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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 31.

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

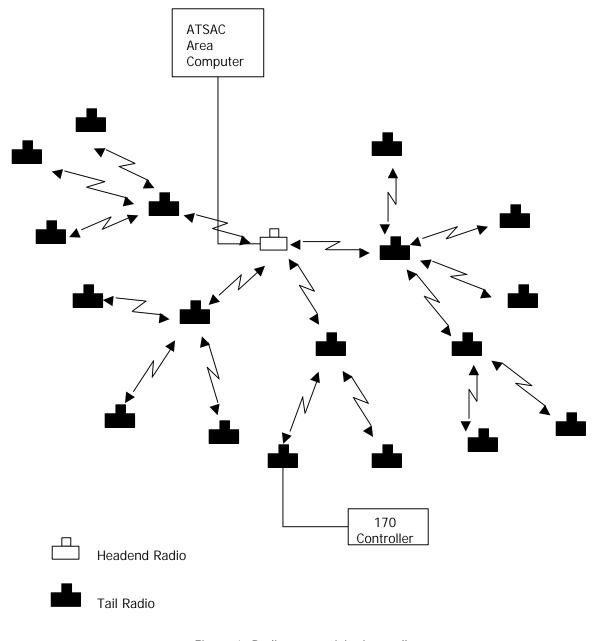


Figure 1: Radio connectivity in a cell

<sup>&</sup>lt;sup>1</sup> In the figure, filled boxes are part of the full deployment whereas unfilled boxes are not

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 UUSC), 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 and described 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), Minmum 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 BPSKmodulated signal with a high bitrate pseudo-random noise (PN) sequence, g(t) (which is also referred to as a code). Following the notion used in [7], let the bit rate of the input bit sequence d(t) by  $f_b$ , 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

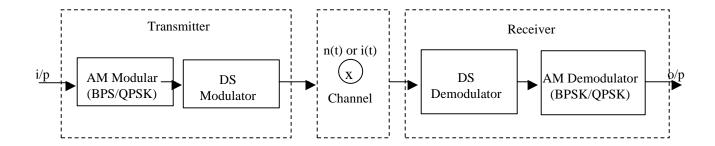


Figure 4: Direct sequence spread spectrum system

BPSK modulated signal is 2 x fb, while that of the DS modulated signal is 2 x fC. 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 Pj 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 Pj/(fc/fb).

In FH systems, the available bandwidth is divided into a number of channels (typically 100 to 500). T ime 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 modu-lation scheme is BPSK and the spreading factor is 15.

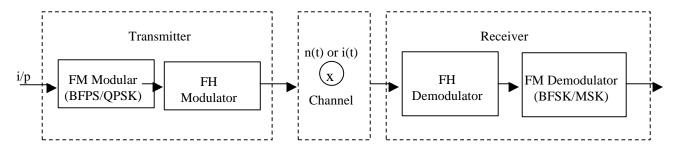


Figure 5: Frequency hopping spread spectrum system

#### 2.2 ATSAC System

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

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

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

# 2.3 System Operation and Design Issues

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

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

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

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

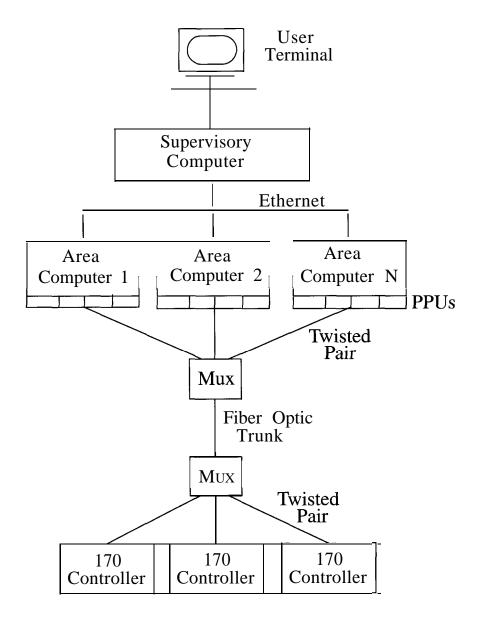


Figure 6: ATSAC system architecture

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

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

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

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

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

# 2.4 Network Operation

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

	msb	1     2     3     4     5     6     7     8	lsb					
	Byte 1	Command Block Type						
(a)	Byte 2	One's Complement of Byte 1						
(4)	Variable	Command Message Packet 1						
	Variable	Command Message Packet 2						
	Variable	Command Message Packet N						

