSP TX DEL UD ENT RQ	0 0 0	0	0 0 0	0 0 0	0 0 0	60 60 0	60 60 0	60 60 0	51 48 0 0	60 60 0	60 60 0	3 0 0	60 60 0	45 60 0 0
Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD RX RSP TX DEL UD ENT RQ	44 60 0	44 0 0 0	44 0 0 0	44 0 0 0	44 0 0 0	44 0 0 0	44 0 0 0	43 0 0 0	0 0 0	0	0000	43 0 0 0	0 0 0	0 0 0
Radio#	29	30_	31_	32										
CMD RX RSP TX DEL UD ENT RQ	43 0 0 0	0 0 0	43 0 0 0	43 0 0 0										
==== Sta	art Fra	ame 56	5 160 ,	Total	. Elaj	psed F	rames	120	====					
Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13_	14
CMD RX RSP TX DEL UD ENT RQ	0 0 0	0000	000	0 0 0	0 0 0	60 59 0 0	60 59 0	60 60 0	60 60 0	60 60 0	60 60 0	60 48 0 0	60 60 0	60 60 0
Radio#	15	16	17	18	19	20	21_	22_	23	24	25	26	27	28
CMD RX RSP TX DEL UD ENT RQ	60 60 0 0	60 1 0 0	60 0 0	60 0 0	60 0 0	60 0 0	60 0 0	59 0 0	0 0 0	0 0 0	0 0 0	59 0 0	0 0 0	0 0 0
Radio#	29_	30	31	32										
CMD RX RSP TX DEL UD ENT RQ	59 0 0 0	0 0 0	59 0 0	59 0 0										
==== St	art Fr	ame 5	6220,	Tota	l Ela	psed	Frame	s 180	====					
Radio#_	01	02	03	04	05	06	07	08	09_	10_	11	12_	13_	14
CMD RX RSP TX DEL UD ENT RQ	0 0 0	0 0 0	0	0 0 0	0	60 58 0 0	60 59 0	60 60 0	60 60 0	60 60 0	60 60 0	60 56 0	60 60 0	60 60 0
Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27_	28
CMD RX RSP TX DEL UD ENT RQ	60 60 0	60 1 0 0	60 0 0	60 0 0	60 0 0	60 0 0	60 0 0	60 0 0	0 0 0	0 0 0	0 0 0	60 0 0	0 0 0	0000
Radio#	29	30	31	32										
CMD RX RSP TX DEL UD ENT RQ	60 0 0	0 0 0	60 0 0	60 0 0										

==== Sta	rt Fra	ume 56	S280,	Total	Elap	sed I	Frames	240	====						==== Sta	rt Fra	ame 56	3280
Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14	Radio#	01	02	03
CMD TX RSP RX DEL UD ENT RQ	0 0 0 0	0	0000	0	0 0 0	60 53 0	60 57 0 0	60 58 0	60 58 0 0	60 58 0 0	60 57 0	60 49 0 0	60 59 0 0	60 58 0 0	CMD RX RSP TX DEL UD ENT RQ	0 0 0	0	(
Radio#	15	16	17	18	19	20	21	22_	23	24	25	26	27	28	Radio#	15_	16	_1
CMD TX RSP RX DEL UD ENT RQ	60 60 0	60 59 0	60 59 0	60 60 0	60 60 0	60 58 0 0	60 59 0	60 60 0	0 0 0	0 0 0	0 0 0	60 0 0	0 0 0	0 0 0	CMD RX RSP TX DEL UD ENT RQ	60 0 0	2 0 0 0	(
Radio#	29	30	31	32											Radio#	29	30	3
CMD TX RSP RX DEL UD ENT RQ	60 0 0	0 0 0	60 0 0	60 0 0											CMD RX RSP TX DEL UD ENT RQ	2 0 0	0 0 0	(
==== Sta	rt Fra	ame 56	6340,	Total	. Elaj	psed :	Frames	300	====						==== Sta	art Fra	ame 5	634
Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14	Radio#	01	02	0
CMD TX RSP RX DEL UD ENT RQ	0 0 0	0	0	0 0 0 0	0	60 52 0	60 58 0 0	60 50 0 0	60 51 0 0	60 50 0	60 49 0 0	49 31 1 0	60 60 0	60 51 0 0	CMD RX RSP TX DEL UD ENT RQ	0 0 0	0 0 0	1
Radio#	15	16	17	18	19	20	21	22	23	24	25_	26	27	28	Radio#	15	16	1
CMD TX RSP RX DEL UD ENT RQ	60 60 0	60 60 0	60 56 0	60 60 0	60 60 0	60 60 0 0	60 60 0	60 60 0	0	0	0 0 0	60 0 0	0 0 0	0 0 0	CMD RX RSP TX DEL UD ENT RQ	60 0 0	0 0 0	
Radio#	29	30	31	32											Radio#	29	30	3
CMD TX RSP RX DEL UD ENT RQ	60 0 0	0 0 0	60 0 0	60 0 0											CMD RX RSP TX DEL UD ENT RQ	0 0 0	0 0 0	
==== Sta	art Fr	ame 5	6400,	Tota	l Ela	psed	Frames	360	====						==== St	art Fr	ame 5	640
Radio#	01	02	03	04	05	06	07	08	09	10	11	12_	13	14	Radio#	01	02	0
CMD TX RSP RX DEL UD ENT RQ	0 0 0 0	0000	0	0	0	60 60 0	60 59 0	60 58 0 0	51 41 1 0	60 60 0	60 60 0	45 27 1 0	60 60 0	60 60 0	CMD RX RSP TX DEL UD ENT RQ	0 0 0	0 0 0	
Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28	Radio#	15	16	1
CMD TX RSP RX DEL UD ENT RQ	60 60 0	60 55 0	60 56 0	60 60 0	60 60 0	60 57 0	60 56 0	60 60 0	0 0 0 0	0 0 0 0	0 0 0	60 0 0	0 0 0	0	CMD RX RSP TX DEL UD ENT RQ	60 0 0	0 0 0	
Radio#	29	30_	31	32											Radio#	29	30	3
CMD TX RSP RX DEL UD ENT RQ	60 0 0	0 0 0	60 0 0	60 0 0											CMD RX RSP TX DEL UD ENT RQ	0 0 0	0	

==== Star	rt Fra	me 56	280,	Total	Elap	sed	Frames	240	====					
Radio#	01	02	03_	04	05	06	07	08	09	10	_11	12_	13	<u>14</u>
CMD RX RSP TX DEL UD ENT RQ	0 0 0	0	0 0 0	0 0 0	0 0 0	60 55 0	60 57 0 0	60 60 0	60 60 0	60 60 0	60 60 0	60 50 0 0	60 60 0	60 0 0
Radio#	15	16	17	18	19	_20_	21	_22	23	_24	_25	26	. <u>-27</u>	_28
CMD RX RSP TX DEL UD ENT RQ	60 0 0	2 0 0 0	2 0 0 0	2 0 0 0	2 0 0 0	2 0 0 0	2 0 0 0	2 0 0 0	0 0 0	0	0000	2 0 0 0	0 0 0	0 0 0
Radio#	29	30	31	32										
CMD RX RSP TX DEL UD ENT RQ	2 0 0 0	0	2 0 0 0	2 0 0 0										
==== Sta	rt Fra	me 56	340,	Total	Elaj	sed	Frames	300	====					
Radio#_	01	02	03	04	05	06	07	08	09	10	11_	12	13	14
CMD RX RSP TX DEL UD ENT RQ	0 0 0	0	0	0 0 0	0 0 0 0	60 56 0 0	60 59 0 0	60 59 0	60 59 0	60 60 0	60 60 0	49 38 0 0	60 60 0	60 0 0
Radio#	15	16	17	18	19	20	21	_22_	23	24_	25_	26	27	28
CMD RX RSP TX DEL UD ENT RQ	0 60 0 0	0 0 0	0 0 0	0 0 0	0 0 0	000	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0000
Radio#	29	30	31	32										
CMD RX RSP TX DEL UD ENT RQ	0 0 0	0 0 0	0	0										
==== Sta	rt Fra	ame 50	6400,	Total	Ela	psed	Frames	360	====					
Radio#	01	02_	03	04	05	06	07	08	09	10	11	12_	13_	14
CMD RX RSP TX DEL UD ENT RQ	0 0 0	0 0 0	0 0 0	0000	0 0 0	60 60 0	60 60 0	60 58 0 0	38 36 0 0	60 60 0	60 60 0	32 23 0 0	60 60 0	6((
Radio#	15	16_	17	18	19	20	21	22	23	24	25	26	27_	28
CMD RX RSP TX DEL UD ENT RQ	60 0 0	0 0 0	0 0 0	0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0	0 0 0	(((
Radio#	29_	30_	31	32										
CMD RX RSP TX DEL UD ENT RQ	000	0	0	0 0 0										

==== Start Frame 56460, Total Elapsed Frames 420 ====	==== Start Frame 56460, Total Elapsed Frames 420 ====
Radio# 01 02 03 04 05 06 07 08 09 10 11 12 13 14	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 80 88 PRX 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 0 0 0 0	CMD RX 0 0 0 0 0 0 60 60 60 60 60 60 60 52 RSP TX 0 0 0 0 0 59 60 60 60 60 60 54 60 60 ENT RQ 0 0 0 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 27 28	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 60 0 0 0 0 60 0 0 0 RSP RX 60 60 59 60 60 60 59 60 0 0 0 0 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 0 0 0 0 0
Radio# 29 30 31 32	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	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 ====	==== Start Frame 56520, Total Elapsed Frames 480 ====
Radio# 01 02 03 04 05 06 07 08 09 10 11 12 13 14	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 60	CMD RX 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 0 0 0 0
Radio# 15 16 17 18 19 20 21 22 23 24 25 26 27 28	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 60 0 0 0 0 60 0 0 0 RSP RX 60 52 50 60 59 60 60 60 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	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 0 0 0 0 0
Radio# 29 30 31 32	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	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 ====	==== Start Frame 56580, Total Elapsed Frames 540 ====
Radio# 01 02 03 04 05 06 07 08 09 10 11 12 13 14	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 0 0 0 0 0 0 0 0	CMD RX 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 60 EDEL UD 0 0 0 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 27 28	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 60 0 0 0 0 60 0 0 0 RSP RX 60 59 60 60 60 60 60 60 60 0 0 0 0 0 0 0 0 0	CMD RX 35 34 34 34 34 34 34 34 34 0 0 0 34 0 (RSP TX 60 2 0 0 0 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	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 ====	==== Start Frame 56640, Total Elapsed Frames 600 ====
Radio# 01 02 03 04 05 06 07 08 09 10 11 12 13 14	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 49 60 60 88 PX 0 0 0 0 0 58 60 57 55 58 57 35 60 58 PX UD 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	CMD RX 0 0 0 0 0 60 60 60 60 60 49 60 52 RSP TX 0 0 0 0 0 60 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 0 0 0 0
Radio# 15 16 17 18 19 20 21 22 23 24 25 26 27 28	Radio# 15 16 17 16 15 26 27 27 27 27 27 27 27 27 27 27 27 27 27
CMD TX 60 60 60 60 60 60 60 60 0 0 0 0 60 0 0 0 RSP RX 60 57 53 60 60 59 60 60 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	CMD RX 52 52 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 0 0 0 0 0
Radio# 29 30 31 32	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	CMD RX 52 O 52 52 RSP TX O O O O DEL UD O O O O ENT RQ O O O
==== Start Frame 56700, Total Elapsed Frames 660 ====	==== Start Frame 56700, Total Elapsed Frames 660 ====
Radio# 01 02 03 04 05 06 07 08 09 10 11 12 13 14	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 0 0 0 0 0 0 0 0 0 0	CMD RX 0 0 0 0 0 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 0 0 0 0
Radio# 15 16 17 18 19 20 21 22 23 24 25 26 27 28	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 0 0 0 0	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 0 0 0 0 0
Radio# 29 30 31 32	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	CMD RX 52 O 52 51 RSP TX O O O O DEL UD O O O O ENT RQ O O O O
==== Start Frame 56760, Total Elapsed Frames 720 ====	==== Start Frame 56760, Total Elapsed Frames 720 ====
Radio# 01 02 03 04 05 06 07 08 09 10 11 12 13 14	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 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 0 0 0 0 0 0 0	CMD RX
Radio# 15 16 17 18 19 20 21 22 23 24 25 26 27 28	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 0 60 0 0 0 RSP RX 58 57 50 60 60 59 60 60 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	CMD RX 34 34 34 34 34 33 33 33 0 0 0 33 0 (RSP TX 59 0 0 0 0 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	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

==== Star	rt Fra	ume 5€	820,	Total	Elap	sed	Frames	780	====					
Radio#	01	02	03	04	05	06	07	08	09	10_	11_	12	13	_14
CMD TX RSP RX DEL UD ENT RQ	0	0 0 0	0 0 0	0 0 0	0	56 50 0	56 52 0	51 40 1 0	27 11 2 1	51 41 1 0	51 41 1 0	17 9 1 0	56 53 0 0	47 36 1 1
Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD TX RSP RX DEL UD ENT RQ	56 55 0 0	56 56 0	56 52 0 0	56 56 0	56 56 0	56 56 0	56 56 0 0	56 56 0	0 0 0	0 0 0	0 0 0	56 0 0	0 0 0	0 0 0
Radio#	29	30	31	32										
CMD TX RSP RX DEL UD ENT RQ	56 0 0	0 0 0	56 0 0	56 0 0										
==== Sta	rt Fra	ame 56	880,	Total	Elap	sed	Frames	840	====					
Radio#	01	02_	03	04	05	06	07	08	09	10_	11	12	13	14
CMD TX RSP RX DEL UD ENT RQ	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	60 58 0 0	60 59 0	60 56 0 0	51 50 0 0	60 59 0	60 58 0 0	44 26 0 0	60 58 0 0	60 55 0 0
Radio#	15	16	17	18	19	20	21	22	23	24	25_	26	27	28
CMD TX RSP RX DEL UD ENT RQ	60 60 0	60 60 0 0	60 50 0 0	60 60 0	60 60 0	60 54 0 0	60 60 0	60 60 0	0 0 0	0 0 0	0000	60 0 0	0	0 0 0
Radio#	29	30	31	32										
CMD TX RSP RX DEL UD ENT RQ	60 0 0	0 0 0	60 0 0	60 0 0										
==== Sta	rt Fra	ame 50	3940,	Total	Ela	psed	Frames	900	====					
Radio#	01	02	03	04	05	06	07	08	09	10	11_	12	13	14
CMD TX RSP RX DEL UD ENT RQ	0 0 0	0	0 0 0	0 0 0	0 0 0	60 58 0 0	60 60 0	60 58 0 0	60 59 0 0	60 58 0 0	60 59 0	60 51 0 0	60 59 0 0	60 58 0 0
Radio#	15	16	17	18	19	20	21	22	23	24	25_	26	27	28
CMD TX RSP RX DEL UD ENT RQ	60 60 0	60 60 0	56 43 1 1	60 60 0	60 59 0 0	60 60 0	60 60 0	60 60 0	0 0 0	0	0 0 0	60 0 0	0	0 0 0
Radio#	29_	30_	31	32										
CMD TX RSP RX DEL UD ENT RQ	60 0 0	0 0 0	60 0 0	60 0 0										

==== Sta	rt Fra	me 56	820.	Total	Elap	sed F	rames	780	====					
Radio#	01	02	03	04	05	06	07	08	09	10_	11	12	13	14
CMD RX RSP TX DEL UD ENT RQ	0	0 0 0 0	0	0 0 0	0	60 59 0	60 60 0	51 51 0 1	20 20 0 0	51 51 0	51 51 0	17 13 0 0	60 60 0	26 51 0 1
Radio#	15	16	17	18	19	20	21	22	23	. <u>24</u>	<u>25</u>	26	27	28
CMD RX RSP TX DEL UD ENT RQ	32 60 0 0	32 0 0 0	31 0 0 0	31 0 0 0	31 0 0 0	31 0 0 0	31 0 0 0	31 0 0 0	0 0 0	0 0 0	0 0 0	31 0 0 0	0 0 0	0000
Radio#	29	30	31_	32										
CMD RX RSP TX DEL UD ENT RQ	31 0 0 0	0	31 0 0 0	31 0 0 0										
==== Sta	rt Fra	ame 56	880,	Total	Elaj	sed F	rames	840	====					
Radio#	01	02	03	04	05	06	07	08	09_	10	11	12	13	14
CMD RX RSP TX DEL UD ENT RQ	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	60 59 0	59 59 0	59 57 0 0	51 50 0 0	60 60 0	60 59 0	44 26 0 0	59 59 0	5 5 (
Radio#	15	16	17	18	19	20	21_	22	23	24	25_	26_	27	28
CMD RX RSP TX DEL UD ENT RQ	60 0 0	0 0 0	0	0 0 0	0 0 0	0 0 0	0000	0 0 0	0 0 0	0 0 0	0	0 0 0	0 0 0	(
Radio#	29	30_	31	<u> 32</u>										
CMD RX RSP TX DEL UD ENT RQ	0 0 0	0	0 0 0	0 0 0										
==== Sta	rt Fr	ame 5	6940,	Total	l Ela	psed 1	Frame	s 900	====					
Radio#	01	02	03	04	05	06_	07	08	09	10_	11	12_	13_	<u>1</u> ,
CMD RX RSP TX DEL UD ENT RQ	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	60 56 0 0	60 60 0	60 56 0	60 60 0	60 59 0 0	60 60 0	60 52 0 0	60 60 0	6
Radio#	15	16	17	18	19	20	21	22	23_	24	25_	26	27	_2
CMD RX RSP TX DEL UD ENT RQ	60 0 0	0	0 0 0	0	0 0 0	0 0 0	0	0 0 0	0 0 0	0 0 0	0	0 0 0	0 0 0	1
Radio#	29	30	31	32										
CMD RX RSP TX DEL UD ENT RQ	0 0 0	0 0 0	0 0 0	0										

A

==== Sta	rt Fra	ame 5	7000,	Total	Ela	psed	Frames	960	====					
Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13_	14
CMD TX RSP RX DEL UD ENT RQ	0	0 0 0	0 0 0	0 0 0	0	60 56 0 0	60 57 0	60 56 0	51 35 1 1	60 59 0	60 57 0	35 17 1 0	60 58 0 0	60 58 0 0
Radio#	15	16	17	18	19_	20	21	22	23	24	25	26_	27	28
CMD TX RSP RX DEL UD ENT RQ	60 59 0 0	60 59 0 0	60 58 0 0	60 60 0	60 60 0	60 60 0	60 60 0	60 60 0	0 0 0	0 0 0	0	60 0 0	000	0 0 0
Radio#	29	30	31_	_32										
CMD TX RSP RX DEL UD ENT RQ	60 0 0	0 0 0	60 0 0	60 0 0										
=======	Test	Data	Summ	ary ==	====	==								
Radio#														
war 10#	01	_02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX RSP RX DEL UD ENT RQ	01 0 0 0	0 0 0 0 0	03 0 0 0	04 0 0 0 0	05 0 0 0	956 906 0	956 932 0 0	08 951 857 1 0	09 882 754 6 3	951 875 1 0	942 849 2 0	728 515 10 0	956 942 0 0	947 873 1 1
CMD TX RSP RX DEL UD	0	0 0 0	0	0	0	956 906 0	956 932 0	951 857 1	882 754 6	951 875 1	942 849 2	728 515 10	956 942 0	947 873 1
CMD TX RSP RX DEL UD ENT RQ	0	0 0 0 0	0 0 0	0 0 0 0	0 0 0 0	956 906 0 0	956 932 0 0	951 857 1 0	882 754 6 3	951 875 1 0	942 849 2 0	728 515 10 0	956 942 0 0	947 873 1 1
CMD TX RSP RX DEL UD ENT RQ Radio# CMD TX RSP RX DEL UD	0 0 0 0 15 956 951	0 0 0 0 16 956 918	0 0 0 0 17 952 872 1	0 0 0 0 18 956 956	0 0 0 0 19 956 954	956 906 0 0 20 956 936	956 932 0 0 21 956 949 0	951 857 1 0 22 956 956	882 754 6 3 23 0 0	951 875 1 0 24	942 849 2 0 25	728 515 10 0 26 956 0	956 942 0 0 27	947 873 1 1 28

Frame range = 56100 -> 57059
Total number of frames = 960
Total number of DEL UPDT frames = 22
Total number of ENT RQST frames = 5

ENT RU	Į	0	U	U	U	
Frame Total Total Total	numbe	er of	fram DEL	nes = UPDT		= 0 = 4