msb		1		2		3		4		5	I	6		7	[	8	lsb
Byte 1							C	ell :	Nu	mbe	er						
Byte 2		Cell Address															
Bytes 3 to N						(	Com	ıma	ınd	M	essa	age					
Byte N+1									CR	С							
	Byte 1 Byte 2 Bytes 3 to N	Byte 1  Byte 2  Bytes 3 to N	Byte 1 Byte 2 Bytes 3 to N	Byte 1 Byte 2 Bytes 3 to N	Byte 1 Byte 2 Bytes 3 to N	Byte 1 Byte 2 Bytes 3 to N	Byte 1 Byte 2 Bytes 3 to N	Byte 1 Com  Byte 2 Com  Bytes 3 to N Com	Byte 1 Cell 2 Byte 2 Cell Bytes 3 to N Comma	Byte 1 Cell Num Byte 2 Cell Ad Bytes 3 to N Command	Byte 1 Cell Number  Byte 2 Cell Address  Bytes 3 to N Command Me	Byte 1 Cell Number  Byte 2 Cell Address  Bytes 3 to N Command Messa	Byte 1 Cell Number  Byte 2 Cell Address  Bytes 3 to N Command Message	Byte 1 Cell Number  Byte 2 Cell Address  Bytes 3 to N Command Message	Byte 1 Cell Number  Byte 2 Cell Address  Bytes 3 to N Command Message	Byte 1 Cell Number  Byte 2 Cell Address  Bytes 3 to N Command Message	Byte 1 Cell Number  Byte 2 Cell Address  Bytes 3 to N Command Message

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

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

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

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

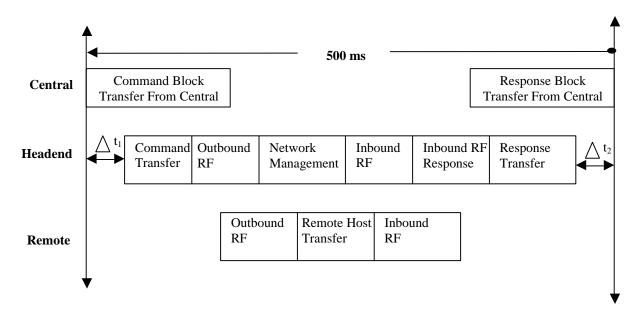


Figure 8: Command/Response Timeline

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

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

#### 2.5 Cell Capacity

Since the number of available channels is limited (to seven, in our case), it is desirable to maximize the number of radios in a cell. Since the multiple access scheme within a cell is packet switched TDMA, at any time instant only one radio can transmit. This increases the duration of a Command-Response (CMD-RSP) cycle as the number of radios increases. Each CMD-RSP cycle needs to be completed within 500ms. 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 (s)	120	40	20	10

Table 1: Baud rate vs. delay for remote interface

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

Table 2: Otherdelays

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 (5+8) + N 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:l
Output power	500 mW (27 dBm)
Antenna gain	3  dB (EIRP = 30 dBm)
Emissions	FCC part 15.427
Receiver sensitivity	-85 dBm @ 10 <sup>-5</sup> 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.

## 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

<sup>&</sup>lt;sup>2</sup>Testing 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.	$\overline{\mathrm{CMD}}$	CMD	RSP	RSP	Success
	#	from Headend	of frames	TX	RX	TX	RX	rate $(%)  $
Ī	6	4	960	960	959	960	950	99
1	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

	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 #l (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) #l (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	
	i		(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				
Frequ	uency #	RSSI	Byte Throughput	BER	BER		
•	v			(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		
<b>#4</b>	(915 MHzj	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
11			(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)

		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)

	ĺ	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 #	k RSSI	Byte Throughput	BER	BER	
			(received bytes)	(total bytes)	
#1 (906 M	(Hz) 121	28.2%	64e-02	7.22e-01	
#2 (912 M	(Hz) 104	20.9%	3.10e-02	7.97e 01	
#3 (912 M	(Hz) 0	0.0%	0.00e+00	1.00e-00	
#4 (9 15 M	Hz) 119	97.7%	2.29e-06	2.34e-02	
#5 (918 M	IHz) 104	81.5%	7.42e-03	1.91e-01	
#6 (921 M	(Hz) 108	65.3%	1.23e-02	3.55e-01	
#7 (924 M	IHz) 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 MIIz)	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	
	İ		(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. <b>32</b> 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		
	ļ		(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%	$2.\overline{26}e-0\overline{2}$	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					
	<u> </u>		(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 Throughpur	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					
Free	quency	#	RSSI	Byte	Throughput	BER	BER	
ļ , , , , , , , , , , , , , , , , , , ,			İ			(received bytes)	(total bytes),	
#1	(906	MHz)	141	100.09	6	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	100.09	6	0.00e+00	0.00e + 00	
#6	(921	MHz)	119	97.9%		0.00e + 00	2.14e-02	
#7	(924	MHz')	127	100.09	6	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					
Free	quency	<i>,</i> #	RSSI	Byte	Throughput	BER		BER	
	- 0					(received	bytes)	(total	bytes)
#1	(906	MHz)	1	0.0%		0.00e+00		1 .00e	+00
#2	(909	MHz)	0	0.0%		0.00e+00		l.00e-	٠00
#3	(912	MHz)	0	0.0%		0.00e+00		l.00e-	٠00
#4	(915	MHz)	14	0.6%		0.00e+00		9.94e-	01
#5	(918	MHz)	0	0.0%		0.00e+00		l.00e-	٠00
#6	(921	MHz)	0	0.0%		0.00e+00		l.OOe-	+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
	j		(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
			(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	Throughmt	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		
ÍÍ			(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		
	İ		(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)

		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			
Fre	quency #	RSSI	Byte	Throughput	BER	BER
					(received	bytes) (total bytes)
#1	(906 MHz)	0	0.0%		0.00e+00	1.00e+l
#2	(909 MHz)	0	0.0%		0.00e+00	1. <u>00e+00</u>
#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	l.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)

	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	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		
			(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)
#l (906 MHz)	0	0.0%	0.00e+ <u>0</u> 0	1.00e+00
#2 (912 MHz)	0	0.0%	0.00e+00	1.00e+00
#3 (912 MHz)	Õ	0.0%	0.00e+00	1.00e+00
#4 (915 MHz)	0	0.0%	O.OOe+00	1.00e+00
#5 (918 MHz)	0	0.0%	0.00e+00	l.00e+00
#6 (921 MHz)	0	0.0%	0.00e+00	1.00e+00
#7 (924 MHz)	0	0.0%	0.00e+00	l.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 .OOe	+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 Quality				
Frequency #	RSSI	Byte Throughput	BER	BER 1		
11			(received bytes	(total bytes)		
#1 (906 MHz)	198	100.0%	0.00e+00	0.00e+00		
# <b>2</b> (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	$0.\overline{3}\%$	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

<b>~</b> .	. =		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	<del></del>	<del>12</del> 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	<del></del>	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 <b>47</b>	60 60 0
CMD TX RSP RX DEL UD	57 0	59 0	59 0	<b>43</b> 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 0	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 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 60 57 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 =	== <b>=</b>					
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 0 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 <b>4</b>	0	59 <b>46</b>	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> _	60	==-	<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	== <b>=</b> =	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	<del>-</del> -	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 25	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	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 8 240 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	07 56 55 0 0 21 60 56 0 0 Frame	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 16 0 0 0 0 0 0 0 0	03 0 58 0 0 17 60 59 0 0 1780, 03 058 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 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 art Fr 60 60 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 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	60 58 0 0	59 60 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	sed I	rames	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	60 57 0	60 57 0	60 59 0	60 59 0 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.	Total	l Ela	psed	Frame	s 420	====						==== 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	53 38 1 0	60 45 0	60 57 0	60 47 0 0	60 60 0	60 58 0 0	60 57 0	60 58 0 0	60 56 0	60 60 0	60 59 0	60 59 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 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 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 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 50 0	60 60 0	60 60 0	60 60 0	60 49 0 0	60 57 0 0	60 60 0	60 60 0 0	60 58 0 0	60 59 0	60 60 0			CMD RX RSP TX DEL UD ENT RQ