Radio#	01	02	03	04	05	06	07	80	09	10	11	12	13	14
CMD RX RSP TX DEL UD ENT RQ	0 0 0 0	0 0 0	0	0	0 0 0 0	60 59 0	60 59 0	60 59 0	19 19 0 0	60 60 0	60 59 0	13 8 0 0	60 60 0	60 0 0
Radio#	15	16	17_	18	19	20	21_	22	23	24_	25	26_	27	28
CMD RX RSP TX DEL UD ENT RQ	0 60 0	0 0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
Radio#	29	30	31	32										
CMD RX RSP TX DEL UD ENT RQ	0 0 0	0 0 0	0 0 0	0 0 0										
======	Test	Data	Summ	ary =	====	==								
Radio#	01	02	03	04	05	06	07	- 08	09	10_	11_	12	13	14
CMD RX RSP TX DEL UD ENT RQ	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	959 933 0 0	958 946 0 0	948 936 0 1	828 803 0 0	949 948 0 1	940 938 0 1	691 550 0 0	958 958 0 0	456 949 0
Radio#	15_	16	17	18	19	20	21	22	23	24	25_	26	27	28
CMD RX RSP TX DEL UD ENT RQ	460 959 0 0	459 4 0 0	456 0 0 0	456 0 0 0	455 0 0 0	453 0 0 0	453 0 0 0	451 0 0 0	0 0 0	0 0 0	0	451 0 0 0	0 0 0	
Radio#	29	30	31	32										
CMD RX RSP TX DEL UD	451 0 0	0	451 0 0	450 0 0										

==== Start Frame 57000, Total Elapsed Frames 960 ====

(Cell 3) HE & Radio #14: Data collected at HE

** Data from file 09041339.log

==== Sta	rt Fra	me	900,	Total	Ela	psed I	rames	60 =	===					
Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX RSP RX	0	0	0	0	0	60 60	60 60	60 56	60 58	60 59	60 59	60 58	60 58	60 55
DEL UD	ö	ŏ	ŏ	ŏ	ŏ	ő	ő	0	ő	ő	ő	ő	ő	Ö
ENT RQ Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD TX		60	60		60	60	60	60	0	0	0	60	0	0
RSP RX DEL UD	6ŏ	54 0	49 0	60 0	6ŏ	60 0	60 0	59 0	Ŏ	Ö	8	0	8	Ŏ
ENT RQ	Ō	Ŏ	Ō	Ō	Ō	Ŏ	Ō	Ó	0	0	0	0	0	0
Radio#	29	30	31	32										
CMD TX RSP RX	60 0	8	60 0	60 0										
DEL UD ENT RQ	0	8	8	0										
==== Sta	rt Fra	ame	960,	Total	Ela	psed 1	Frames	120	====					
Radio#	01	02	03	04	05	06	07	80	09	10	11	12	13	14
CMD TX	o o	o o	o Q	o Q	o	60	60	60 59	60	60	60 60	60 58	60	60 49
RSP RX DEL UD	0	0	0	0	0	60 0	60 0	0	60 0	60 0	Ō	Ō	60 0	0
ENT RQ	0	0	0	0	10	0	0	0 22	0 23	0 24	0 25	0 26	0 27	
Radio#	15	16	17	18	19 60	<u>20</u>	²¹	60	<u></u>		<u></u>	60		28
CMD TX RSP RX DEL UD	60 60	60 59	60 52 0	60 60	60	60	60	60	ŏ	ŏ	ŏ	ŏŏ	ŏ	0
DEL UD Ent rq	0	0	ŏ	0	0	ŏ	ŏ	ŏ	ŏ	ŏ	ŏ	ŏ	ŏ	ŏ
Radio#	29	30	31	32										
CMD TX RSP RX	60 0	0	60 0	60 0										
DEL UD ENT RO	ŏ	Ŏ	Ŏ	Ŏ										
•	_	-					_	400						
==== Sta			1020,			•	Frames			40	4.4	40	13	1.4
Radio#	01_	02_	03_	04	05	06_	07	08_	09	10_	11	<u>12</u> -	<u>13</u> -	-14
CMD TX RSP RX	0	0	0	0	0	60 60	60 60	60 60	60 60	60 60	60 60	58	60	60 53 0
DEL UD Ent rq	8	8	8	0	8	0	0	0	0	8	0	8	0	ŏ
Radio#	15_	16	17	18	19	20	21	22	23	24	25_	26	27	28
CMD TX RSP RX	60 60	60 57	58 41	60 60	60 60	60 60	60 60	60 60	0	0	0	60 0	0	0
DEL UD	0	0	1	00	8	ő	8	0	ŏ	ŏ	ŏ	ŏ	ŏ	ŏ
ENT RQ Radio#	0 29	0 30	31	32	J	0	U	v	v	v	v	v	v	•
CMD TX	. <u> 23</u> - 60	<u>30</u> .	60	60										
RSP RX DEL UD	ő	ŏ	ŏ	ő										
ĔĦŦ ŘQ	ŏ	ŏ	ŏ	ŏ										

(Cell 3) HE & Radio #14: Data collected at Radio #14

** Data from file 09041339.log

==== Start Frame	900,	Total	Elap	sed I	Frames	60 =	===					
Radio# 01 0	02 03	04	05	06	07	08_	09	10	11	12_	13	14
CMD RX O RSP TX O	0 0	0	0	60 60	60 60	60 57	60 60	60 60	60 60	60 59	60 60	60 60
DEL UD O ENT RQ O	8 8	0	0	0	0	0	8	8	0	0	0	0
	l6 17	18	19	20	21	22	23	24	25	26	27	28
CMD RX 60 RSP TX 60	50 60 55 42	60 0	60 0	60 0	60 0	60 3	0	0	0	60 0	0	8
RSP TX 60 1 DEL UD 0 ENT RQ 0	0 0	ŏ	ŏ	Ŏ	Ŏ	Ö	0	0	0	0	0	0
	30 31	32										
CMD RX 60	0 60	60										
RSP TX O	0 0	0										
ENT RQ O	0 0	0										
==== Start Fram	e 960	Total	Elap	sed	Frames	120	====					
Radio# 01	02 03	04	05	06	07	_08_	09	10	11_	12	13	14
CMD RX O RSP TX O	8 8	0	8	60 60	60 60	60 59	60 60	60 60	60 60	60 58	60 60	60 60
DEL UD O ENT RQ O	ŏ	ŏ	ŏ	ő	ő	0	0	0	0	0	8	0
	16 17	18	19	20	21	22	23	24	25	26	27	28
	60 60	60	60	60	60	60	o	o o	ō.	60	o .	0
RSP TX 60 DEL UD 0	60 54 0 0	8	0	8	0	10	0	ò	0	0	0	ŏ
ENT RQ O	0 0	0	0	0	0	0	0	0	0	0	0	Ō
Radio# 29	30 31	32										
CMD RX 60 RSP TX 0	0 60	60 Q										
DEL UD O ENT RQ O	8 8	8										
==== Start Fram	e 1020	, Total	l Ela	psed	Frames	180	====					
Radio# 01	02 03	04	05	06	07	80	09	10	11	12	13	14
CMD RX O	0 0	o	o O	60	60	60	60	60	60		60	60
RSP TX O DEL UD O	0 0	0	0	60 0	60 0	60 0	60 0	60 0	60 0	58 0	60 0	60 0
ENT RQ O	0 0	0	0	0	0	0	0	0	0	0	0	0
Radio# 15	16 17	18	19	20	21	<u>-22</u>	23_	24	25_	26	27_	<u>28</u> 0
CMD RX 60 RSP TX 60 DEL UD 0	60 58 60 38	60 0	60 0	60 0	60 0	60 33	0	0	0	60	0	ö
DEL UD O Ent rq o	0 0	0	8	8	0	0	0	8	0	0	Ô	ŏ
Radio# 29	30 31	32										
CMD RX 60 RSP TX 0	0 60	60 0										
DEL UD O												

==== Sta	art Fra	me	1080,	Total	Elaj	sed l	Frame	240	====						==== Sta	art Fra	ame 1
Radio#	01	02	03	04	05	06	07	08	09	10	11	12_	13	14	Radio#	01	02
CMD TX RSP RX DEL UD ENT RQ	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	60 57 0 0	60 57 0 0	60 56 0 0	60 57 0	60 57 0 0	60 57 0 0	60 51 0 0	60 56 0 0	60 48 0 0	CMD RX RSP TX DEL UD ENT RQ	0 0 0	0 0 0
Radio#	15	16	17_	18	19	20	21	22	23_	24	25	26	27	28	Radio#_	15	16
CMD TX RSP RX DEL UD ENT RQ	60 57 0 0	60 55 0 0	60 57 0 0	60 60 0	60 59 0	60 59 0	60 59 0	60 59 0 0	0 0 0	0 0 0	0 0 0	60 0 0	0 0 0	0 0 0	CMD RX RSP TX DEL UD ENT RQ	59 60 0	59 59 0
Radio#_	29	30	31	32											Radio#	29	30
CMD TX RSP RX DEL UD ENT RQ	60 0 0	000	60 0 0	60 0 0											CMD RX RSP TX DEL UD ENT RQ	59 0 0 0	0 0 0
==== Sta	art Fra	me	1140,	Total	Ela	psed :	Frame	s 300	====						==== Sta	art Fr	ame :
Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14	Radio#_	01	02
CMD TX RSP RX DEL UD ENT RQ	0 0 0	0 0 0	0 0 0 0	0000	0	60 57 0 0	60 56 0	60 56 0 0	60 52 0 0	60 56 0	60 54 0 0	60 46 0 0	60 50 0	50 35 1 1	CMD RX RSP TX DEL UD ENT RQ	0 0 0	0 0 0
Radio#	15	16	17	18_	19	20	21	22	23	24	25	26	27	28	Radio#_	15	16
CMD TX RSP RX DEL UD ENT RQ	60 57 0 0	60 52 0 0	60 46 0 0	60 60 0	60 60 0	60 59 0	60 59 0	60 60 0	0 0 0	0 0 0	0 0 0	60 0 0	0 0 0	0 0 0	CMD RX RSP TX DEL UD ENT RQ	60 60 0	60 60 0
Radio#	29	30	31	32											Radio#	29	30
CMD TX RSP RX DEL UD ENT RQ	60 0 0	0 0 0	60 0 0	60 0 0											CMD RX RSP TX DEL UD ENT RQ	60 0 0	0
==== Sta	art Fra	me	1200,	Tota]	l Ela	psed	Frame	s 360	====						==== St	art Fr	ame
Radio#	01	02	03	04	05	06	_07_	08	09	10	11	12	13	14	Radio#	01	02
CMD TX RSP RX DEL UD ENT RQ	0 0 0	0	0	0 0 0	0000	60 57 0 0	60 57 0 0	60 57 0 0	60 55 0 0	60 56 0 0	60 56 0	60 46 0 0	60 57 0 0	60 55 0 0	CMD RX RSP TX DEL UD ENT RQ	0 0 0	0000
Radio#	15	16	17	18	19	20	21	22	23_	24	25	26_	27	28	Radio#	15	16
CMD TX RSP RX DEL UD ENT RQ	60 59 0 0	60 60 0	55 46 1 1	60 60 0	60 60 0	60 58 0 0	60 60 0	60 60 0	0 0 0	0 0 0	0 0 0	60 0 0	0 0 0	0	CMD RX RSP TX DEL UD ENT RQ	60 60 0	60 60 0
Radio#	29	30	31	32											Radio#	29	30
CMD TX RSP RX DEL UD ENT RQ	60 0 0	0	60 0 0	60 0 0											CMD RX RSP TX DEL UD ENT RQ	59 0 0 0	0

==== Stan	rt Fra	me	1080,	Total	Elap	sed	Frames	240	====					
Radio#	01	02	03	04	05	06	07	08_	09	10	11	12	13	14
CMD RX RSP TX DEL UD ENT RQ	0 0 0	0 0 0	0 0 0	0 0 0	0	60 60 0	60 60 0	60 58 0 0	60 59 0 0	60 60 0	60 60 0	60 53 0 0	60 60 0	59 59 0 0
Radio#	15	16	17	18	19	20	21	22_	23	24	25	26	27	28
CMD RX RSP TX DEL UD ENT RQ	59 60 0 0	59 59 0 0	59 56 0 0	59 1 0 0	59 0 0	59 0 0 0	59 0 0	59 20 0	0 0 0	0 0 0	0 0 0	59 0 0 0	0 0 0	0 0 0
Radio#	29	30	31	32										
CMD RX RSP TX DEL UD ENT RQ	59 0 0	0	59 0 0	59 0 0										
==== Sta	rt Fra	me	1140,	Total	Elaj	psed	Frames	300	====					
Radio#_	01	02	03	04	05	06	07	_08_	09	10	_11	12_	13_	14
CMD RX RSP TX DEL UD ENT RQ	0 0 0	000	0 0 0	0 0 0	0 0 0	60 60 0	60 60 0	60 60 0	60 60 0	60 60 0	60 60 0	60 54 0 0	60 60 0	50 51 0 2
Radio#	15	16	17	18	19	20	21	22_	23	24	25	26	27	28
CMD RX RSP TX DEL UD ENT RQ	60 60 0	60 60 0	60 47 0 0	60 0 0	60 0 0	60 0 0	60 0 0	60 12 0 0	0 0 0	0 0 0	0 0 0	60 0 0	000	0 0 0
Radio#	29	30	31	_32										
CMD RX RSP TX DEL UD ENT RQ	60 0 0	000	60 0 0	60 0 0										
==== Sta	rt Fra	ame	1200,	Total	Ela	psed	Frames	360	====					
Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX RSP TX DEL UD ENT RQ	0 0 0 0	0000	0 0 0	0	0	60 60 0	60 59 0	60 59 0	60 58 0 0	60 59 0	60 59 0 0	60 48 0 0	60 59 0 0	60 60 0
Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD RX RSP TX DEL UD ENT RQ	60 60 0	60 60 0	55 39 0 1	60 0 0	60 0 0	60 0 0	60 0 0	60 0 0	0 0 0	0 0 0	0 0 0	59 0 0	0 0 0 0	GCCC
Radio#	29	30	31	32										
CMD RX RSP TX DEL UD ENT RQ	59 0 0	000	59 0 0	59 0 0										

==== Sta	rt Fra	me	1260,	Total	Elaj	psed	Frames	420	====						==
Radio#	01	02	03	04	05	06	07	08	09	10	11_	12_	13	14	<u>Ra</u>
CMD TX RSP RX DEL UD ENT RQ	0 0 0 0	0 0 0	0 0 0	0 0 0	0000	60 58 0 0	60 60 0	60 59 0	60 58 0 0	60 58 0 0	60 58 0 0	60 42 0 0	60 58 0 0	60 48 0 0	CM RS DE EN
Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28	<u>Ra</u>
CMD TX RSP RX DEL UD ENT RQ	60 60 0	60 44 0 0	56 50 1 0	60 60 0	60 60 0	60 60 0	60 60 0 0	60 60 0	0 0 0	0 0 0	0 0 0	60 0 0	0 0 0	0	CM RS DE EN
Radio#	29	30	31	32											<u>Ra</u>
CMD TX RSP RX DEL UD ENT RQ	60 0 0	0 0 0	60 0 0	60 0 0											CM RS DE EN
==== Sta	rt Fra	ame	1320,	Total	Ela	psed	Frames	480	====						==
Radio#	01	02	03	04	05	06	07	08	09	10	11_	12	13	14	<u>Ra</u>
CMD TX RSP RX DEL UD ENT RQ	0 0 0	0 0 0	0 0 0	0 0 0	0	60 60 0	60 60 0 0	60 58 0 0	60 57 0 0	60 59 0	60 58 0 0	36 25 1 0	60 58 0 0	60 53 0 0	CM RS DE EN
Radio#	15	16	17	18	19_	20	21	22	23	24	25	26	27	28	Ra
CMD TX RSP RX DEL UD ENT RQ	60 60 0	60 57 0 0	60 56 0	60 60 0	60 60 0	60 60 0	60 60 0	60 60 0	0 0 0 0	0000	0 0 0	60 0 0	0 0 0	0 0 0	CM RS DE EN
Radio#	29	30	31	32											Ra
CMD TX RSP RX DEL UD ENT RQ	60 0 0	0 0 0	60 0 0	60 0 0											CM RS DE EN
==== Sta	rt Fra	ame	1380,	Total	Ela	psed	Frames	540	====						==
Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14	Ra
CMD TX RSP RX DEL UD ENT RQ	0 0 0	0	0 0 0 0	0 0 0	0	60 58 0 0	60 58 0 0	60 58 0 0	60 58 0 0	60 58 0 0	60 58 0 0	60 49 0 0	60 57 0 0	60 57 0 0	CM RS DF EI
Radio#	15	. 16	17	18	19	20	21	22	23	24	25	26_	27	28	Ra
CMD TX RSP RX DEL UD ENT RQ	60 59 0 0	60 60 0	60 59 0 0	60 60 0	60 60 0	60 58 0 0	60 60 0	60 60 0	0 0 0	0 0 0	0 0 0	60 0 0	0 0 0	0 0 0	CI RS DI EI
Radio#	29_	30	31	32											Re
CMD TX RSP RX DEL UD ENT RQ	60 0 0	0 0 0	60 0 0	60 0 0											CI RS DI EI

==== Star	t Fra	me	1260,	Total	Elap	sed	Frames	420	====					
Radio#	01	02	03	04	05	06	07	08	09	10	11	12	_13	14
CMD RX RSP TX DEL UD ENT RQ	0 0 0	0	0 0 0	0 0 0	0	60 60 0	60 60 0	60 60 0	60 60 0	60 60 0	60 60 0	60 42 0 0	60 60 0	60 60 0
Radio#	15	16	17	18	19	20	21	_22	23	24	25	26	27	28
CMD RX RSP TX DEL UD ENT RQ	60 60 0	60 57 0 0	56 41 0 1	60 0 0	60 0 0	60 0 0	60 0 0	60 1 0 0	0 0 0	0 0 0	0 0 0	60 0 0	0 0 0	0000
Radio#	29	30	31	32										
CMD RX RSP TX DEL UD ENT RQ	60 0 0	0 0 0	60 0 0	60 0 0										
==== Sta	rt Fra	me	1320,	Total	Ela	psed	Frames	480	====					
Radio#	01	02	03	04	05	06	07	08	09	10	11_	12_	13	14
CMD RX RSP TX DEL UD ENT RQ	0	000	0 0 0	0	0 0 0	60 60 0	60 60 0	60 59 0	60 59 0 0	60 60 0	60 60 0	36 27 0 0	60 60 0	6C 6C C
Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD RX RSP TX DEL UD ENT RQ	60 60 0	60 60 0	60 50 0 0	60 0 0	60 0 0	60 0 0	60 0 0	60 9 0	0 0 0	0 0 0	0000	60 0 0	0 0 0	(
Radio#	29	30	31	32										
CMD RX RSP TX DEL UD ENT RQ	60 0 0	0	60 0 0	60 0 0										
==== Sta	rt Fra	ame	1380,	Total	Ela	psed	Frames	540	====					
Radio#	01	02	03	04	05	06	07	08	09	10	11	12_	13	1.
CMD RX RSP TX DEL UD ENT RQ	0 0 0	0 0 0	0 0 0	0 0 0	000	59 58 0 0	59 58 0 0	59 58 0 0	59 58 0 0	59 58 0 0	59 58 0 0	59 49 0 0	59 57 0 0	6(6((
Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	2!
CMD RX RSP TX DEL UD ENT RQ	60 59 0	60 60 0	60 53 0	59 0 0	59 0 0	59 0 0	0	59 0 0	0 0 0	0 0 0	0 0 0	59 0 0	0 0 0	(
Radio#	29	30	31	32										
CMD RX RSP TX DEL UD ENT RQ	59 0 0	000	59 0 0	59 0 0										

==== Start Frame 1440, Total Elapsed Frames 600 ====	==== Start Frame 1440, Total Elapsed Frames 600 ====
Radio# 01 02 03 04 05 06 07 08 09 10 11 12 13 14	Radio# 01 02 03 04 05 06 07 08 09 10 11 12 13
CMD TX 0 0 0 0 0 60 60 60 60 60 60 60 60 60 60	CMD RX 0 0 0 0 0 60 60 60 60 60 60 60 60 60 80 80 80 80 80 80 80 80 80 80 80 80 80
Radio# 15 16 17 18 19 20 21 22 23 24 25 26 27 28	Radio# 15 16 17 18 19 20 21 22 23 24 25 26 27
CMD TX 60 60 60 60 60 60 60 60 0 0 0 0 60 0 0 0 RSP RX 59 60 60 60 60 60 60 60 60 0 0 0 0 0 0 0	CMD RX 58 58 58 58 58 58 58 58 58 0 0 0 58 0 RSP TX 60 60 47 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Radio# 29 30 31 32	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	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 ====	==== Start Frame 1500, Total Elapsed Frames 660 ====
Radio# 01 02 03 04 05 06 07 08 09 10 11 12 13 14	Radio# 01 02 03 04 05 06 07 08 09 10 11 12 13
CMD TX 0 0 0 0 0 60 60 60 60 60 60 60 60 60 60	CMD RX 0 0 0 0 60 60 60 60 60 60 60 60 60 60 80 80 80 80 80 80 80 80 80 80 80 80 80
Radio# 15 16 17 18 19 20 21 22 23 24 25 26 27 28	Radio# 15 16 17 18 19 20 21 22 23 24 25 26 27
CMD TX 60 60 60 60 60 60 60 60 0 0 0 0 0 0 0	CMD RX 60 60 60 60 60 59 59 59 0 0 0 59 0 RSP TX 60 59 45 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Radio# 29 30 31 32	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	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 ====	==== Start Frame 1560, Total Elapsed Frames 720 ====
Radio# 01 02 03 04 05 06 07 08 09 10 11 12 13 14	Radio# 01 02 03 04 05 06 07 08 09 10 11 12 13
CMD TX 0 0 0 0 0 60 60 60 60 60 60 60 60 60 60	CMD RX 0 0 0 0 0 60 60 60 60 60 60 60 60 60 88 58 BEL UD 0 0 0 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 27 28	Radio# 15 16 17 18 19 20 21 22 23 24 25 26 27
CMD TX 60 60 60 60 60 60 60 60 0 0 0 0 60 0 0 0 RSP RX 60 59 56 60 60 60 60 60 0 0 0 0 0 0 0 0 0 0 0	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 0 0 0 0 0 0 0
Radio# 29 30 31 32	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	CMD RX 60 0 60 60 RSP TX 0 0 0 0 DEL UD 0 0 0 0 ENT RQ 0 0 0 0

60 0

10 11 12 13 14 60 60 60 60 60 60 60 58 58 60 0 0 0 0 0 0

==== 8	Start	Fran	ne	1620,	Total	Elap	sed	Frames	780	====					
Radio	<u> </u>	01	02	03	04	05	06	07	80	09	10	11	12	13	14
CMD TX RSP RX DEL UI ENT RO)	0	0	0 0 0	0 0 0	0 0 0	60 59 0	60 59 0 0	60 59 0	60 60 0	60 59 0	60 59 0 0	60 58 0 0	60 58 0 0	60 56 0
Radio	<u> </u>	15	16	17	18	19	20	21	22_	23	24	25	26	27	28
CMD TO RSP RO DEL UI ENT RO	(60 59 0 0	60 56 0	60 56 0 0	60 60 0	60 60 0	60 51 0 0	60 60 0 0	60 60 0	0 0 0	0 0 0	0 0 0	60 0 0	0 0 0	0 0 0
Radio		29	30	31	32										
CMD TX RSP RX DEL UI ENT RO)	60 0 0	000	60 0 0	60 0 0										
==== 5	Start	Fra	me	1680,	Total	Elap	sed	Frames	840	====					
Radio	#	01	02	03	04	05	06	07	80	09	10	11	12_	13	14
CMD TX RSP RX DEL UI ENT RO	K D	0 0 0 0	000	0 0 0	0 0 0	0 0 0	60 60 0	60 60 0 0	60 60 0	60 59 0 0	60 60 0	60 60 0	60 57 0 0	60 60 0	60 51 0 0
Radio	#	15	16	17	18	19	20	21	22_	23	24	25	26	27	28
CMD TO RSP RO DEL UI ENT RO	X D	60 60 0	60 58 0 0	60 58 0 0	60 60 0	60 60 0	60 55 0 0	60 58 0 0	60 60 0	0 0 0	0 0 0	0 0 0	60 0 0	0	0 0 0
Radio	<u>#</u>	29	30	31_	32										
CMD TI RSP RI DEL UI ENT RO	X D	60 0 0	0 0 0	60 0 0	60 0 0										
==== :	Start	Fra	me	1740,	Total	Elap	sed	Frames	900	====					
Radio	#	01	02	03	04	05	06	07	80_	09	10	11_	12	13	14
CMD TI RSP RI DEL UI ENT RO	X D	0 0 0	0 0 0	0 0 0	0 0 0	0	60 60 0	60 60 0	60 60 0	60 60 0	60 60 0	60 60 0	60 55 0 0	60 58 0 0	60 46 0 0
Radio	#	15	16	17	18	19	20	21	22	23	24_	25	26	27	28
CMD T. RSP R DEL U. ENT R	X D	60 60 0	60 49 0	60 58 0 0	60 60 0	60 60 0	60 60 0	60 60 0	60 60 0	0	0 0 0	0	60 0 0	000	0
Radio		29	30	31_	32										
CMD T. RSP R. DEL U. ENT R.	D	60 0 0	0	60 0 0	60 0 0										

==== Stan	rt Fra	me	1620,	Total	Elap	sed 1	Frames	780	====					
Radio#	01	02	03	04	05	06	07	80	09	10	11	12_	_13	14
CMD RX RSP TX DEL UD ENT RQ	0 0 0	0 0 0	0 0 0	0 0 0	0000	60 60 0	60 60 0 0	60 60 0	60 60 0	60 60 0	60 60 0	60 58 0 0	60 59 0	60 60 0
Radio#	15	16	17	18	19_	20	21	22_	23	24	25	26	27	28
CMD RX RSP TX DEL UD ENT RQ	60 60 0	60 60 0	60 50 0 0	60 0 0	60 0 0	60 0 0	60 0 0	60 0 0	0 0 0	0 0 0	0 0 0	60 0 0	0 0 0	0 0 0
Radio#	29	30	31	32										
CMD RX RSP TX DEL UD ENT RQ	60 0 0	0 0 0	60 0 0	60 0 0										
==== Sta	rt Fra	ame	1680,	Total	Ela	psed	Frames	840	====					
Radio#	01	02	03	04	05_	06	07	08	09	10_	11	12	13_	14
CMD RX RSP TX DEL UD ENT RQ	0 0 0	0 0 0	0 0 0	0 0 0	000	60 60 0	60 60 0	60 60 0	60 59 0	60 60 0	60 60 0	60 57 0 0	60 60 0	60 60 0
Radio#	15	16	17	18	19	20	21	22_	23	24	25_	26	27	28
CMD RX RSP TX DEL UD ENT RQ	60 60 0	60 60 0	60 57 0 0	60 0 0 0	60 0 0	60 0 0	60 0 0	60 10 0 0	0 0 0	0 0 0	0	60 0 0	0 0 0	0 0 0
Radio#	29	30	31	32										
CMD RX RSP TX DEL UD ENT RQ	60 0 0	0	60 0 0	60 0 0										
==== Sta	rt Fr	ame	1740,	Total	Ela	psed	Frames	900	====					
Radio#	01	02	03	04	05	06	07	_08_	09	10_	11_	12_	13_	14
CMD RX RSP TX DEL UD ENT RQ	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	60 60 0	60 60 0	60 60 0	60 60 0	60 60 0	60 60 0	60 55 0 0	60 59 0 0	60 60 0
Radio#	15	16	17	18	19	20	21	22	23	2 <u>4</u> _	25_	26	27	28
CMD RX RSP TX DEL UD ENT RQ	60 60 0	60 59 0	60 53 0 0	60 0 0	60 0 0	60 0 0	60 0 0	60 0 0	0 0 0	0 0 0	0	60 0 0	0 0 0	0 0 0
Radio#	29_	30		32										
CMD RX RSP TX DEL UD ENT RQ	60 0 0	0 0 0	0	60 0 0										

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==== Sta	rt Fra	ame	1800,	Total	Ela	psed	Frames	960	====					
Radio#	01	02	03	04	05	06	07	08	09	10	11_	12_	13	14
CMD TX RSP RX DEL UD ENT RQ	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	60 57 0 0	60 58 0 0	60 58 0 0	60 57 0 0	60 57 0 0	60 57 0 0	60 54 0 0	60 56 0 0	60 52 0 0
Radio#	15	16	17	18	19	20	21	_22_	23	24_	25	26_	27	28
CMD TX RSP RX DEL UD ENT RQ	60 59 0 0	60 58 0 0	60 56 0 0	60 60 0	60 60 0	60 54 0 0	60 60 0	60 60 0	0 0 0	0 0 0	0 0 0	60 0 0	0	0
Radio#	29_	30	31	32										
CMD TX RSP RX DEL UD ENT RQ	60 0 0	0 0 0	60 0 0	60 0 0										
======	Test	Data	Summ	ary ==	====	==								
Radio#	Test 01	Data 02	Summ 03	ary == _04	05	== 06	07	08	09	10	11	12	13	14
				•			960 943 0	08 960 932 0	960 927 0	10 960 936 0	960 932 0	936 822 1 0	960 917 0	950 820 1
Radio# CMD TX RSP RX DEL UD	01 0 0	02 0 0	03 0 0	04 0 0	05 0 0	960 941 0	960 943 0	960 932 0	960 927 0	960 936 0	960 932 0	936 822 1	960 917 0	950 820 1
Radio# CMD TX RSP RX DEL UD ENT RQ	01 0 0 0	02 0 0 0	03 0 0 0 0	04 0 0 0 0 0 18	05 0 0 0	960 941 0 0	960 943 0 0	960 932 0 0	960 927 0 0	960 936 0	960 932 0 0	936 822 1 0	960 917 0 0	950 820 1 1
Radio# CMD TX RSP RX DEL UD ENT RQ Radio# CMD TX RSP RX DEL UD	01 0 0 0 0 0 15 960 948 0	02 0 0 0 0 16 960 894	03 0 0 0 0 17 949 856 3	04 0 0 0 0 0 18 960 960	05 0 0 0 0 19 960 959 0	960 941 0 0 20 960 934	960 943 0 0 21 960 956	960 932 0 0 22 960 958 0	960 927 0 0 23	960 936 0 0 24	960 932 0 0 25	936 822 1 0 26 960 0	960 917 0 0 27	950 820 1 1 28

Frame range = 900 -> 1859

Total number of frames = 960
Total number of DEL UPDT frames = 5
Total number of ENT RQST frames = 3

Total number of ENT RQST frames = 5

==== ;	Star	t Fra	me	1800,	Total	Elaj	psed	Frames	960	====					
Radio	#	01	02	03	04	05	06	07	_08	09	10	11	<u> 12</u>	13	14
CMD R RSP T DEL U ENT R	X D	0	000	0 0 0	0 0 0	0 0 0	60 60 0	60 60 0	60 60 0	60 60 0	60 60 0	60 60 0	60 56 0 0	60 59 0	58 58 0 0
Radio	#	15	16	17	18	19	20	21	22	23_	24	25_	26	27	<u>28</u>
CMD R RSP T DEL U ENT R	X D	58 60 0	58 59 0 0	58 31 0 0	58 0 0 0	58 0 0 0	58 0 0 0	58 0 0 0	58 0 0 0	0 0 0	0 0 0	0 0 0	58 0 0 0	0 0 0	0
Radio	#	29	30	31	32										
CMD R RSP T DEL U ENT R	X D	58 0 0 0	0 0 0	58 0 0 0	58 0 0 0										
====	===	Test	Data	Summ	ary ==	====	==								
Radio	#	01	02	03	04	05	06	07	08	09	10_	11	12_	13_	14
RSP T	X X ID IQ	0	0 0 0	0 0 0	0 0 0	0 0 0	959 958 0 0		959 950 0 0	959 952 0 0	959 957 0 0	959 957 0 0	935 846 0 0	959 951 0 0	945 946 0 2
Radio	#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
	T X	955 959 0 0	955 9 47 0 0	944 754 0 3	954 1 0 0	954 0 0 0	953 0 0 0	8	953 103 0 0	0 0 0	0 0 0	0 0 0	952 0 0 0	0 0 0	0 0 0
Radio	#	29	30	31	32										
CMD R	X.	950	0	949	948										

(Cell 4) HE & Radio #16: Data collected at HE

	Data	from	f:10	09161418	700
**	Dara	i rom	1116	USIDIAIO	. 100

====	Start	Fram	e 11	640,	Total	Elap	sed	Frames	60	====					
Radio	o#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
RSP I	RX UD	30 17 1 0	60 59 0	60 57 0 0	60 60 0	60 48 0 0	60 59 0	60 60 0	60 60 0	60 60 0	60 60 0	60 60 0	60 60 0	60 59 0	60 60 0
Radio	o#	15	16	17	18	19	20	21	22	23	24_	25	26		
DEL U	TX RX UD RQ	60 60 0	60 60 0 0	60 60 0	60 60 0	60 60 0	60 56 0	60 49 0 0	60 60 0	60 60 0	60 59 0	60 60 0	60 60 0		
====	Start	Fram	e 11'	700,	Total	Elap	sed	Frames	120	====					
Radio	o#	01	02	03	04	05	06	07	80	09	10	11	12	13	14
RSP F	TX RX JD RQ	0 0 0	60 60 0	60 60 0	60 60 0	51 42 1 1	60 60 0	60 60 0	60 60 0	60 60 0	60 60 0	60 58 0 0	60 60 0	60 60 0	60 60 0
Radio	<u>#</u>	15	16	17	18	19	_20	21	22_	23	_24	25	26		
RSP I	TX RX JD RQ	60 60 0	60 60 0 0	60 60 0	60 60 0	60 60 0	51 43 1 0	51 37 1 0	60 60 0	60 60 0	60 60 0	60 60 0	60 60 0		
====	Start	Fram	e 11'	760,	Total	Elap	sed	Frames	180	====					
Radio	o#	01	02	03	04	05	06	07	80	09	10	11	12	13	14
CMD TRSP F DEL U ENT F	R X JD	30 24 0 0	60 60 0	60 58 0 0	60 60 0	60 60 0	60 55 0 0	60 60 0	60 60 0	60 60 0	60 60 0	60 58 0 0	60 60 0	60 60 0	60 60 0
Radio	o#	15	16	17	18	19	20	21	22	23	24_	25	26		
DEL U	rx RX JD RQ	60 59 0 0	60 60 0	60 60 0	60 60 0	60 60 0	51 39 1 1	51 41 1 0	60 60 0	60 60 0	60 60 0	60 60 0	60 60 0		
====	Start	Fram	ne 11	820,	Total	Elap	sed	Frames	240	====					
Radio	o#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TRSP F DEL U ENT F	JD	35 20 1 0	60 60 0	60 57 0 0	60 60 0	60 60 0	60 55 0	60 60 0	60 60 0	60 60 0	60 60 0	60 50 0	60 60 0	60 60 0	60 60 0
Radio	<u>#</u>	<u>15</u>	16	17_	18	19	_20_	21	22_	23	_24	25	26		
RSP F DEL U	rx RX JD RQ	60 59 0	60 60 0	60 60 0	60 60 0	60 60 0	51 39 1	60 59 0 0	60 60 0	60 60 0	60 60 0	60 60 0	60 60 0		

(Cell 4) HE & Radio #16: Data collected at Radio #16

** Data from file 09161423.log

==== Sta	rt. Fra	ame 1	1640.	Total	Ela	psed	Frames	60 :	====					
Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX RSP TX DEL UD ENT RQ	30 20 0 0	56 54 0 0	56 52 0 0	60 60 0	60 0 0	56 51 0	60 60 0 0	60 60 0	0 0 0 0	0 0 0	0 60 0	60 0 0	0 55 0 0	0
Radio#	15	16	17	18	19_	20	21	22_	23	24	25_	26		
CMD RX RSP TX DEL UD ENT RQ	0 0 0	60 60 0 0	60 60 0	60 60 0	60 60 0	55 0 0	57 0 0	60 60 0	60 60 0	60 59 0	60 60 0	60 60 0		
==== Sta	rt Fr	ame 1	1700,	Total	L Ela	psed	Frames	120	====					
Radio#	01	02	03	04	05	06	07	08	09	10	11_	12	13	14
CMD RX RSP TX DEL UD ENT RQ	0 0 0	59 60 0	59 60 0	60 60 0	31 51 0 1	59 59 0	60 60 0	60 60 0	0	0	60 0 0	60 0 0	60 0 0	0
Radio#	15	16	17	18	19	20	21	22	23	24_	<u>25</u>	26		
CMD RX RSP TX DEL UD ENT RQ	8	60 60 8	60 60 8	60 60 8	60 60 8	51 0 1	51 0 1	60 60 8	60 60 0	60 60 8	60 60 8	60 60 0		
mar red	U	0	U	U	O	_	-	U	•	O	U	U		
0		1	1760	m-+-	n = 1 =			. 100						
Radio#	rt Fr		1760,	Total		_	Frames		08	09	10	11	12 13	14
Radio# CMD RX RSP TX DEL UD EBT RQ	rt Fr	ame 1	1760, 02 59 57 0	Total 03 60 60	60 60 60 0	59 53 00	60 60 60 0	60 60 0 0	08 0 0 0 0	09 0 0 8	10 0 60 0	0 60 0 0	12 13 0 60 0	0 0 0
Radio# CMD RX RSP TX DEL UD	30 24 0	01 58 60 0	02 59 57 0	03 60 60	60 60 0	05 59 53 0	06 60 60	07 60 60 0	08 0 0	0	60 0	0 60 0	60 60	0
Radio# CMD RX RSP TX DEL UD EBT RQ	30 24 0 0	58 60 0	59 57 0 0	03 60 60 8	04 60 60 0	05 59 53 0	06 60 60 0	60 60 0	08 0 0 0	0 0 8	0 60 0	0 60 0	60 60	0
Radio# CMD RX RSP TX DEL UD EBT RQ Radio# CMD RX RSP TX DEL UD	30 24 0 0 15	01 58 60 0 0 16 60 60 0	02 59 57 0 0 17 60 60	03 60 60 8 18 60 60	04 60 0 0 0 19 60 60 0	05 59 53 0 0 20 19 49 0 2	06 60 60 0 0 21 28 51 0	07 60 60 0 0 22 88 8	08 0 0 0 0 23 60	0 0 8 24 60 60 0	0 60 0 0 25 60 60 0	0 60 0 0 26 60	60 60	0
Radio# CMD RX RSP TX DEL UD EBT RQ Radio# CMD RX RSP TX DEL UD ENT RQ ==== Sta Radio#	30 24 0 0 15 8 8 rt Fr 01	01 58 60 0 0 16 60 60 0	02 59 57 0 17 60 60 8 1820, 03	03 60 60 8 18 60 60	04 60 0 0 0 19 60 60 0	05 59 53 0 0 20 19 49 0 2 psed 06	06 60 0 0 0 21 28 51 0	07 60 60 0 0 22 88 8	08 0 0 0 0 23 60 60	0 0 8 24 60 60 0	0 60 0 0 25 60 60 0	0 60 0 0 26 60	60 60	0
Radio# CMD RX RSP TX DEL UD EBT RQ Radio# CMD RX RSP TX DEL UD ENT RQ	30 24 0 0 15 8 8 rt Fr	01 58 60 0 0 16 60 0 0	02 59 57 0 0 17 60 60 8	03 60 60 8 18 60 60 0	04 60 60 0 0 19 60 60 0	05 59 53 0 0 20 19 49 0 2	06 60 0 0 0 21 28 51 0 1	07 60 60 0 0 22 88 8	08 0 0 0 0 23 60 60 8	8 24 60 60	0 60 0 0 25 60 60	0 60 0 0 26 60 60	60 0 0	8
Radio# CMD RX RSP TX DEL UD EBT RQ Radio# CMD RX RSP TX DEL UD ENT RQ === Sta Radio# CMD RX RSP TX DEL UD CMD RX RSP TX DEL UD	30 24 0 0 15 8 8 rt Fr 01 35 20 0	01 58 60 0 0 16 60 60 0 0 0 ame 1 02 56 60 0	02 59 57 0 0 17 60 60 8 1820, 03 59 57 0	03 60 60 8 18 60 0 0 Tota: 04 60 60 60 0	04 60 0 0 0 19 60 60 0 0 0	05 59 53 0 0 20 19 49 0 2 psed 06 59 50	06 60 0 0 0 21 28 51 0 1 Frames 07 60 60 60 0	07 60 60 0 0 22 88 8 8 240 08 60 60 0	08 0 0 0 0 23 60 8 ==== 09	0 0 8 24 60 60 0 0	0 60 0 0 25 60 60 0 0	0 60 0 0 26 60 60 8	0 60 0 0	0 0 8 8