==== Stai	rt Fra	me 51	840.	Total	Elap	sed F	rames	300	====					
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	43 44 0 1	49 41 0 0	0 53 0	60 0	0 60 0	0	50 51 0 0	0	23 23 0 0	60 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	60 59 0 0	60 59 0 0	60 59 0 0		
==== Sta	rt Fra	ume 5	1900,	Total	Elap	sed 1	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	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	60 60 0	0 0 0	0 0 0	0	60 54 0 0	60 60 0	0 0 0	60 59 0	60 60 0	60 60 0 0		
== <b>==</b> Sta	rt Fr	ame 5	1960,	Total	Ela	psed	Frames	420	====					
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	48 49 0 1	53 47 0 0	52 0 0	24 60 0 0	0 60 0	0 0 0	53 51 0 0	0	53 50 0	60 0 0	0 0 0	0	0 0 0	0 0 0
Radio#	15	16	17	18	19	20	0.4					വല		
CMD RX	_						<u>21</u>	_22_	23	24	25_	26		
RSP TX DEL UD ENT RQ	0 0 0	0 0 0	60 60 0	0 0 0 0	0 0 0 0	<u>20</u> -	60 59 0	60 59 0	0 0 0 0	60 58 0	60 58 0 0	60 59 0		
RSP TX DEL UD	0	0	60 0 0	0 0 0	0 0 0	0	60 59 0	60 59 0	0 0 0	60 58 0	60 58 0	60 59 0		
ŘŠP TX DEL UD ENT RQ	0	0	60 0 0	0 0 0	0 0 0	0	60 59 0	60 59 0	0 0 0	60 58 0	60 58 0	60 59 0	13	14
RSP TX DEL UD ENT RQ ==== Sta	0 0 o art Fr	o O ame	60 0 52020	0 0 0 . Tota	0 0 0 0	0 0 0 .psed 06 0	60 59 0 0 Frames 07 49 49 0	60 59 0 0 8 480 08 1 1 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	60 58 0 0	60 58 0 0	60 59 0 0	13 0 0 0	-14 0 0 0 0
RSP TX DEL UD ENT RQ  ==== Sta  Radio# CMD RX RSP TX DEL UD	0 0 0 art Fr 01 50 51	0 0 0 ame 5 	60 0 52020 03 0 50	0 0 0 , Tota 30 42 0	0 0 0 0 1 Ela 05 0 58	0 0 0 0 0 0 0 06 0 0	60 59 0 0 Frames 07 49 49	60 59 0 0 8 480 08 1	0 0 0 0 0 ==== 09 50 41 0	60 58 0 0	60 58 0 0	60 59 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	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 <b>4</b> 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	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	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> 25	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>	<u>o#</u>	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	60 60 0	60 57 0	60 60 0 0	60 58 0 0	60 60 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 0	60 60 0 0	60 60 0 0		
====	Stai	t Fra	me 37	7100,	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 0	60 54 0 0	60 56 0	60 44 0 0	60 58 0	60 53 0 0	60 59 0	60 60 0	60 57 0	60 60 0	60 59 0 0	60 60 0	60 59 0 0	60 58 0 0
Radi	<u>o#</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 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 3	7160,	Total	Ela	psed	Frames							
Radi		01	02	03	04	05	06	07	08_	09	10		12	13	-14
DEL	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	io#	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	60 55 0 0	60 57 0	0	60 59 0	60 60 0	59 49 0 0	60 57 0 0	59 57 0		
====	= Sta	rt Fra	ame 3	7220,	[Tota]	Ela	psed	Frames	480	) <b>==</b> ==					
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 60 0	60 60 0	60 55 0 0	60 57 0 0	60 60 0	60 54 0	60	60 57 0 0	60 56 0	60 60 0 0	60 59 0 0	60 60 0	60 60 0	60 57 0 0
Rad		15_	16	17	18	19	20		22_	23	- <del>-24</del> -	25_			
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	60 60 0	60 60 0		
===:	= Sta	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	8 8	60 51 0 0	60 55 0 0	60 59 0	60 58 0 0	60 60 0	60 60 0	60 57 0 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 0	60 60 0	60 60 0	60 60 (	60	60 59 0 0	60 60 0	60 58 0 0	60 59 0 0	60 59 0		