==== Star	rt Fra	ame 1	1880,	Total	Ela	psed	Frames	300	====					
Radio#	01	02	03	04	05	06	07	0.8	09	10	<u>11</u> .	12	13_	14
CMD TX RSP RX DEL UD ENT RQ	21 11 1 0	60 59 0	60 60 0	60 60 0	60 60 0	60 59 8	60 60 0	60 60 0	60 60 0	60 60 0	60 55 0 0	60 60 0	60 60 0	60 60 8
Radio#	15	16	17	18	19	2.0	21	2.2.	2.3	2.4	25	26		
CMD TX RSP RX DEL UD EBT RQ	60 56 0 0	60 60 0	60 60 8	60 60 0	60 60 0	60 59 0 0	60 59 8	60 58 0 0	60 58 8	60 58 8	60 59 0	60 58 0 0		
==== Stan	rt Fra	ame 1	1940,	Total	Ela	psed	Frames	360	====					
Radio#	01_	02	0.3	04	0.5	06	07	0.8	09	10_	11	12	1.3	14
CMD TX RSP RX DEL UD ENT RQ	20 10 1 0	60 59 8	60 58 8	60 60 8	60 59 0	60 56 8	60 60 8	60 60 8	60 60 0 0	60 60 0	60 60 8	60 60 0	60 59 0	60 59 0 0
Radio#_	15	16	17	18	19	2.0	2.1	2.2.	2.3	2.4	25	26		
CMD TX RSP RX DEL UD ENT RQ	60 54 8	60 60 8	60 60 0	60 60 8	60 60 0	60 60 8	60 60 0	60 60 0	60 60 0	60 60 0	60 60 0	60 59 0 0		
======				ary ==										
Radio#	01	02	03	04	05	06	07	08	09	10	11	<u> 12</u>	13	14
CMD TX RSP RX DEL UD ENT RQ	136 82 4 0	360 35 0	; ³⁶⁰ 3	50 3€ 0 0	351 0 3 1	29 ³⁶⁰ 29 ³ 1 0	44 360 0 0	360 360 0	360 360 0	360 360 0	360 341 0	360 360 0	360 358 0 0	360 359 0 0
Radio#		#	15		17	18	19 20	21_	<u>22 2</u>	3 24	25	<u> 26</u>		
CMD RSP HI DEL UD ENT RQ	360 348 8	360 360 8	360 36 0 0		360 360 0	333 296 3 2	305 ³⁴² 38	360 5 8 35 0		360 570 0	360 359 0 0	360 357 8		
Frame ra Total nu Total nu Total nu	mber mber	of fr	ames EL UPI	= 360 T fra	mes :	= 10								

==== Stan	rt Fra	ame 1	1880,	Tota	l Ela	psed	Frame	s 300) ====					
Radio#	01.	U3_	03_	∩ <u>4</u> _	0.5.	<u> </u>	07	NΑ	<u> 19</u>	10	_11_	12	13_	_14
CMD "RX RSP TX DEL UD	21 11	55 56 0	57 56 0	60 60 0	60 60 8	56 55 8	60 60 8	60 60 8	n 8	000	60 8	60 8	0 59 0	0000
EHT RQ	8	0	0	0			-	-	-	-	-	-	U	٠
Radio#	15.	<u> 16.</u>	17 	18	19	20	21	2.2	23	2.4	_25_	_26		
CMD RX RSP TX DEL UD ENT RQ	0 8 0	60 60 8	60 60 8	60 60 0	60 60 0	60 60 0	60 58 0 0	60 58 0 0	60 58 0 0	60 58 0 0	60 59 0 0	60 58 0 0		
==== Sta	rt Fra	ame 1	1940,	Tota	l Ela	psed	Frame	s 360) ====					
Radio#	NJ_	N2	N <u>.</u> 3_	N.4_	0.5	nĸ	٥7	NΑ	N9	_10_	11	12_	_13_	_14
CMD ""RX RSP TX DEL UD ENT RQ	20 10	57 59	57 57 8	60 60	47 60 0	57 51 0 0	60 60 0	60 60 8	n 8	n 8	60 60 0	60	59 0 0	0 8 0
Radio#	15.	16	17	18	19	2.0	21	2.2	23	2.4	25.	26		
CMD RX RSP TX DEL UD ENT RQ	8	60 60 0	60 60 0	60 60 0	60 60 8	58 59 8	41 60 0 0	88 0 0	60 60	60 60 0 0	60 60 0	60 59 0		
=======	Test	Data	Summ	ary =	=== =	==								
Radio#	01_	N2_	0.3_	Λ <u>4</u> _	<u> </u>	nĸ	07	nя	N 9	10	11	12	13	14
CMD RX RSP TX DEL UD ENT RQ	136 85 8	341 349 8	347 33	0	035	${\overset{346}{\overset{324}{0}}}_{10}$			0 0 8	8	3 60 8	360 0 0	353 8	6
Radio#	15	16	17	18	19_	20	21_	2.2	2.3	24	25	26		
CMD RX RSP TX DEL UD ENT RQ	0 0 8	360 360 0 0	360 360 0	360 360 0	360 360 0	171 320 0 4	191 336 0		358 358 0	360 357 3	360 59 0	360 35;		
Frame ra	mber	of fr	ames	= 360		= 0								

Total number of DEL UPDT frames = 0
Total number of EBT RQST frames = 7

(Cell 4) HE & Radio #17: Data collected at HE

** Data i	from :	file	09161	447.lo	g									
==== Star	t Fra	me 15	5160,	Total	Elap	psed	Frames	60 =	====					
Radio#	01	02	03	04	05	06	07	80	09	10	11	12	13_	14
CMD TX RSP RX DEL UD ENT RQ	1 0 0	60 59 0	60 56 0	60 60 0	60 60 0	60 57 0	60 60 0	60 60 0	60 60 0	60 60 0	60 54 0 0	60 60 0	60 59 0	60 60 0
Radio#	15	16	17	18	19	20	21	_22	23	24	25	26		
CMD TX RSP RX DEL UD EBT RQ	60 52 8	60 59 8	60 60 0	60 49 0 0	60 60 0	45 35 1 0	60 60 8	60 59 0	60 59 0 0	59 0	60 59 8	60 59 8		
==== Star	rt Fra	ame 1	5220,	Total	Ela	psed	Frames	120	====					
Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX RSP RX DEL UD ENT RQ	41 28 1 0	60 60 0	60 58 0 0	60 59 0	60 60 0	60 58 0 0	60 59 0 0	60 60 0	60 60 0	60 60 0	60 57 0 0	60 60 0	60 60 0	60 60 0
Radio#	15	16	17_	18	19_	20_	21_	22_	23	24	25	26		
CMD TX RSP RX DEL UD ENT RQ	52 49 1 1	60 59 0	60 59 0 0	60 5 4 0 0	60 59 0	60 59 0	60 59 0	60 58 0	60 58 0 0	60 58 0 0	60 59 0	60 58 0 0		
==== Sta	rt Fra	ame 1	5280,	Total	Ela	psed	Frames	180	====					
Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13_	<u> 14</u>
CMD TX RSP RX DEL UD ENT RQ	0 0 0	60 59 0	60 54 0 0	60 58 0 0	60 59 0	60 57 0 0	60 59 0 0	60 59 0 0	60 59 0 0	60 59 0 0	60 59 0 0	60 59 0	60 59 0	60 59 0
Radio#	15	16	17_	18	19	20_	21	22_	23	24_	25	26		
CMD TX RSP RX DEL UD ENT RQ	60 54 0 0	60 59 0	60 59 0	60 57 0 0	60 59 0	60 58 0 0	60 53 0 0	60 58 0 0	60 59 0 0	60 58 0 0	60 58 0 0	60 59 0		
==== Star	rt Fra	ame 1	5340,	Total	Ela	psed	Frames	240	====					
Radio#	01	02	03	04	05	06	07	08	09	10_	11	12_	13	14
CMD TX RSP RX DEL UD ENT RQ	0000	60 60 0	60 59 0 0	60 60 0 0	60 60 0	60 60 0	60 60 0	60 60 0	60 60 0	60 60 0	60 60 0	60 60 0	60 60 0	60 60 0
Radio#	<u> 15</u>	16	17	18	19	20	21	22	23	24_	25	26		
CMD TX RSP RX DEL UD	60 60 0	60 60 0	60 60 0	60 57 0	60 59 0	60 59 0	60 55 0	60 60 0	60 60 0	60 60 0	60 60 0	60 60 0		

(Cell 4) HE & Radio #17: Data collected at Radio #17

**	Data	from	file	09161452	.log
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==== Star	t Fra	me 15	160,	Total	Elap	sed	Frames	60	====					
Radio#	01	02	0.3	04	05	06	07	0.8	09	10	11	12	13	14
CMD RX RSP TX	1 0	58 56	58 7	60 60	58 48	58 10	60 60	60 60	59 0	59 0	58 60	58 60	58 25	58 4 5
Pet KB	8	8	8	8	8	-8	8	8	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		
BEL UDTX	8	68	60	59	" 8	41	60	59	58	59	59 0	59 0		
ENT RQ	0	0	0	8	0	2	60 0 0	0	0	8	0	0		
==== Star	t Fra	ame 15	5220,	Total	Elar	sed	Frames	s 120) === =					
Radio#	01	02	03	04	05	06	07	08	09	10	11	12_	13	14
CMD RX RSP TX	40 27	58 57	58 6	60 59	58 56	58 5	60 58	60 58	57 0	57 0	57 59	57 59	57 20	57 4 2
DEL UD ENT RQ	٥ 0	8	ö	00	8	8	8	8	8	ŏ	ő	ő	8	8
Radio#	15	16	17	18	19	20	21	22	23	24	25	26	Ü	Ü
CMD RX	49	60	<u>±/</u> -	<u>+</u>	60	59	59	60	60	60	60	60		
RSP TX DEL UD	16 0	60	60	57 0	60	56	60 0	59	59 0	59	60	59 O		
ENT RQ	Ō	8	8	ŏ	ŏ	8	Ŏ	ŏ	Ŏ	8	8	0		
Ent re	U	U	Ü	•	•		-							
==== Sta	_			-	-		Frame	s 180) ====					
_	_			Total	-		-	s 180	09	10	11	12	13	14
==== Sta Radio# CUD RX	rt Fr	ame 1:	5280, 03 60	Total 04 60	Ela _l 05	06 60	Frame: 07 60	<u>08</u>	09 59	59	59	59	59	
==== Sta Radio# CUD RX RSP TX DEL UD	01 0 0	ame 1:	5280, 03 60 10	Total 04 60 59	Elap 05 60 55	06 60 7	Frame: 07 60 60 0	08 60 60	09 59 0	59 0	59 60 0	59 60 0	59 22	59 57
Radio# CUD RX RSP TX DEL UD EBT RQ	01 0	ame 1: 02 60 59 0	5280, 03 60 10 8	Total 04 60 59	Elap 05 60 55 0	06 60 7 0	60 60 0	08 60 60 0	09 59 0 0	59 0 0	59 60 0	59 60 0	59	
Radio# CUD RX RSP TX DEL UD EBT RQ Radio#	01 0 0 0	ame 1: 02 60 59 0 0	5280, 03 60 10 8	Total 04 60 59 8 17	Elap 05 60 55 0 0	06 60 7 0 0	Frame: 07 60 60 0 0	08 60 60 0 0	09 59 0 0 0	59 0 0 23	59 60 0 24 25	59 60 0	59 22	59 57
Radio# CUD RX RSP TX DEL UD EBT RQ Radio# CMD RX RSP TX	01 0 0	ame 1: 02 60 59 0	5280, 03 60 10 8 16 60 60	Total 04 60 59 8 17 60 59	Elap 05 60 55 0	06 60 7 0 0 19 59	Frame: 07 60 60 0 0 20 59 59	08 60 60 0 2	09 59 0 0	59 0 0	59 60 0	59 60 0 0 26	59 22	59 57
Radio# CUD RX RSP TX DEL UD EBT RQ Radio# CMD RX	01 0 0 0 0	ame 1: 02 60 59 0 15	5280, 03 60 10 8 16 60	Total 04 60 59 8 17	Elap 05 60 55 0 0	06 60 7 0 0 19	Frame: 07 60 60 0 0	08 60 60 0 0	59 0 0 1 22	59 0 0 23 60	59 60 0 0 24 25 60	59 60 0 0 26	59 22	59 57
Radio# CUD RX RSP TX DEL UD EBT RQ Radio# CMD RX RSP TX DEL UD ENT RQ	rt From 01 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ame 19 02 60 59 0 0 15 60 60	5280, 03 60 10 8 16 60 60 0	Total 04 60 59 8 17 60 59 0	Elap 05 60 55 0 0 18 60 60	06 60 7 0 0 19 47 0	Frames 07 60 60 0 20 59 0 0	60 60 0 0 2 60 60 60 60	59 0 0 0 1 22 60 60	59 0 0 23 60	59 60 0 0 24 25 60 60	59 60 0 0 26 60	59 22	59 57
Radio#CUD RX RSP TX DEL UD EBT RQ Radio#_CMD RX RSP TX RSP TX	rt Front	ame 19 02 60 59 0 0 15 60 60	5280, 03 60 10 8 16 60 60	Total 04 60 59 8 17 60 59 0	Elap 05 60 55 0 0 18 60 60	06 60 7 0 0 19 47 0	Frames 07 60 60 0 0 20 59 59	60 60 0 0 2 60 60 60 60	59 0 0 0 1 22 60 60	59 0 0 23 60	59 60 0 0 24 25 60 60	59 60 0 0 26 60	59 22	59 57
Radio# CUD RX RSP TX DEL UD EBT RQ Radio# CMD RX RSP TX DEL UD ENT RQ Radio# CMD RX	rt Fr. 01 0 0 0 0 -59 0 8 rt Fr.	ame 1: 02 60 59 0 0 15 60 60 8 ame 1:	5280, 03 60 10 8 16 60 0 0 5340, 03 58	Total 04 60 59 8 17 60 59 0 Total 04 60	Elan 05 60 55 0 0 18 60 60 8 Elan 05	06 60 7 0 0 19 47 0 0 psed 06	Frame: 07 60 60 0 0 20 59 59 0 Frame: 07 60	60 60 0 0 2 60 60 0 0 8 24 08	09 59 0 0 1 22 60 60 8 0 ====	59 0 0 23 60 60 8	59 60 0 0 24 25 60 60 8	59 60 0 0 26 60 60 8	59 22 8	59 57 8
Radio# CUD RX RSP TX DEL UD EBT RQ Radio# CMD RX RSP TX DEL UD ENT RQ ==== Sta: Radio# CMD RX RSP TX CMD RX RSP TX DEL UD	rt From 01 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ame 1: 02 60 59 0 0 15 60 60 8 ame 1: 02 56 58	5280, 03 60 10 8 16 60 60 0 0 5340, 03 58 8	Total 04 60 60 0	Elan 05 60 55 60 8 Elan 05 56 60 0	06 60 7 0 0 19 47 0 0 0 psed 06	Frame: 07 60 60 0 20 59 59 0 0 Frame: 07 60 60 60	08 60 60 0 0 2 60 60 60 0 8 8 8 60 60 0	09 59 0 0 1 22 60 60 8 0 ==== 09 57 0	59 0 0 23 60 60 8	59 60 0 0 24 25 60 60 8	59 60 0 26 60 60 8	59 22 8 8	59 57 8
Radio# CUD RX RSP TX DEL UD EBT RQ Radio# CMD RX RSP TX DEL UD ENT RQ ENT RQ ENT RQ	rt Fra 01 0 0 0 8 rt Fra 01 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ame 1: 02 60 59 0 15 60 60 8 ame 1: 02 56 58 0 0	5280, 03 60 10 8 16 60 00 0 5340, 03 58 00 0	Total 04 8 17 60 59 0 Total 04 60 60 0 0	Elaj 05 60 55 0 0 18 60 60 8 Elaj 05 56	06 60 7 0 0 19 59 47 0 0 psed 06 58 10 0	Frame: 07 60 60 0 20 59 59 0 Frame: 07 60 60 0 0	08 60 60 0 2: 60 60 0 8 24 08 60 60 60	09 59 0 0 1 22 60 60 8 0 ==== 09 57 0	59 0 0 23 60 60 8	59 60 0 24 25 60 60 8	59 60 0 26 60 8 8	59 22 8 8	59 57 8
Radio# CUD RX RSP TX DEL UD EBT RQ Radio# CMD RX RSP TX DEL UD ENT RQ Radio# CMD RX RSP TX CMD RX RSP TX CMD RX RSP TX RADIO# CMD RX RSP TX RSP TX RADIO# CMD RX RSP TX RSP TX RADIO# RADIO# RADIO#	rt Fr: 01 0 0 0 8 rt Fr: 01 0 0 15	ame 1: 02 60 59 0 15 60 60 8 ame 1: 02 56 58 0 0 16	5280, 03 60 10 8 16 60 60 0 0 5340, 03 58 0 0	Total 04 60 59 8 17 60 0 0 Total 04 60 60 0 0 18	Elap 05 60 55 0 18 60 60 8 Elap 05 56 60 0	06 60 7 0 0 19 47 0 0 0 psed 06 58 10 0 0	7 60 60 60 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	08 60 60 0 0 2 60 60 0 0 8 24 08 60 60 0 0	09 59 0 0 1 22 60 60 8 0 9 57 0 0 0	59 0 0 23 60 60 8 10 57 0 0 0 24	59 60 0 24 25 60 8 8	59 60 0 26 60 60 8 12 57 60 0	59 22 8 8	59 57 8
Radio# CUD RX RSP TX DEL UD EBT RQ Radio# CMD RX RSP TX DEL UD ENT RQ ENT RQ ENT RQ	rt Fra 01 0 0 0 8 rt Fra 01 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ame 1: 02 60 59 0 15 60 60 8 ame 1: 02 56 58 0 0	5280, 03 60 10 8 16 60 00 0 5340, 03 58 00 0	Total 04 8 17 60 59 0 Total 04 60 60 0 0	Elaj 05 60 55 0 0 18 60 60 8 Elaj 05 56	06 60 7 0 0 19 59 47 0 0 psed 06 58 10 0	Frame: 07 60 60 0 20 59 59 0 Frame: 07 60 60 0 0	08 60 60 0 2: 60 60 0 8 24 08 60 60 60	09 59 0 0 1 22 60 60 8 0 ==== 09 57 0	59 0 0 23 60 60 8	59 60 0 24 25 60 60 8	59 60 0 26 60 8 8	59 22 8 8	59 57 8

==== Sta	art Fr	ame	15400,	Total	Ela	psed	Frame	₃ 300	====					
Radio#	01	02	03	04	05	06	07	_08_	09	10	11_	12	13_	14
CMD TX RSP RX DEL UD ENT RQ	0 0 0	60 60 0	60 57 0 0	60 60 0	60 60 0	60 59 0	60 60 0	60 60 0	60 60 0	60 59 0	60 60 0	60 60 0	60 60 0	60 60 0
Radio#	15_	16	17	18	19	20	21	22	23	24	25	26		
CMD TX RSP RX DEL UD ENT RQ	60 60 0	60 60 0	60 60 0 0	60 60 0	60 60 0	60 59 0	60 51 0 0	60 60 0	60 60 0 0	60 60 0	60 60 0	60 60 0		
==== Sta	art Fr	ame	15460,	Total	Ela	psed	Frames	360	====					
Radio#	01	_02	03	04	05	06	07	_08	09	10	11	12	13	14
CMD TX RSP RX DEL UD ENT RQ	0 0 0	60 60 0	60 60 0	60 59 0 0	60 60 0	60 60 0	60 60 0	60 60 0	60 59 0 0	60 60 0	60 60 0	60 60 0	60 60 0	60 60 0
Radio#	15	16	17	18	19	20	21	22	23	24	25	26		
CMD TX RSP RX DEL UD EBT RQ	60 60 8	60 60 0	60 60 8	60 60 0	60 60 0	60 47 0 0	51 42 1 0	60 60 8	60 60 8	60 60 0	60 60 0	60 60 0		
======	= Test	Dat	a Summa	ary ==	====	==								
Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
RSP RX DEL UD EBT RQ	42 29 1	360 358 0	360 344 0	360 356 0	360 359 0	360 351 0	360 358 0	360 359 0	360 358 0	360 358 0	360 350 0	360 359 0	360 358 0	360 359 0
-	15	16	17	18	19	20	21	22	23	24	25	26	U	U
Radio# CMD	352 3 1 1	360 357 8	360 10		360 357 0	345 3 1 O	351 3 1 0	360 355 0	360 356 0	360 355 0	360 356 0	360 356 0		
TOT ICE				U	U			U	U	U	U	U		

Frame range = 15160 -> 15519
Total number of frames = 360
Total number of DEL UPDT frames = 4
Total number of EBT RQST frames = 1

==== Star	t Fra	me 1	5400,	Total	Elap	sed	Frames	300	====					
Radio#	01	. 0:	2 03	3 04	05	06	07	08	09	10	11	12	13	14
CMD RX RSP TX DEL UD ENT RQ	 0 0	58 56 0	60 5 0	60 59 0	58 58 0	58 4 0 0	60 59 0 0	60 59 0	59 0 0	59 0 0	59 60 0	59 59 0	59 14 0 0	59 49 0 0
Radio#	15	16	17	18	19	20	21	22	23_	24	25	<u> 26</u>		
CMD RX RSP TX DEL UD ENT RQ	59 0 0	60 60 0	60 60 0	60 60 0 0	60 60 0	59 50 0	59 58 0 0	60 60 0	60 60 0	60 60 0	60 60 0 0	60 60 0		
==== Star	t Fra	me 1	5460,	Total	Elag	sed	Frames	360	====					
Radio#	01	02	03	04	05	06	07	08	09	10	11_	12	13	14
CMD RX RSP TX DEL UD ENT RQ	0 0 0	60 59 0	60 32 0 0	60 59 0 0	60 57 0 0	60 29 0 0	60 60 0	60 60 0	60 0 0	60 0 0	60 60 0	60 60 0	60 44 0 0	60 51 0 0
Radio#	15	16	17	18	19	20	21	22	23	24	25	26		
CMD RX RSP TX DEL UD ENT RQ	60 0 0	60 60 0	60 60 0	60 60 0	60 60 0	60 46 0 0	51 51 0 1	60 60 0	60 60 0	60 60 0	60 60 0	60 60 0		
******	Test	Data	Summ	ary ==	====	==								
Radio#	01	02	03	_04	05	0.6_	_07	_08	_09	_10	_11	12	13	14
RSP TX DEL UD EBT RQ	41 27 8	350 345 0	3 68 0	356 0	334 0	3 65 0	357 0	357	351 0	351 0 0	350 3 59 0	350 358 0	350 1 45 0	350 295 0
Radio#	15	16	17	18	19	20	21	22	23	24	25	26	U	U
RSP) TX: DEL UD EBT RO	342 16	360 360 0	360 360 0	360 35;	360 359 0	339 274 0		360 358 0	360 358 0	360 358 0	360 359 0	360 358 0		

Framerange = 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

(Cell 4) HE & Radio #18: Data collected at Radio #18

** Data from file 09161439.log

==== Sta	rt Fr	ame 1	3860,	Total	Elar	psed	Frames	60	====					
Radio#	^J.		<u>U3</u> ~	<u> </u>	Λ <u>Ε.</u>	<u> </u>	07	ΛΩ	<u>na</u>	10	_11		12	1.1.
CMD RX RSP TX	31 21	55 60	56 59	60 60	54 60	55 58	60 60	60 60	0	8	0 60	60 60	60	60
DEL UD Ent rq	-ō	8	8	8	8	0	0	0	0	8	8	8	0	0
Radio#	15.	16.	17	1 8	19	20	21	22	23	24	25	26		
CMD RX RSP TX	8	60 60	60 60	60 60	60 59	32 32	36 45	60 57	60 57	60 58	60 60	60 56		
DEL UD	0	Ō	0	8	8	Ő	ŏ	ó	Ó	Õ	Ŏ	ŏ		
ENT RQ	0	0	0	0	0	U	1	Ü	Ū	J	v	v		
==== Sta	art Fr	ame 1	3920,	Total	l Ela	psed	Frames	120	====					
Radio#	N1_	N2_	U3.	∩4	05	<u> </u>	07	N.R.	<u> 19</u>	_10	_11	12_	1_3	14
CMD RX RSP TX		50 53	53 49	60 59	50 60	52 4 7	60 59	60 59	0	0	0 57	0 59	0 56	57 57
RSP TX DEL UD ENT RQ	` <u> </u>	0	0	0	0	0	8	8	8	0	0	0	8	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 DEL UD	0	39 0	59	60	59 0	58 0	60 0	59	59	59	60	60		
ENT RQ	Ŏ	3	8	8	0	0	0	8	8	8	8	8		
==== Sta	art Fr	ame 1	3980,	Tota:	l Ela	psed	Frame	s 180	====					
==== Sta Radio#	art Fr	ame 1	3980, ng_	Tota:	l Ela	psed _ns	Frame:	s 180		_10	_11	12_	_13_	_]_4_
Radio#_	01_	∩2_	∩3_ 54	_ <u>∩4</u> 59	<u>05.</u> 53	<u>6</u> 54	 58	_ <u>∩Ջ</u> 57	<u></u>	0	0	0		0
Radio# CMD RX RSP TX DEL UD	25 16 0	∩2_ 53 53 0	54 50 0	59 57 0	53 60	54 49	58 57	57 60	0 0 0	0 0 0	0 58 0	0 57 0	0 55 0	0 57
Radio# CMD RX RSP TX DEL UD ENT RQ	25 16 0	53 53 0 0	54 50 0	59 57 0 0	53 60 8	54 49 8	58 57	57 60 8	0 0 0 0	0 0 0 0	0 58 0	0 57 0	0 55	0
Radio# CMD RX RSP TX DEL UD ENT RQ Radio#	25 16 0	53 53 0 0	54 50 0 0	59 57 0 0	53 60 8	54 49 8	58 57 8	57 60 8 22	0 0 0 0 0	0 0 0 0	0 58 0	0 57 0	0 55 0	0 57
Radio# CMD RX RSP TX DEL UD ENT RQ Radio# CMD RX RSP TX	25 16 0	53 53 0 0 16 55 57	54 50 0 0 17 57 60	59 57 0 0 18 60 60	53 60 8 19 60 60	54 49 8 20 57 55	58 57	57 60 8	0 0 0 0	0 0 0 0	0 58 0 0	0 57 0 0	0 55 0	0 57
Radio# CMD RX RSP TX DEL UD ENT RQ Radio# CMD RX	01_ 25 16 0 1	53 53 0 0	54 50 0 0 17	59 57 0 0	53 60 8 19 60	54 49 8 20	58 57 8 21 60	57 60 8 22 60	0 0 0 0 0 23 60	0 0 0 0 0 24 60	0 58 0 0 25	0 57 0 0 26 60	0 55 0	0 57
Radio# CMD RX RSP TX DEL UD ENT RQ Radio# CMD RX RSP TX DEL UD ENT RQ	01_ 25 16 0 1 15_	53 53 0 0 16 55 57 0	54 50 0 0 17 57 60 0	59 57 0 0 18 60 60	53 60 8 19 60 60 0	54 49 8 20 57 55 0	58 57 8 21 60 60	57 60 8 22 60 60	0 0 0 0 0 23 60 60	0 0 0 0 24 60 60	0 58 0 0 0 25 60	0 57 0 0 26 60	0 55 0	0 57
Radio# CMD RX RSP TX DEL UD ENT RQ Radio# CMD RX RSP TX DEL UD ENT RQ	25 16 0 1 15_	53 53 0 0 16 55 57 0	54 50 0 0 17 57 60 0	59 57 0 0 18 60 60	53 60 8 19 60 60 0	54 49 8 20 57 55 0	58 57 8 21 60 60	57 60 8 22 60 60	0 0 0 0 0 23 60 60	0 0 0 0 24 60 60	0 58 0 0 0 25 60	0 57 0 0 26 60	0 55 0	0 57
Radio# CMD RX RSP TX DELL UD ENT RQ Radio# CMD RX RSP TX DEL UD ENT RQ ==== St. Radio#	01_ 25_ 16_0 1 15_ 8_ 8 art Fr_ 01_ 5	02_ 53 53 0 0 16 557 0 3 ame 1	54 50 0 0 17 57 60 0 0	59 57 0 0 18 60 60 0 Tota 04_	53 60 8 19 60 60 0 0	54 49 8 20 57 55 0 0	07 58 57 8 21 60 60 8 Frame	57 60 8 22 60 60 8 s 240 ns	0 0 0 0 0 23 60 60 8	0 0 0 0 24 60 60	0 58 0 0 0 -25 -60 60 8	0 57 0 0 26 60 60 8	0 55 0 0	0 57 0 0
Radio#_ CMD RX RSP TX DEL UD ENT RQ Radio#_ CMD RX RSP TX DEL UD ENT RQ ==== St. Radio#_ CMD RX RSP TX RSP TX	01_ 25_ 16_ 0 1 15_ 8_ 8 art Fr	53 53 0 0 16 55 57 0 3 arame 1	54 50 0 17 57 60 0 4040,	59 57 0 0 18 60 60 0 Tota 64 57	53 60 8 19 60 60 0 0	54 49 8 20 57 55 0 0 psed 65 50	58 57 8 21 60 60 8 Frame	57 60 8 22 60 60 8 8 240 0	0 0 0 0 0 23 60 60 8	0 0 0 0 24 60 60 8	0 58 0 0 25 60 60 8	0 57 0 26 60 60 8	0 55 0 0	0 57 0 0
Radio#_ CMD RX RSP TX DEL UD ENT RQ Radio#_ CMD RX RSP TX DEL UD ENT RQ ==== St. Radio#_ CMD RX RSP TX	01_ 25 16 0 1 15_ 8 8 art Fr	53 53 0 0 16 55 57 0 3 rame 1	54 50 0 0 17 57 60 0 4040,	04 - 59 57 0 0 18 60 60 0 0 Tota 0 4 - 60 57 0 0	53 60 8 19 60 60 0 0 1 Ela 05- 55 60	8 20 57 55 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	58 57 8 21 60 60 8 Frame 60 57 0	57 60 8 22 60 60 8 8 240 0 0	0 0 0 0 0 23 60 60 8	0 0 0 0 24 60 60 8	0 58 0 0 25 60 60 8	0 57 0 26 60 60 8	0 55 0 0	0 57 0 0
Radio#_ CMD RX RSP TX DEL UD ENT RQ Radio#_ CMD RX RSP TX DEL UD ENT RQ ==== St. Radio#_ CMD RX RSP TX RSP	01_ 25_ 16_ 0 1 15_ 8_ 8 art Fr	53 53 0 0 16 55 57 0 3 rame 1 02 55 54 8	54 50 0 0 17 57 60 0 4040, 0 17	04 - 59 57 0 0 18 60 60 0 0 Tota 04 - 60 57 0 0 18	53 60 8 19 60 0 0 1 Ela .05 60 8 19	8 20 57 55 0 0 0 0 0 0 20	58 57 8 21 60 60 8 Frame 07 0 0	60 60 60 8 22 60 60 8 8 240 0 0 0	0 0 0 0 0 0 23 60 60 8	0 0 0 24 60 60 8	0 58 0 0 0 25 60 60 8	0 57 0 0 26 60 60 8	0 55 0 0	0 57 0 0
Radio# CMD RX RSP TX DEL UD ENT RQ Radio# CMD RX RSP TX DEL UD ENT RQ ==== St. Radio# CMD RX RSP TX DEL UD ENT RQ Radio# CMD RX RSP TX CMD RX RSP TX CMD RX RSP TX RSP TX	01_ 25_ 16_ 01_ 15_ 8_ 8 art Fr 01_ 00_ 0_ 15_	53 53 0 0 16 55 57 0 3 rame 1	54 50 0 17 57 60 0 0 .4040, 0 17 57 52 0 0 17 57 58 60	04 - 59 57 0 0 18 60 60 0 0 Tota 0 4 - 60 57 0 0	53 60 8 19 60 0 0 1 Ela 55 60 8 19 60 59	54 49 8 20 57 55 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	58 57 8 21 60 60 8 Frame 60 57 0	60 60 8 22 60 60 8 8 240 60 60 60 60 60 60 60 60 60 60 60 60 60	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 24 60 60 8 10 24 60 57	0 58 0 0 25 60 60 8	0 57 0 26 60 60 8 12 0 60 0 26 60	0 55 0 0	0 57 0 0
Radio#_ CMD RX RSP TX DEL UD ENT RQ Radio# CMD RX RSP TX DEL UD ENT RQ ==== St. Radio# CMD RX RSP TX RSP T	01_ 25_ 16_ 0 1 15_ 8_ 8 art Fr 00_ 0	53 53 0 16 557 0 3 rame 1 02 554 8	54 50 0 0 17 57 60 0 4040, 0 0 17 57 52 0 0	59 57 0 0 18 60 60 0 Tota 0 57 0	53 60 8 19 60 0 0 1 Ela 05 55 60 8	54 49 8 20 57 55 0 0 0 0 0 0 0 20 20 0 0 0 0 0 0 0 0	58 57 8 21 60 60 8 Frame 0 57 0 0	57 60 8 22 60 60 8 s 240 0 0 0	0 0 0 0 0 0 23 60 60 8	0 0 0 0 24 60 60 8	0 58 0 0 25 60 60 8	0 57 0 0 26 60 60 8	0 55 0 0	0 57 0 0

==== Stan	rt Fr	ame 1	4100,	Tota	l Ela	psed	Frame	s 300	====					
Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD TX RSP RX DEL UD ENT RQ	0 0 0	60 60 0	60 60 0	60 60 0	60 60 0	60 58 0 0	60 60 0 0	60 60 0	60 60 0	60 60 0	60 60 0	60 60 0	60 60 0	60 60 0
Radio#	15	16	17	18	19	20	21	22	23	24	25	26		
CMD TX RSP RX DEL UD ENT RQ	60 60 0	60 60 0	60 60 0	60 60 0	60 60 0	60 51 0 0	60 60 0	60 60 0	60 60 0	60 60 0	60 60 0	60 60 0		
==== Sta:	rt Fr	ame 1	4160,	Tota	l Ela	psed	Frame	s 360	====					
Radio#	01	02	03	04	05	06	07	_08	09	10_	11_	12_	13	14
CMD TX RSP RX DEL UD ENT RQ	0 0 0	60 60 0	60 59 0	60 60 0	60 60 0	60 59 0	60 60 0	60 60 0	60 60 0	60 60 0	60 59 0	60 60 0	60 60 0	60 60 0
Radio#	15	16	17	18	19	20	21	22	23	24	25	26		
CMD TX RSP RX DEL UD ENT RQ	60 59 0 0	60 59 0	60 60 0	60 60 0	60 60 0	60 50 0	60 53 0 0	60 60 0	60 60 0	60 60 0	60 60 0	60 60 0		
=======	Test	Data	Sumn	nary =	====	==								
Radio#	01	02	03	04	05	06	07	_08	09	10_	11	12_	13	14
CMD TX RSP RX DEL UD ENT RQ	78 44 3 0	360 0	360 360 0	355 3 0 0	60 3 0 0	60 ³⁶⁰ 3	50 36 0 0		360 360 0	360 359 0	360 318 0 0	360 360 0 0	360 360 0 0	360 0 0
Radio#	15	16	17	18	19	20	21	22	23	24	25	26		
ŘSP ŘX	360 346	338	360 360 3	360	3 6 0 35;	351 314	351 3 34 3	360	360 3 354	360 359	360	3 6 0 354		
DEL UD ENT RQ	8	200	0	ŏ ₀	0	10	i		ŏ oo		0	8		
Frame ra Total nu Total nu Total nu	mber mber	of fr	ames L UPD	= 360 T fra	mes =									

====	Start	Fra	ame 1	4100,	Total	Elap	sed	Frames	300	====					
Radi	o#	٥1	02	0.3	04	05	06	07	08	09	10_	11	12	<u>13</u>	14
CMD I	RX TX UD	8 8	50 58 0	53 56 8	59 59 0	50 60 0	52 54 8	59 59 8	58 60 8	8 0 0	8	58 0 0	59 0 0	0 58 8	0 58 8
Radi	•	-	16	17	18	19	20	21	22	23	24	25	26	0	0
CMD I	RX TX UD	-15- 0 0	58 60 0	58 60 0	60 60 0	60 60 0	0	60 60 0	60 60 0	60 60 0	60 60 8	60 60 0	60 60 8		
====	Dour			4160,	Total	_		Frames		====				4.0	4.
Radi	<u>o#</u>	01_	02	03_	04	05	06	07	08	09	_10_	11	12_	13_	14
RSP DEL	RX TX UD RQ	0000	56 55 0 0	57 51 0 0	60 57 0 0	55 60 0 0	57 50 0 0	60 57 0 0	60 60 0	0 0 0	0 0 0	58 0 0	58 0 0	55 0 0	0 59 0 0
Radi	o#	15	16	17	18	19	20	21	22	_23	24	25	26		
RSP DEL	RX TX UD RQ	0	59 60 0	59 60 0 0	60 60 0	60 60 0	0 0 0	40 47 0 0	60 60 0 0	60 60 0 0	60 60 0	60 60 0	60 60 0		
====	==== 1	est	Data	a Summ	ary ==:	-====	=								
Radi	o#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
RSP	RX TX UD RQ	78 44 0 3	319 0	330 333 31 0	358 7 349 0 0	317 360 0	326 310 0		355 3 59 0 0	0 0 0	0 0 0	347 0 0	353 0 0	340 0 0	351 0 0
Radi	₽#	15	<u>16</u>	17	18	19	20	21_	22	23	24	<u>25</u>	26		
RSP	TX TX RQ	0	332 336 0	0	360 35 0	0	157 15;	() () 0	360 354 0	360 359 0	360 354 0		
EBT	ĸų	Ō	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 RQS7 frames = 10

(Cell 4) HE & Radio #22: Data collected at HE

** Data	from	file	0916	1310.10	g									
==== Sta	art Fra	ame 3	515,	Total	Elap	sed	Frames	s 60	====					
Radio#	01	02	03	04	05	06	07	0.8	09	10	11	12	13_	14
CMD TX RSP RX	0	60 57	60 58	60 60	60 59	60 56	60 60	60 60	60 60	60 60	60 58	60 60	60 59	60 60
RSP RX DEL UD ENT RQ	0	0	0	0	0	0	8	0	0	0	0	0	0	0
Radio#_	15	16	17	18	19	20	21	22_	23	24	25	26		
CMD TX RSP RX	60 59	60 60	60 60	60 60	60 60	60 60	60 60	60 60	60 60	60 59	60 60	60 60		
DEL UD ENT RQ	ő	ő	ő	ŏ	ŏ	ŏ	ő	ő	ŏ	ő	ŏ	ő		
		•	٠	_	-	_			-		·	Ů		
==== Sta				Total	_						11	12	12	14
Radio#_	01	02_	03	04	<u>05</u> _ 51	06 	<u>07</u> 57	<u>08</u> _ 57	09_	<u>10</u> 57	. <u>. 11</u> 57	<u>12</u>	13 57	57
CMD TX RSP RX	0	57 57	57 52	57 57	43	57 55 0	57	57	57 57	57	55	57	57	57
RSP RX DEL UD ENT RQ	8	8	8	0	0	ŏ	0	8	0	8	ö	8	0	8
Radio#	15	16	17	18	19	20	21	22	23	24	25	26		
CMD TX RSP RX	57 57	57 57	57 57	57 57	57 57	46 38	51 42	57 57	57 57	57 57	57 57	57 57		
DEL UD ENT RQ	Ö	Ö	Ö	0	ò	0	1	0	0	Ö	8	0		
•	-	-	•	_	-			100						
sees Sta				Total	_									
Radio# CMD TX	<u>01</u> 0	02 60	03 60	04 60	05 60	<u>06</u> 60	<u>07</u> _ 60	<u>08</u> 60	09 60	<u>. 10</u> 60	<u>11</u> 51	<u>12</u> _ 60	13 60	60
RSP RX	ŏ	58 0	56	60	59 0	55	60	60	60	ĕŏ	36 1	6ŏ	60 59 0	60
DEL UD ENT RQ	ŏ	ŏ	ŏ	ŏ	ŏ	ŏ	ŏ	ŏ	ŏ	ŏ	ō	ŏ	ŏ	ŏ
Radio#	15	16	17	18	19	20	21	22	23	24	<u>25</u>	<u>26</u>		
CMD RSP If	60 54	60 60	60 60	60 60	60 59	60 60	60 60	60 60	60 60	60 60	60 60	60 60		
RSP If DEL UD ENT RQ	8	8	8	0	8	8	8	8	8	8	8	Ö		
			C											
====== Radio#	= lest 01	02	. Sum n	04	05	 06	07	08	09	10	11	12	13	14
CMD TX		177	177	177	171		177	177						
RSP RX DEL UD	0	172	116	6 177 0 0	161 1	177 166 0	177	177' :	$1777 \\ 1771 \\ 0$	777 77 1	49 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	177 L7;:	177 175 0	177 177 0
ENT RQ	ŏ	8	0	0	0	Ō	Ō	0	0	0	0	0	0	Ō
Radio#_	15_	16_	17	18	19	20_	21	22_	23	24	25	26		
CMD TX RSP RX	177 170	177 17	177 9 1	7^{177}_{7}	177 7 17 0	166 158	171 1 62	$\frac{177}{177}$		177 176	177 17;	$\frac{177}{177}$		
DEL UD EBT RQ	0	0	0	0 0	0 0	0 1	0	0 0	o 0	o 0	0	0		
Frame 1	rango "	= 251	5 ->	3601										
Total n	umber 🤈	of fra	ames	= 180		4								
Total no	umber	of EE	T RUS	T fram	nes =	0								

(Cell 4) HE & Radio #22: Data collected at Radio #22

** Data	from	file	0916	1315.10	og									
==== St	art Fra	ame 3	515,	Total	Elap	sed E	Frames	60	====					
Radio#	01	02	03	0.4	05_	06	07	0.8	0.9	10	11	<u>12</u>	13	_14
CMD RX RSP TX	8	0	3	8	1	0	0	0	8	0	0	8	0 2 0 0	0
BBY RQ	8	8	8	8	8	0	0	8	0	0	8	0	8	8
Radio#	15	16	17	18	19	20	21	22	23	24_	25_	<u>26</u>		
RX BP TX	0 14	60 60	60 57	60 60	60 43	0 33	60 60	60 60	60 60	60	60 60	60 60		
DEL UD ENT RQ	0	8	Ó	ŏ	ŏ	8	ŏ	ő	8	59 0	ŏ	ŏ		
PN ING	v	O	v	Ū	J	0	U	U	O	U	Ū	Ü		
==== St					_		Frames		====					
Radio#	⁰¹	02	03	04	05	06_	<u>07</u>	08	09	10_	11	12_	<u>13</u>	<u>14</u> 0
CMD RX BSP TX	o o	3	9	8	0	0	0	0	0	0	0	0	0	000
ĔŇŤ ŘQ	ó	ŏ	ŏ	ŏ	ŏ	ŏ	ŏ	ŏ	ŏ	ŏ	ŏ	ŏ	ŏ	ŏ
Radio#	15	16_	17	18	19	20	21	22	<u>23</u>	24_	25	26		
CMD RX RSP TX DEL UD	0 1	48	56 48	53 52	52 25	0 1	11 11	60 60	60 60	60 60	60 60	58 60		
ENT RQ	8	8	8	8	0	8	0	8	8	8	8	8		
==== St	art Fr	ame 3	635.	Total	Elar	sed I	Frames	180	====					
==== St Padis#				Total	Elap	osed I		180 08		10	11	12	13 _	14_
==== St CMD-RX RSP TX	01	ame 3	635, 0 <u>8</u> -		0.5 O	<u>06</u> _	Frames		<u>09</u> 0	<u>10</u> _		<u>12</u>	1 3	<u>14</u> 0
ČMĎÍŘÍ. RSP TX	<u>01</u> 0	<u>0</u> 8	. <u></u> იგ ი	<u>04</u> 8	05 0 0	06 0 0	⁰ 7	<u>08</u> 8	09 0 0	0	2 2 0	0	ŏ o	0 0
endirž RSP TX EBT RQ	01 0 0	<u>0</u> 8-	. <u></u> .60 0	<u>04</u> 8	05 0 0 0	06 0 0	⁰ 7 0 0	<u>08</u> 8	09 0 0 0	0 0 0	2 2 0 0	0 0 0	ŏ	0
ENDIRÄ RSP TX EBT RQ Radio#	01 0 0 0 0	0 0 8 16	0 0 0 17	04 8 8 18	05 0 0 0 0	06 0 0 0 0	0 0 21	8 8 22	09 0 0 0 0 23	0 0 0 0 24	2 2 0 0 25	0 0 0 0 26	ŏ o	0 0
EMDIRX RSP TX BEL HD Radio# CMD RX RSP TX	01 0 0 0 0 15	8 16 0 59	0 0 0 17 56 46	8 8 18 56 49	05 0 0 0 0 19 49 34	06 0 0 0 0 20	0 0 0 21 60 60	8 22 60 60	09 0 0 0 0 23 60 60	0 0 0 0 24 60 60	2 2 0 0 25 60	0 0 0 0 26 52 60	ŏ o	0 0
EMDIRX RSP TX EBT RQ Radio# CMD RX	01 0 0 0 0 0	8 16 0	0 0 0 17 56	8 8 18 56	05 0 0 0 0 19 49	06 0 0 0 0	0 0 0 0 	8 8 22 60	09 0 0 0 0 23 60	0 0 0 0 24 60	2 2 0 0 25	0 0 0 0 26	ŏ o	0 0
RSP TX RSP TX RSP TX Radio# CMD RX RSP TX DEL UD ENT RQ	01 0 0 0 0 15 0 6	8 16 0 59	0 0 0 0 17 56 46 0	8 18 18 49 0	05 0 0 0 0 19 49 34 0	06 0 0 0 0 20 0 9	07 0 0 0 21 60 60	8 22 60 60 0	09 0 0 0 0 23 60 60	0 0 0 0 24 60 60	2 0 0 25 60 60	0 0 0 0 26 	ŏ o	0 0
EMDIRX RSP TX BEL HD Radio# CMD RX RSP TX	01 0 0 0 0 15 0 6	8 16 0 59	0 0 0 0 17 56 46 0	8 18 18 49 0	05 0 0 0 0 19 49 34 0	06 0 0 0 0 20 0 9	07 0 0 0 21 60 60	8 22 60 60 0	09 0 0 0 0 23 60 60	0 0 0 0 24 60 60	2 0 0 25 60 60	0 0 0 0 26 52 60 0	ŏ o	0 0
CMD RX Radio# CMD RX RSP TX DEL TX DEL TX ENT RQ Radio# CMD RX	01 0 0 0 0 15 0 6 0 0	0 8 16 0 59 0 0	0 0 0 17 56 46 0 0 Summ	04 8 8 18 18 56 49 0 0	05 0 0 0 19 49 34 0 0	06 0 0 0 20 9 0	-07 0 0 21 60 60 0	8 8 22 60 60 0	09 0 0 0 23 60 60 0	0 0 0 0 24 60 60 0	2 2 0 0 25 60 60 0	0 0 0 0 26 	0 0	0 0 0 0
EMDIRZ RSP TX Radio# CMD RX RSP TX DEL T RQ ENT RQ Radio# CMD RX RSP TX	01 0 0 0 15 0 6 0 0 0	00-0 8 16-0 59 0 0 Data		04 8 8 18 56 49 0 0	05 0 0 0 19 49 34 0 0	-06 0 0 0 20 -20 0 0	-07 0 0 21 60 60 0	8 8 22 60 60 0	09 0 0 0 23 60 60 0	0 0 0 0 24 60 60 0 0	2 0 0 25 60 60 0 0	0 0 0 0 26 52 60 0 0	ŏ o o o o o o o o o o o o o o o o o o o	0 0 0 0
RADIO TX	01 0 0 0 15 0 6 0 0 0 0 0		0 0 0 17 566 466 0 0 0 Summ 03 3 0 0 0 0	04 8 8 18 56 49 0 0	05 0 0 0 0 19 49 34 0 0	06 0 0 0 0 20 0 9 0 0	-07 0 0 21 60 60 0 0	8 8 22 60 60 0	09 0 0 0 23 60 60 0	0 0 0 0 24 60 60 0 0	2 0 0 25 60 60 0 0	0 0 0 0 26 522 600 0	0 0	0 0 0 0
RADIO TX RADIO TX	01 0 0 0 15 0 6 0 0 Test	0 8 16 0 59 0 0 Data 02 0 1 8	00 00 17 566 46 00 8 Summ 03 3 00 0	04 8 8 18 56 49 0 0 0 0 0 0 0 18	05 0 0 0 19 49 34 0 0 0 5	06 0 0 0 0 20 0 0 0 0	-07-00-00-00-00-00-00-00-00-00-00-00-00-	8 8 22 60 60 0 0	09 0 0 0 23 60 60 0 0	0 0 0 0 24 60 60 0 0	2 0 0 25 60 60 0 0	0 0 0 26 52 60 0 0	ŏ o o o o o o o o o o o o o o o o o o o	0 0 0 0
RADIO TX	01 0 0 0 15 0 6 0 0 0 0 0		0 0 0 17 566 466 0 0 0 Summ 03 3 0 0 0 0	04 8 8 18 56 49 0 0	05 0 0 0 0 19 49 34 0 0	-06 0 0 0 20 0 9 0 0	-07-00 0 0 21-60 60 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	8 8 22 60 60 0 0	09 00 00 00 23 60 60 00 0	0 0 0 0 24 60 60 0 0 0	2 0 0 25 60 0 0 0	0 0 0 0 0 0 152 600 0 0 0	ŏ o o o o o o o o o o o o o o o o o o o	0 0 0 0
EMPLEY RQ Radio# CMD RX RSP TX DEL TX DEL TX DEL TX ENT RQ RADIO# CMD RX RSP TX ENT RQ ENT RQ CMD RX RSP TX	01 0 0 0 15 0 6 0 0 0 == Test 01 0	0 8 16 0 59 0 0 Data 02 0 1 8 - 16 164 0	00 0 0 0 17 566 466 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	04 8 8 18 56 49 0 0 0 0 0 0 0 0 0	05 0 0 0 19 49 34 0 0 5	06 0 0 20 0 9 0 0	-07-00-00-00-00-00-00-00-00-00-00-00-00-	8 8 8 22 60 60 0 0	09 0 0 0 23 60 60 0 0	0 0 0 0 24 60 60 0 0	2 0 0 25 60 60 0 0	0 0 0 0 26 52 60 0 0	ŏ o o o o o o o o o o o o o o o o o o o	0 0 0 0

(Cell 4) HE & Radio #23: Data collected at HE

** Data from file 09161330.log

====	Star	rt Fra	me 5	910,	Total	Elap	sed	Frames	60 =	===					
Radi	o#	01	02	03	04	05	06	07	08	09	10_	11	12	13	14
RSP	TX RX UD RQ	3 2 0 0	60 60 0	60 59 0	60 60 0	60 60 0	60 59 0	60 60 0	60 60 0	60 60 0	60 60 0	60 53 0 0	60 60 0	60 60 0	60 60 0
Radi	0#	15	16	17	18	19	20	21	22	23	24	25	26		
CMD RSP DEL ENT	TX RX UD RQ	60 60 0	60 60 0	60 60 8	60 60 0	60 60 8	60 60 0	60 60 8	60 60 8	60 60 0	60 59 8	60 60 0	60 60 0		
====	Sta	rt Fra	ame 5	970,	Total	Elap	sed	Frames	120	====					
Radi		01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD	TX RX	50 34	60 60	60 57	60 60	60 60	60 60	60 60	60 60	60 60	60 59	60 59	60 60	60 60	60 60
DEL	ŪĎ RQ	0	8	8	8	8	ő	8	8	8	8	11	8	8	8
Radi	io#	15	16	17	18	19	20	21	22	23	24	25	26		
CMD RSP	RX IID	60 58	60 60	60 60	60 60	60 60	60 60	60 60	60 59	60 59 0	60 59	60 60	60 59		
DEL EBT	ĸŖ	8	ŏ	8	8	8	8	8	8	ŏ	8	8	8		
====	Sta	rt Fra			Total	_		Frames	180	====					
Radi		01	02	03	04	05	06	07	_08	09	10	11	12_	13	14
CMD RSP DEL ENT	TX RX UD RQ	33 25 1 0	60 60 0	60 58 0	60 60 0 0	60 59 0	60 60 0	60 60 0 0	60 60 0	60 60 0	60 60 0	60 51 0 0	60 60 0	60 60 0	60 60 0
Rad:		15	16	17	18	19	20	21	22	23	24	25	26		
CMD RSP DEL	TX RX UD	60 60	60 60	60 60	60 60	60 60	60 60	60 60	60 59	60 59	60 59	60 60	60 59 0		
ENT	ŔQ	8	8	8	8	8	8	8	8	8	8	8	Ó		
===:	= Sta	rt Fr	ame 6	5090,	Total	Elaj	psed	Frames	240	====					
Rad	io#	01	02	03	04	05	06	07	0.8	09	10_	11	12	13	<u> 14</u>
CMD RSP DEL	TX RX UD	8	60 68	60 53	60 "8	60 60	60 60 0	60 60 0	60 60	60 60	60 68	60 56	60 60	60 60 0	60 60
ENT	ŔQ	8	0	8	0	0	Ō	Ō	0	8	0	8	8	0	8
Rad	io#	15	16	17	18	19	20	21	22	23	24	25_	26		
CMD RSP DEL ENT	HI UD RQ	60 60 8	60 60 8	60 60 0	60 60 0	60 59 8	60 60 0	60 60 0	60 60 0	60 60 8	60 60 0	60 60 0	60 60 8		

(Cell 4) HE & Radio #23: Data collected at Radio #23

** Data from file 09161335.log

==== Sta	rt. Fra	ame 5	910.	Total	Elar	sed	Frames	s 60	====					
Radio#	01	02	03	04	05	06	07	0.8	09	10_	11_	12_	13	14
RSP TX	8	8	8	8	8	8	8	8	8	8	8	8	8	8
EBT RO	8	8	8	8	8	8	8	8	8	8	8	ő	ő	8
	-	-	-		-	-	-	-	-	-	-	-	U	0
Radio#_ CMD RX	o =		L5 :	161 0	<u></u>	8 0	19 <u>20</u> 60	2 <u>1</u> 60	_ <u>22_</u> 60	<u>23 2</u> 60	<u>4 2</u> 5. 60	26 0		
RSP TX	ŏ	0	ö	ŏ	ŏ	8	60	ĕŏ	60	5 <u>9</u>	6ŏ	6ŏ		
DEL UD Ent rq	ŏ	ŏ	ŏ	ŏ	ŏ	ŏ	ŏ	ŏ	ŏ	ŏ	ŏ	ŏ		
==== Sta	rt Fr	ame 5	970,	Total	Elap	sed	Frames	120	====					
Radio#	01	02	0.3	04	05	06_	07	0.8	09	10_	_11	12	1.3	14
CMD RX		0	8	0	0	0	8	0	0	0	0	8	0	0
RSP TX DEL UD	8	_		8	ŏ	8	8	ŏ	ŏ	ŏ	8	ŏ	ŏ	000
ENT RQ Radio#	8	8 15	8 16	1 7	18	19		_	2 23	_	25	26	·	Ü
CMD RX		10.		<u>_</u>		0	60			59	59 60	0		
RSP TX DEL UD	8	8	8	8	Ŏ	10	60	59 59	59 59	59	60	59 0		
ĔŇŤ ŘQ	8	8	8	8	8	8	8	8	8	8	Ŏ	Ŏ		
==== Sta	art Fr	rame	6030,	Total	Elaj	psed	Frame	s 180) ====	:				
Radio#	01	02	03	04	05	06	07	_08	09	10	11	12	13	14
CMD RX RSP TX DEL UD	0	8	0	0	0	0	0	0	0	0	8	0	8	0 0
ĎĔĹ ÚĎ ENT RQ	ŏ	8	Ŏ	Ŏ	Ŏ	Ŏ	Ŏ	8	Ō	Ö	8	Ô	Ŏ	Ŏ
Radio#	15	16	17	18	19	20	21	22	23	24	25	26	•	
CMD RX		0			0	o O	60	59	59	59	59			
RSP TX DEL UD	0	0	8	8	0	4 0	60 0	59 0	59 0	59	60	59		
ENT RQ	Ō	Ō	8	0	8	0	0	0	0	8	8	8		
==== Sta	art Fr	ame 6	5090,	Total	Elap	psed	Frame	s 240) ====	:				
Radio#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD RX RSP TX	8	8	0	0	8	8	8	8	8	8	0	0	8	8
RSP TX DEL UD ENT RO	ŏ	8	ŏ	ŏ	8	8	Ŏ	Ŏ	Ŏ	Ŏ	Ŏ	Ŏ	8	0
Radio#	15	16	17	18	19	20	21	22	23	24	25	_ 26	3	•
CMD RX	-	0	0	<u>o</u>	0	0	60	60	60	60	60	34		
RSP TX DEL UD	0	8	24 0	8	0	43 0		60 0	60 0	60 0	60 0	60 0		
ENT RQ	Ō	Ō	Ō	Ō	Ō	Ō	8	0	0	0	0	0		

====	Star	rt Fra	ame 6	150,	Total	Elap	sed F	'rames	300	====					
Radi	<u>o#</u>	01_	N 2_	U.3_	04_	05_	<u> </u>	07	NΑ	<u> 19</u>	10	11	12	13	14
DEL	RX UD	8	60 60 0	60 58 0	60 60 0	60 60 0	60 60 0	60 60 8	60 60 0	60 60 8	60 60 8	60 47 0 0	60 60 0	60 60 0	60 60 0
ENT Radi	•	15		17	18	19		21				25		O	U
CMD	TX	60	16 60	-±/ 60	-±≏ 60	60	2 <u>0</u> 60	60	<u>22</u> 60	. <u>23</u>	<u>24</u> 60	60	.2ક્દ 60		
RSP	ŔŶ UD	"8	ĕŏ	60	ĕŏ	6ŏ	60	60	ĕŏ	60	6ŏ	60 0	60		
ĒNĪ		Ŏ	Ŏ	Ō	Ō	Ō	8	8	0	8	0	0	8		
====	Sta	rt Fr	ame 6	210,	Total	Elaj	psed F	rame	s 360	====					
Radi	o#	01_	N 2_	U 3-	04	<u> </u>	06	07	NΑ	<u> 19</u>	10_	_11	12	13	14
CMD RSP	ΤX	2	60 60	60 57	60 59	60 60	60 60	60 59	60 60	60 60	60 60	60 48	60 60	60 60	60 60
	UD	Õ	ŏ	8	8	Ŏ	8	8	8	8	8	8	8	8	0
Radi	-	15	16	17	18	19	20	21	2.2	23_	2.4	2.5	26	_	_
CHD			TX		60	60	60 60	60	60 60	0 60	60	60 60	60		
RSP DEL	RX UD	0		0	58	O	59 59	U	60 ₀ 5	9 59		58 59	590		
EBT	RQ	Ō	8	0	8	0	8	0	0	0	8	8	0		
====	Sta	rt Fr	ame 6	270,	Total	Ela	psed I	rame	s 403	====					
Radi	io#	01_	0.2_	03	04	05	06	07	0.8	<u> 19</u>	10_	11	12	13	14
CMD RSP	RY	26 9	42 42	42 40	42 42	42 42	42 42	42 42 0	42 42	42 42	42 42	42 35	42 42	42 42	42 42
ĎĔĹ EBT	UD	Ž	8	8	8	8	8	8	0	8	8	8	8	8	8
Rad	•	15	16	17	18	19	20_	21_	22	23	24_	25	26_		
CHD RSP	ŢX	42	42	42 42	42 42	42 42	42 42	42 42	42 42	1%	42 41	42 42	42 42		
DEL	עט	42 0	42			0	0	4. 2	8	0 0	0	0	8		
EBT	ĸŲ	O	8	8	8	0	0	0	0	U	U	Ü	0		
====	====	Test	Data	Summ	ary ==	====	==								
Rad:	io#	∩1_	N2_	N 3	∩4	05	06_	07	N.R.	<u> 19</u>	10	11	12_	_13_	14
CHD RSP	TX RX	114 72	402 402	402	402 82	402 101	402 401	402 401 4	01 402	402 402	401	2 402 349	402 402	402 402	402 402
DEL EBT	UD	72 4 0	o O	o O	8	0	Ō	- ō	0 0	5 7 6	Ō	~ ō	8	8	0
Rad	•	15	16	17	18	19	20	21_	2.2	2.3	2.4	2.5	26		
CMD	TX	402	402	402	402	402	402	402		402 399 3		402	402 399		
RSP Del	UD	398 O		0	1 401	39	(2 401	0	0	0	401	399		
EBT	RQ	0	0	0	0	0	0	0	0	0	0	8	U		
Erra		0000	- FO												
					6312										
Tota	al nı	mber	of fr	rames	6312 = 403 T fram ST fram	mes =	= 4								

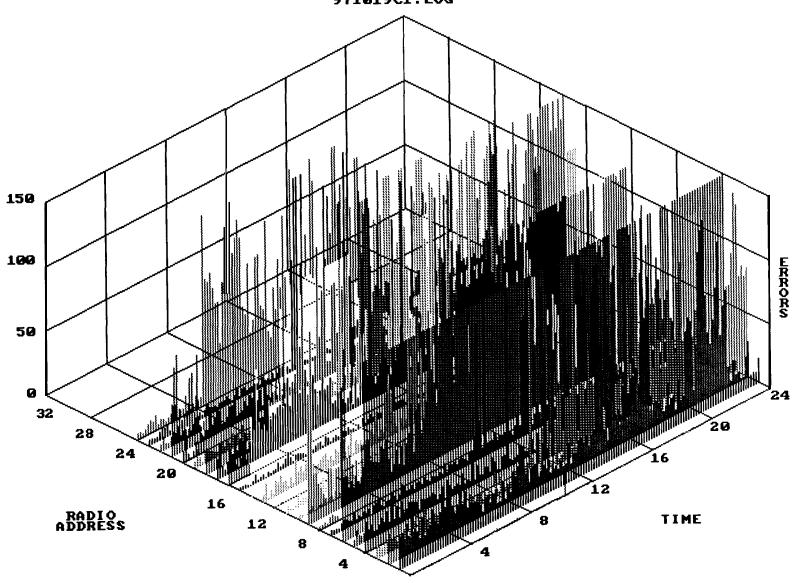
====	Sta	art Fra	ame 6	150,	Total	Elap	sed F	rames	300	====					
Radi	o#	^1.	∩ 3	∩ვ_	na.	UE-	٥٤	07.	ΛΩ	na	10	11	12	12	14
	RX	o O		Ŏ	0	8	8	8	0	0	8	8	8	0	8
EBB DEL	IJD	ŏ	8	0	Ō	0	8	8	ŏ	ŏ	8	8	8	8	8
ENT :	•	1.5	8 16.	0 17	0 1 8	19	20		_			_25	26	Ü	Ü
Radi CMD		1 <u>5.</u> 0				19		21 60	<u>22</u>	- <u>-23</u>	24 60	- <u>-2</u>	$-\frac{20}{41}$		
RSP	TX	ŏ	ŏ	3 4	8 0	8	6Ŏ	60 0	60 0	60	60	60	60		
DEL EBT	UD R q	ŏ	ŏ	ŏ	ŏ	ŏ	ő	ŏ	ŏ	ŏ	ŏ	ŏ	8		
====	Sta	art Fra	ame 6	210,	Total	Elar	sed E	rames	360	====					
Radi		nj.	n.2.	ΛZ	Λ4_	ቢፍ	06	0.7	<u> </u>	nα	10	11_	12_	13	_14
CMD RSP			o Q	<u>o</u>					Ŏ	ŏ	ò	0	8	0	8
RSP DEL	TX UD	8	0	0	8	8 0	8	8	ò	0	0	Ō	Ō	8	
ENT	RQ	8	0	0	8	0	8	8	0	0	0	0	0	8	8
Radi	0#	15_	16-	17.	18	19	20	_21	22	_23	24	25	<u> 26</u>		
CMD	RX TX	8	8	0 36	0	8	0 54	60 60	60 60	60 60	60 59	60 60	39 60		
RSP DEL ENT	ΪΧ̈́	8	Ŏ	Ŏ	0	0	0	8	8	0	0	8	0		
En 1	red	Ū	Ū	Ū	U	·	Ū	ŭ							
	O.L.														
	Sta	art Fr	ame 6			_		Frames							
Radi	0#_	nj_	ame 6	U 3_	<u> </u>	ns.	nsed 1	07	NΑ	<u>na</u>	10	_11	12_	_13	_1_4_
Radi	0#_ RX		∩2_ 0		<u>∩4</u> 0	_			0 0	0 0	10 0 0	_ <u>11</u> _0 _0	0	0	0
Radi	0#_ RX	0 0 0	0 0 0	03_	<u> </u>	05.	06	<u>07</u>	<u>0</u>	<u>0</u>	0	0	0	0	_
Radi CMD RSP DEL ENT	RX TX UD RQ	0 0	0 0	0 0 03 ⁻	0 0 0 0 0	05. 8 0	<u>ne</u> 8	0	0 0 0	0 0 0	0	8	0	0	0
Radi CMD RSP DEL ENT Radi	RX TX UD RQ	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	05. 8 0 0	06 8 8 20 0	0 0 0 8 21	0 0 0 0 0	0 0 0 0 0	0 8 -24 -51	0 0 8 - 25 - 51	0 0 0 0	0	0
Radi CMD RSP DEL ENT Radi CHD RSP	RX TX UD RQ io#	0 0 0 0 0 15-	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	05. 8 0	0 48	0 0 8 21 51	0 0 0 0 0 0 22 51 51	0 0 0 0 0 0 -23 -51	0 8 24 51 50	0 0 8 - 25 - 51 51	0 0 0 0 26 38 51	0	0
Radi CMD RSP DEL ENT Radi	RX TX UD RQ io#	0 0 0 0 0	0 0 0 0 16.	0 0 0 0 17.	0 0 0 0 0 18	05. 8 0 0	06 8 8 20 0	0 0 0 8 21	0 0 0 0 0	0 0 0 0 0	0 8 -24 -51	0 0 8 - 25 - 51	0 0 0 0	0	0
Radi CMD RSP DEL ENT Radi CHD RSP DEL EBT	RX TX UD RQ O# RX UD RQ	0 0 0 0 0 15_	0 0 0 0 0 16.	0 0 0 0 0 17.	0 0 0 0 0 0 18	05. 8 0 0	8 8 20 0 48	0 0 8 21 51	0 0 0 0 0 0 22 51 51	0 0 0 0 0 0 -23 -51	0 8 24 51 50	0 0 8 - 25 - 51 51	0 0 0 0 26 38 51	0	0
Radi CMD RSP DEL ENT Radi CHD RSP DEL EBT	RX TX UD RQ Io# RX TX UD RQ	0 0 0 0 0 0	0 0 0 0 0 16.	0 0 0 0 0 17.	0 0 0 0 0 0 18	05. 8 0 0	8 8 20 0 48	0 0 8 21 51	0 0 0 0 0 0 22 51 51	0 0 0 0 0 0 -23 -51	0 8 24 51 50	0 0 8 - 25 - 51 51	0 0 0 0 0 26 38 51 8	0 0 0 0	0
Radi CMD RSP DELT RADI CHD RSP DEL EBT	RX TX UD RQ io# RX UD RQ io#	00 00 00 00 15_ 00 00 00	0 0 0 0 16. 0 0 0 0	0 0 0 0 0 17. 29 0 0 0 0 Summ	00 00 00 18 00 00 00 00 00 00 00 00 00 00 00 00 00	05. 80 0 19 80 0	8 8 20 48 8	0 0 8 21 51 51 8	0 0 0 0 0 22 51 51 8	0 0 0 0 0 0 0 51 51 8	0 0 8 24 51 50 8	0 0 8 25 51 51	0 0 0 0 26 38 51 8	0	
Radi CMD RSPL ENT Radi CHD RSP DEL EBT	RX TX URQ io# RX TX URQ RQ RQ RQ RX URQ	00000000000000000000000000000000000000	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 17. 0 29 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	00000000000000000000000000000000000000	05. 8 0 0 19 8 0 0	0 48 8 8 8 8 8 8	0 0 8 21 51 51 8 0 8	0 0 0 0 0 22 51 8	0 0 0 0 0 0 23 51 51 8	0 8 24 51 50 8	0 0 8 -25 -51 51 8	0 0 0 0 26 38 51 8	00000	
Radice CMD RSP DEL ENT Radice CMD RSP DEL ENT RADICE CMD RSP DEL ENT	RX TX UDQ RQ LO# LO# LO# LO# LO# LO# LO# LO# LO# LO#	00000000000000000000000000000000000000	00 00 00 16. 00 00 00 00 00 00 00 00 00 00 00 00 00	0 0 0 0 0 17. 0 29 0 0 0 0 Summ 03. 8	00000000000000000000000000000000000000	05. 800 019 800 000	0 48 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	0 0 8 21 51 51 8	0 0 0 0 22 51 8 8 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 8 24 51 50 8 10 0	0 8 -25 -51 51 8	0 0 0 0 0 26 38 51 8	0 0 0 0	
Radi CMD RSP DEL ENT RADI CHD RSP DEL EBT RADI RSP DEL ENT RADI	RXX TXD RQ IO# IO# IO# IO#	00000000000000000000000000000000000000	00000000000000000000000000000000000000	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0000 18 0000 0000 18 0000 0000 0000 18 18	05. 8 0 0 19 8 0 0	8 8 8 20 48 8 == 0 0 0 20	0 0 8 21 51 51 8 0 8	0 0 0 0 22 51 51 8 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 8 24 51 50 8 10 0 0 0	0 0 8 25 51 51 8	0 0 0 0 26 38 51 8	00000	
Radical CRSP DELT RADICAL CRSP CRSP DELT RADICAL CRSP DELT RADICAL CRSP CRSP CRSP CRSP CRSP CRSP CRSP CRSP	RXX TUD RQ IO# RXX TUD RQ IO# RXX TUD RQ IO#	00000000000000000000000000000000000000	00000000000000000000000000000000000000	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	00000000000000000000000000000000000000	05. 800 019 800 000	0 48 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	0 0 8 21 51 51 8 0 8 0 21 411 411	0 0 0 0 0 22 51 51 8 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 23 51 51 8 0 0 0 0 0 23 409	0 8 24 51 50 8 10 0	0 0 8 25 51 51 8 0 8 0 25 409 411	0 0 0 0 26 38 51 8 51 0 0 0 0 152 409	0 0 0 0	
Radi CMD RSP DEL ENT Radi CHD RSEL EBT Radi CMD RSEL ENT Radi CMD RSEL ENT	RXX TUD RQ IO# RXX TUD RQ IO# RXX TUD RQ IO#	00000000000000000000000000000000000000	00000000000000000000000000000000000000	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0000 18000 0000 18000 0000	05. 800 019 800 000 000 000 19	8 8 8 20 48 8 8	0 0 8 21 51 51 8 0 21 0 8 0 21	0 0 0 0 22 51 51 8 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 8 24 51 50 8 10 0 0 0 0	0 0 8 25 51 51 8	0 0 0 0 26 38 51 8 51 0 0 0 0 152 409	0 0 0 0	
Radi CHD RSP DELT RADI CHD RSP DELL EBT RADI CMD RSP DELT RADI CMD RSP DELL ENT	RXX UDQ FRXX TVDQ RXX UDQ RXX	00000000000000000000000000000000000000	00000000000000000000000000000000000000	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	00000000000000000000000000000000000000	05. 800 19 800 05 00 19	8 8 8 20 48 8 8 == 06 0 0 20 22;	0 0 8 21 51 8 0 0 8 0 21 411 411	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	8 24 51 50 8 10 0 0 0 0 24 409 4060	0 0 8 25 51 51 8 0 8 0 25 409 4110	0 0 0 26 38 51 8 12 0 0 0 0 152 409	0 0 0 0	

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%.

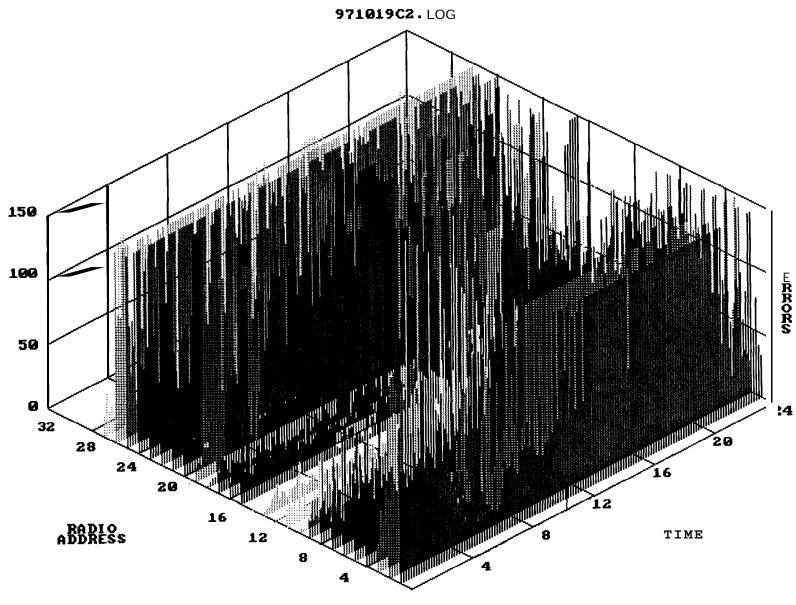
LADOT SPREAD SPECTRUM RADIO PROJECT 24-HOUR COMMUNICATION ERROR GRAPH 971019C1.LOG



ADOT SPREAD SPECTRUM RADIO PROJECT 24-HOUR COMMUNICATIONS ANALYSIS 971019C1.LOG

Radio Address	Good Frames	Totals Bad Frames	Missed Frames	Frame Thruput (%)	Avg	Values Max Good	in 2-M Total Good	inute Avg Bad	Periods Max Bad	Total Bad
Address 01 12 23 45 67 89 10 112 113 114 115 117				-965.5362937475752965.788.3956233752433956366699888.3975246666999722475752466699972247		Good - 8424344555116771915634	Good 6141 8145 13567 15579 15244 1364477 1547	1449855544249146487	Ba 222593961813159529722	84 - 60588543208800153457223144 - 7667566680001533457233144
18 129 221 223 24	169130 168762 170428 167247	3430 3798 2132 5313	240 240 240 240	98.012 97.799 98.764 96.921	1 1 1	4 2 8 4	145 119 267 1 00	5 6 2 8	-31 62 14 59	574 600 452 619

LADOT SPREAD SPECTRUM RADIO PROJECT 24-HOUR COMMUNICATION ERROR GRAPH



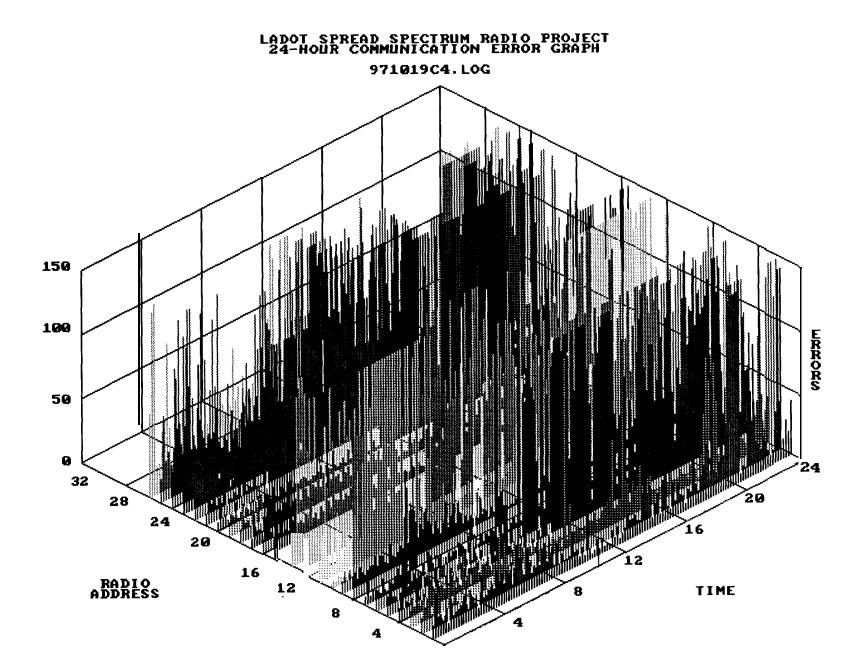
LADOT SPREAD SPECTRIM RADIO PROJECT 24-HOUR COMMUNICATIONS ANALYSIS 971019C2.LOG

				Frame	Values		in 2-Minute		Periods	
	C3	Totals	Missed	Thruput	Avg	Max	p & 1	Avg	<u>Max</u>	Total
Radio	Good Frames	Bad Frames	Frames	(%)	Good	Good	_	Bad	Bad	Bad
Address	L T-STATE 2	1 1 dove 3							2	36
0	172286	274	240	99.841	18	126	683 Ø	359	450	719
•	149089	23471	240	86.338		Ø Ø	ĕ	359	4 <u>5</u> 0	719
2	152240	20320	240	86.398 88.224 87.532			ĭ	239	450	718
3	151046	21514 18123	240 240	86.798	ģ	þ	ē	359	450	719
4	154437 154732	17828	240	89.669	ī	1	1	359 359 359 359 279	450	318
2	160442	12118	240	89.498 89.669 92.978	1	ļ	į	733	450 450	516
3	158013	14547	240	91.570	ļ	Ť	1	239 50 78	369	ว่ดวั
ġ	160592	11968	240	93. 064 94. 901	÷	ż	1 <u>2</u>	วัล	376	710
9	163761 169939 166494	8729	240		†	ž	21Ź	·š	48	507
10	169933	2621 6066	240 240	96 485	ī	Ž	212 42	1 <u>6</u> 25	្ទទីទី	677
} }	168081	4479	240	97.404	ī	1262249221	28 124 188	25	166	525
15	169692	2868	240	98.338	1	.4	124	Ē	36 50	북장감
14	167831	4729	240	97.260	ļ	าผั	កង់ដ	41	216	7 0 1
1 5	161901	4729 10659 5438	240	93.823	†	5	18 17	6 5 41 39	229 450	702
16	167122	5438	240	986.488996969696969696969696999999999999	Ť	ĩ	1	239	450	71189 771187 771187 77117777 7715 6793 7715 7719 7719
17	147878 169292 153077	24682 3268	240	98.166	1	10	26 <u>3</u>	_3	15	426
fά	153635	19483	240 240	88.709	1	_3	16	50 179 359	241 450	717
する	160768	11792	240	93.166	Ţ	Ä	4	752	450	719
21	162035	10525	240	93.991	×	Z	ä	359	450	719
2 2	162035 159522	13038	240 240 240	38.535	<u> </u>	9 9	ធ័	359	450	719
23	156228	16332	240 240	48:314	ĭ	ĭ	Ž	359 359 179	<u> 269</u>	717
24	155846 142748	16714 29812	240	90.314 82.724	ī	ī	1620000210515	239	450	718
<u> </u>	138290	34270	240	ХИ. 140	6	1 2 2	. 9	359	450 341	719 7 04
123456789012345678901234567	163058	9502	240 240 240	94.494	1	2	15	44	341	10-1

LADOT SPREAD SPECTRUM RADIO PROJECT 24-HOUR COMMUNICATION ERROR GRAPH 971019C3.LOG ERRORS RADIO ADDRESS TIME

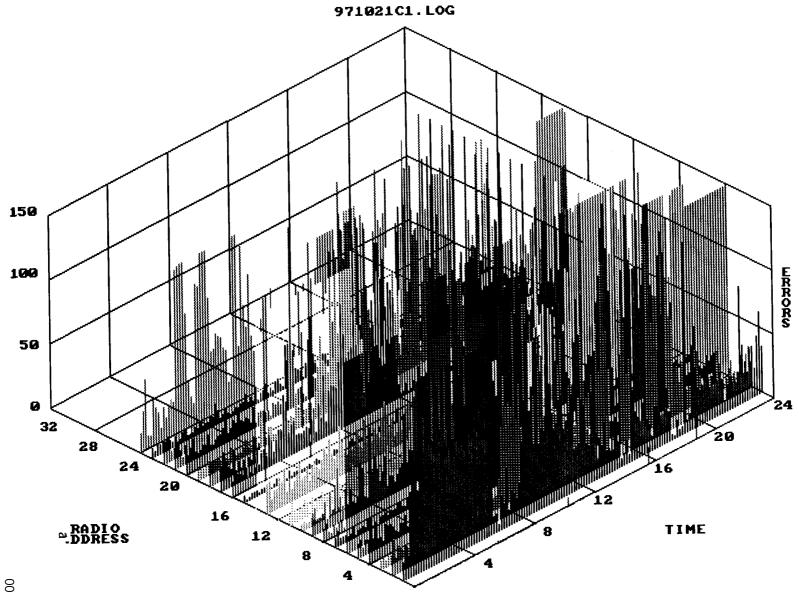
LADOT SPREAD SPECTRIM RADIO PROJECT 24-HOUR COMMUNICATIONS ANALYSIS 971019C3.LOG

Radio	_Good	Totals _ Bad	Missed	Frame Thruput	Avg Good	Values Max Good	in 2-M T&:21	linute] Avg Bad	Periods Max Bad	Total Bad
Address	Frames	Frames	Frames	(%)						46
0	172276	284	240	99.835 97.783	14	132 3	673 61	12	72	658
1/2	168734	3826 13297	240 240	92.294	i	1	5	102	269 38	714 204
3	159263 169898	2662	240	98.457 98.886	1	3	123 187 25	4	26	532
4 5 6	170638	1922 5012	240 240 240	97.096	i	<u>ž</u>	725	26	129 40	658 714 596 532 694 572
ĕ	167548 170269	5012 2291	240	98.672 98.227	1	เตเกนเกตซิจตณตตณเก	147 119		148 450	666
7	169500 149717	3060 22843	240 240	86.762	Ø	ĕ	0	359	450	719
8	171389	1171	240 240 240	99.321 98.271 97.705	2	3	36Ø	2 6	18 90	608
10 112 123 145 117	169577	2983 3961	249 249 249 249 249 249 249 249 249	37:76 5	i	ž	111 67 85 81 66 154	10	86	652
12	168599 169546	3961 3014	240	98.253 97.871 97.265	1	3	85 81	9	47 90	638
13	168887 167840	3673 4720	240	97:265	į	<u>ž</u>	<u>6</u> 6	1 <u>1</u> 5 3 6	151	<u> 653</u>
13	170374	4720 2186	240	98.733	1	5	154 215	3	40 28	504
16	170913 168074	1647 4486	240	98.733 99.046 97.400	i	4	215 118	Ģ	188	601
18	171473	1.087	240	99.370 99.212 99.555	į	11,	413 275	3	14 27	360 444
12	171200 171792	1360 768	240	33:555 39:555	ż	13	425	1	10	224
18 19 20 21 22	170311	2249 523	240	98.697 99.697	13	23 23	162 510	ว	5 <u>6</u>	6999824835541644479 6736653355541644479 6736666555634255
22	172037	523	240	77.677	- 3	23	OID	_	_	



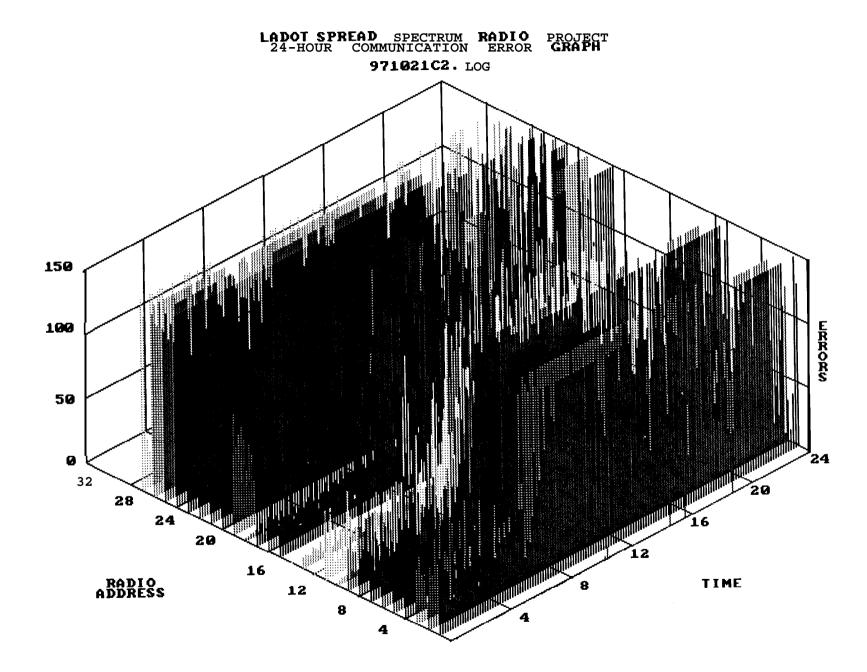
Radio Address	Good Frames	- Total Bad Frames	Missed Frames	Frame Thruput (%)	Avg Good	Values Max Good	in 2-M Total Good	linute Avg Bad	Periods Max Bad	Total Bad
edre 1951 1951 1951 1951 1951 1951 1951 195			Frames 240 240 240 240 240 240 240 240 240 240	% 35244829 971783774620187999999999999999999999999999999999999	14 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Good 800000000000000000000000000000000000	Good 	Bad 139 120 1182 164 95 1629 227 35922	2536490 1235490 123507810 12350781044 45244	Ba %13597325690983
116789Ø1223456	1693494 169382 169384 169283 1568231 1568231 161858 163612 160117 164823	19252 12178 32767 32797 128299 107028 11943 11443 17737	240 2440 2440 2240 2240 2240 2240 2240	948.1948 948.1948 998.1948 998.5798 998.5798 998.3516 998.3516	111111111111111111111111111111111111111	01343444211122	104 93 99 1104 144 155 211 188	7876761545 142546 25324	2049 2049 415 1864 22269 1309	66666666666666666666666666666666666666

LADOT SPREAD SPECTRUM RADIO PROJECT 24-HOUR COMMUNICATION ERROR GRAPH



971021C1.LOG

Radio Address	Good Frames	Totals Bad Frames	Missed Frames	Frame Thruput (%)	Avg	Values Max Good	TOO:'	inute Avg Bad	Periods Max Bad	_Bad_
0123456789012345678901234 11111111222224	172242 158728 164829 164829 1654329 1674329 170518 1574380 170518 1571803 170518 17169573 17169573 17169318 1772684 1772684 1674264 16	31320 31320 1389461 177531 15123802 2047687 18248430 2047687 324841 2047687 3184130 1522776 1522776 1522776 1522776 1522776 142310 1522776 142310 1522776 142310 14		99.81644954599999999999999999999999999999999		5223434441659550255325554 1	621621688165990035547808877099 1128	1182030449162651033935739 1 311 2	1243940 1243940 12437 214427 2146 1575 172437 2192337 184 192337 184 184 184 184 184 184 184 184 184 184	5797831183409964521912290 676667557364563666665646



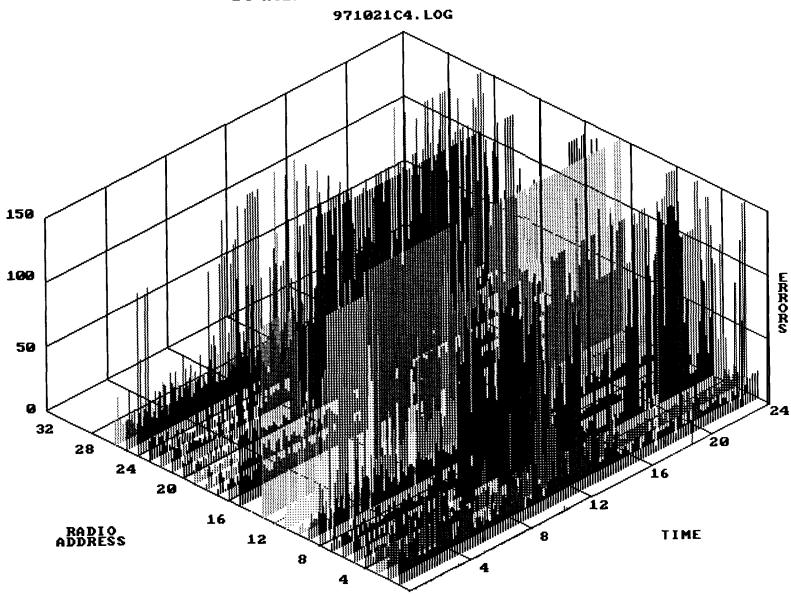
Radio Address	Good Frames	Totals Bad Frames	Missed Frames	Frame Thruput (%)	Good	Values Max Good	in S-M Total Good	inute Avg Bad	Periods Max Bad	Total Bad
9123456789912345678991234567 11111111122222222				-9.24.629.63.7.69.88.88.89.94.27.55.44.85.28.19.64.88.89.94.27.55.44.85.28.19.64.28.19.28.19.28.19.28.19.28.19.64.28.19.28.19.28.19.28.19.28.19.28.19.28.19.28.19.28.19.28.19.		10501 011111111111111111111111111111111		1030929991929719899299000000 7127705577 241 385 33232222222 3 2272777777777777777777777	2050589951487427306180300000 767666665 1311126 3575777777	320602449917766553003398880080000077777777777777777777777

LADOT SPREAD SPECTRUM RADIO PROJECT 24-HOUR COMMUNICATION ERROR GRAPH 971021C3.LOG ERRORS RADIO ADDRESS TIME

971021C3.LOG

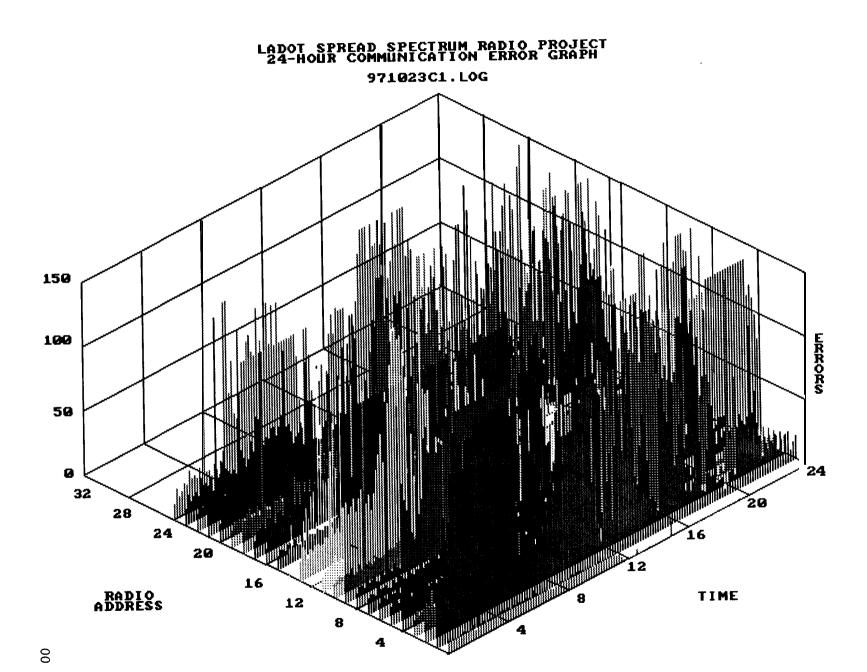
	Good rames	Totals Bad Frames	Missed Frames	Frame Thruput (%)	Avg	Values Max Good	in 2-M Total Good	inute F Avg Bad	eriode Max Bad	Total Bad
9112345 11012345 11012345 1107899111	r=-8- 	7.4	2499 2499 2499 2499 2499 2499 2499 2499	99.8433 996.1730 996.1731 996.1731 996.1731 997.9138	261111111111111111111111111111111111111	152124144294332245425827	1 27 23 0 5 1 8 6 0 5 9 0 0 3 7 7 1 1 1 5 8 5 3 6 1 7 9 7 6 4 5 3 6 1 7 9 7 6 1 7 9 7 7 6 4 5 3 6 1 7 9 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	14933123822213327254364 11133217254364	377 170 4019 4019 4019 4019 4019 4019 4019 401	

LADOT SPREAD SPECTRUM RADIO PROJECT 24-HOUR COMMUNICATION ERROR GRAPH



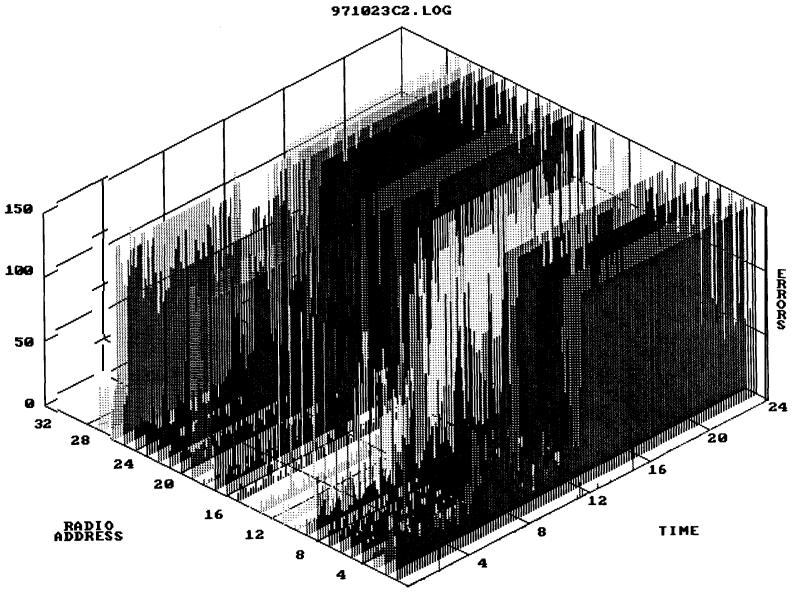
971021C4.LOG

Radio Address	Good Frames	Totals Bad Frames	Missed Frames	Frame Thruput (%)	Avg Good	Values Max Good	in 2-M Total Good	inute F Avg Bad	eriods Max Bad	Total Bad
91233	172268 168314 154200 169351	292 4246 18360 3209	240 240 240 240 240	99.831 97.539 89.360 98.140 98.456	14 1 1 1	132 2 4 4	672 244 63 88 66	27 28 13	181 121 97 112	47 695 695 656 631
45 67 80	169895 162265 158413 170173 165692	2665 10295 14147 2387 6868 2327	240 240 240 240 240 240 240	94.034 91.802 98.617 96.020	1 1 1 1	4 1 7	152 169 169	11 355 4 8 223	114 34	6556 6531 6501 6501 6501 6501 6501 6501 6501 650
10 11 12 13	170233 171595 163965 171227 118633	965 8595 1333 53927 1252	240 240	99.441 95.019 99.228 68.749 99.274	2 1 1 2	7593819357	323 32 253	143	93 21 125 20 446 25	396 687 466 716 416
12345678901234567890123456 11111111111222222	171308 161191 169259 170407 170444	11369 3301 2153 2116	240 240 240 240 240 240 240	93.412 98.087 98.752	<u>1</u> 1 1	4	303 27 90 165 152 139 90	27 94 55	243 43 51 34 72	7162947098514629470985148
19 20 21 22 23	170235 146426 159966 168786 169075	2325 26134 12594 3774 3485	240 240 240 240	98.653 84.855 92.702 97.813 97.980	1 1 1 1	1954352	194 194	10 11 7 9 34	203 163 55 55 225	629 638 615 631 698
24 25 26	166447 164180 169070	6113 8380 3 4 90	240 240 240	96.457 95.144 97.978	1	5 2	88 21 55 59	15 12	142 55	664 660



Radio Address	Good Frames	Totals Bad Frames	Missed Frames	Frame Thruput (%)	Good Good	Values Max Good	in 2-M Total Good	inute Avg Bad	Periods Max Bad	Total Bad
9 1 2	171302 158513 158269 162651	1018 13807 14051 9669	480 480 480 480	99.409 91 988 91.846	10 1 1	8 8 8 8 8 8 8 8	343 17 16	11 43 50 41	137 447 348 447	375 701 702
N34567	151373 167165 159766	20947 5155 12554	480 480 480 480 480	87.844 97.008 92.715	į	•	16 17 24 24 65	31 30 239	348 351 447 348	702 701 694 694 717 653
8	168134 169225 150091 170430	4186 3095 22229 1890	480 480 480 480 480	97:068 92:715 97:571 98:204 87:100 98:387 98:833 98:174	†	3 3 2 11	76 18	11 43 8	348 348 348 348 364	54Z
11133456789012334 1111111222234	167818 170309 169173 166048	4502 2011 3147 6272	480 480 480	98.833 98.174 96.360 99.018	‡ ‡	a 5	124 38 132 89 45	24 ? 11 18	348 348 371 348	594 686 586 629 673 539
15 16 17 18	170628 163924 165445 156201	1692 8396 6875 16119 8715	480 480 480 480	95.128 96.010 96.646 94.943	<u> </u>	ありむいいいいずっずり	179 25 21	59 78 284	447 349 353	709 693 697 714
19 20 21 22	163605 164231 167538 166413	8089 4782 5907	480 480 480 480	95.306 97.225 96.572	1 1	N4'94	22 42 31	142 36 17 26	447 447 348 357	696 676 687
23 24	169270 162854	3050 9466	480 480	98.230 94.507	1	5 1	104 11	54	348 3 4 8	614 7 0 7

LADOT SPREAD SPECTRUM RADIO PROJECT 24-HOUR COMMUNICATION ERROR GRAPH

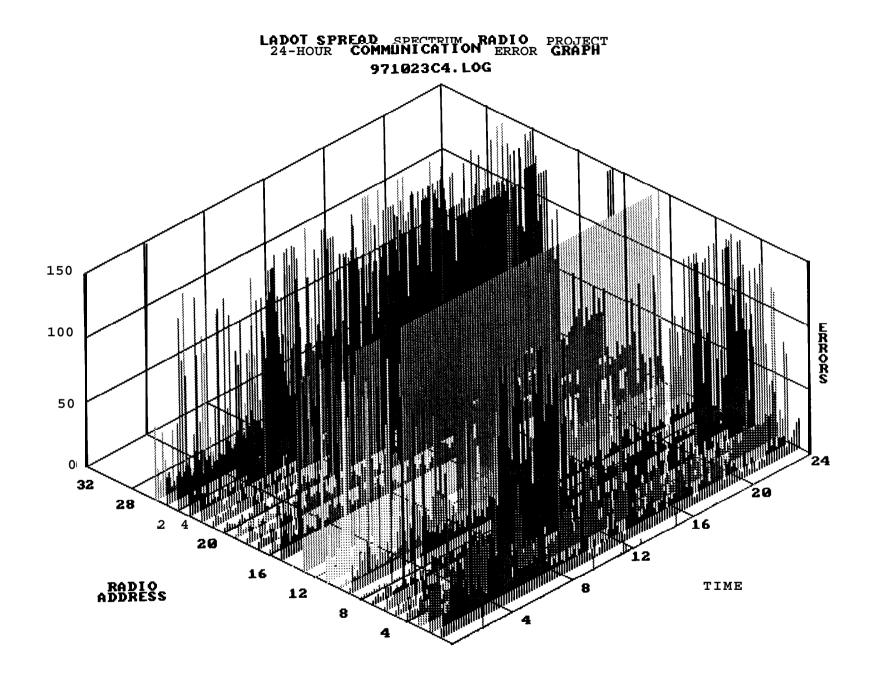


Radio	Good Frames	Totals Bad Frames	Missed Frames	Frame Thruput (%)	2 3	Values Max Good	in 2-M Total Good	inute Avg Bad	Periods Max Bad	Total Bad
Address 0	171948 137760	372 34560	480 480		10	93	647	112	256 271	71
N94'562	145206 152171 153561	27114	480 480 480	84.265 88.307 89.114	1	122222	22 12 17	119 36 54	250	714 696 706 711
	150400 156198 159410 148942	18759 21920 16122 12910 23378	480 480 480 480	90.644 92.508 86.433	1 1	2 2	23 19 4	88 30 36 119	256 150 256 256	711 695 699 714
8 10 11	170194	23126 1738 16697 3347	480 480 480	99.7844 79467 99.230149 99.2301794 889.70.5476918 889.70.5476918 9926.79230 9926.79230 9926.79230 9923	1 2 1	19 19	134 338 43	221288894 15594 357	2530 30 281 48	584 380 675
1112345678901234567 1122222222222222222222222222222222222	155623 168973 164985 158521	7335	480 480 480	98.058 95.743 91.992	212131	28 28 5	364 86 186	8 8 10	48 159 197 298	3542 6322 5329 707
15 16 17	157024 153812 136038 153331	13799 15296 18508 36282	480 480 480 480	89.260 78.945 88.980	1 0 2	1 4	189 11 0 255		298 447 _ 60	46.3
18 19 20 21	142998 146009 143557	36282 18989 29322 26311 28763 23732	480 480 480 480 480 480	82.984	<u> </u>	21 2 3 1	1702632000	38 38 179	447 60 271 271 267 304	701 698 716
22 23 24	148588 147134 142495	29825	480	83.308 86.228 85.384 82.692 82.802 81.933	1	1 2 2	23 22	89 143 30	304 181 447	716 712 715 696 718
25 26 27	142685 141187 146221	29635 31133 26 0 99	480 480 480	82.802 81.933 84.854	<u> </u>	200	Ø	359 359 359	447 447	718 718

LADOT SPREAD SPECTRUM RADIO PROJECT 24-HOUR COMMUNICATION ERROR GRAPH 971023C3.LOG ERRORS RADIO ADDRESS TIME

971023C3.LOG

Radio	Good	· Totals Bad	Missed	Frame Thruput	Avg	Values Max	in 2-Mi Total	inute Avg	Period:	Total
Address		Frames	Frames	(%)	Good	Good	Good	Bad	Bad	Bad
9 1 2 3	172015 164631 164200 168234 170340	305 7689 8120 4086 1980	480 480 480 480 480	99.823 95.538 95.288 97.629 98.851	15 1 1 1	98 1 1 2 4	664 8 7 40 162	71 79 17	198 298 359 72 20 72	54 710 711 678 556 693
56789	167828 168037 165077 167382 170978	4492 4283 7243 4938 1342	480 480 480 480 480	97.393 97.515	1	2422C	162 1625 256 355 47 291 57	26 13 21 14	119 173 112 15	662 683 621
10 11 12 13 14 15 16 17	165006 167828 168739 166097 163579 168645	7314 4492 3581 6223 8741 3675	480 480 480 480 480	97.134 99.1221 95.7566 97.922 96.389 94.387 97.867	1 1 1 1	თთთოთთ	78 43 44 44 98	142 142 16 16 19	119 68 92 83 240 46	427 6660 673 674 620
167 178 199 221 222	170052 162982 167204 170922 170742 167230 171722	2268 9338 5116 1398 1578 5090 598	480 480 480 480 480 480 480	98.684 94.581 97.031 99.189 99.046 99.653	1121113	6 4 9 7 10 3 17	163 113 179 270 258 67 475	47 63 11	29 112 129 33 19 79 14	529 555 525 539 446 460 651 243



Radio Address	Good Frames	Totals Bad Frames	Missed Frames	Frame Thruput (%)	Avg Good	Values Max Good	in 2-l Total Good	Minute Avg Bad	Period: Max Bad	Total Bad
9 1 2	171983 168667 157434 168511	337 3653 14886 3809	480 480 480 480 480	99.804 97.880 91.361 97.790	12 1 1	92 4 2	650 50 33 47	15 20 16	162 150 174	68 668 685 671
N34567	170120 164455 160449 170613	2200 7865 11871 1707	480 480 480 480	98.723 95.436 93.111 99.009 98.741	1 1 1	ずいいのいつつせて	103 98 31 165	23 24	43 59 145 35	615 620 687 553
8 10 11	170151 170420 171310 166782 171252	2169 1900 1010 5538	480 480 480 480	98.741 98.897 99.414 96.786 99.380	1111	7 7 8 2 6	176 189 294 27	4425 252	106 14 119	542 529 424 691
10 11 12 13 14 15 17	171462 171462 167200 169700	1068 87883 858 5120 2620	48 <i>0</i> 48 <i>0</i> 48 <i>0</i> 48 <i>0</i> 48 <i>0</i>	49.000 99.502 97.029 98.480	11111	10	275 1 344 58 89	239 2 14	278 17 133 44	443 717 374 660 629
17 18 19 20	168939 167268 168983 154367	3381 5052 3337 17953	480 480 480 480	98.038 97.068 98.063 89.582	1111	405055004	114 52 101 102 58 27	87588334 134	172 172 56 92	604 666 617
18991233456	157897 159995 162642 158858 162639	14423 12325 9678 13462 9681	480 480 480 480 480	91.630 92.848 94.384 92.188 94.382	11111	4	58 27 42 18 189	13 34 19 101 41	180 178 178 196 130	616 660 691 676 713 700
26	164498	7822	480	95.461	i	24	39	7 9	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