==== S	tart	Fran	ne 37	040,	Total	Elap	sed F	rames	300	====					
Radio#	<u> </u>	01	02	03	04	05	06	07	08	_09	10	_11	12	13	14
CMD RX RSP TX DEL UI ENT RC	)	60 0 0	60 60 0	60 0 0	58 0 0	0	0 3 0 0	0 31 0 0	19 16 0 0	59 60 0	20 0 0	0 0 0	0 2 0 0	0	0 0 0
Radio	ŧ	15	16	_17	18	19	20	21	_22	23	_ <del>24</del>	<u> 25</u>	_26		
CMD R) RSP T) DEL UI ENT RO	)	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 0	0		
==== 5	Start	t Fra	me 37	100,	Total	Elap	sed F	rames	360	====					
Radio		01	02	03_	04	05	06	07	08	09	10	_11	12	_13	<u>14</u>
CMD RY RSP TY DEL UI ENT RO	D	58 0 0	57 57 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	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 RI RSP TI DEL UI ENT R	X X D Q	0 0 0	0 0 0	0 1 0 0	0	0000	0 0 0	0 1 0 0	0	0 0 0	0 0 0	0	0		
====	Star	t Fra	me 37	160,	Total	Elap	sed I	Frames	420	====					
Radio	#	01	02	03	04	05	06	07	08	09	10	11	12	13	14
CMD R RSP T DEL U ENT R	<b>X</b> D	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 0	16 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	24	<u> 25</u> .	26		
CMD R RSP T DEL U ENT R	D	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		
====	Star	t Fra	ame 3	7220,	[Tota]	Ela	psed	Frame	s 480	====					
Radio	#	01	02	03	04	05	06	07	08	09	10	11	12_	13_	14
DEL U	X X ID LQ	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	1 0 0 0	1 0 0 0
Radio	#	15_	16	17	18	19	20	21	22_	23_	24	25	26		
DEL U	X X JD LQ	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 0	0 0 0	0 0 0	0 0 0	0 0 0		
====	Star	t Fr	ame 3	7280	, Tota	l Ela	psed								
Radio		01	02	03	04	05	06	07	08	09	10	11	12_	13	14
CMD F RSP T DEL U ENT F	RX JD 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 0	20 0 0	0 0 0	0 0 0	0 0 0	1 0 0 0
Radio		15	16	17	18_	19		21	22	23	24	25_	<u>26</u>		
DEL U	RX PX UD RQ	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 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 60 0	60 60 0	60 60 0	60 60 0	60 60 0	60 60 0	60 60 0	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 <sup>1</sup> 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	<u>11</u>	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	) <b>=</b> ===	:				
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 <b>4</b> 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		_ <del>_24</del>	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 <b>4</b> 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	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	0	Ō	8	ő	ő	0	ő	Ŏ	0	8	0	0	0
ENT RQ	0	0	0	-	19	20	21	22	23	24	25	26	·	·
Radio#	15	<u> 16</u>	17 60	18	60		60	<del>-22</del> -	<del>2</del> 5	- <u></u>	- <u></u>	60		
CMD TX RSP RX DEL UD	60 60	60 58	60	57 57	59	55 50	56 0	6ŏ	ĕŏ	5 <u>4</u>	58 0	60 0		
DEL UD ENT RQ	0	0	0	0	0	1 1	ŏ	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
CMD TX	60	60	60	51	60	60	60	60	60	60	60 59	60 60	60 47	60 60
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	8	ő	ő
ENT RQ	0	0	0	1	0	0	0	0	0	0	0	-	U	·
Radio#	15	16	17_	18	19_	20_	21	22_	23	- <u>24</u> 	<u>25</u> 60	- <u>26</u> 60		
CMD TX RSP RX	60 60	60 58	60 60	60 60	60 60	60 57	60 57	60 58	60 60	55	57	57 0		
DEL UD ENT RQ	8	8	8	0	8	0	0	0	0	8	0	ŏ		
•			4700	T-4-1	121.		Emamag	180	====					
==== Sta		eunne o 02	03	04	. 61a 05	psed 06	07	08	09	10	11	12	13	14
Radio#	01 60	<u>0</u> 2 60	60	60	60	60	<u></u>	60	60	60	60	60	60	60
RSP RX	50	54	59	58	6ŏ	56	57 0	59 0	59 0	60 0	60	60	49 0	6ŏ 0
DEL UD ENT RQ	0	0	ŏ	ŏ	ŏ	ŏ	ŏ	ŏ	ŏ	ŏ	Ŏ	Ò	Ō	0
Radio#	15	16	17	18	19	20	21	22	23	24_	25_	26		
CMD TX RSP RX	60 60	60 59	60 59	60 60	60 55	60 47	60 56	60 57	60 60	60 53	60 56	60 56		
DEL UD	ő	8	8	ő	ŏ	ò	ő	0	Ö	0	8	8		
ENT RQ	_	•	_	_	·	•	•	_	•	v	•			
==== Sta	art Fr	ame 5	1780,	Tota								4.0	40	
Radio#	01	02	03	04	05	06	07	08	09	10_	11-	12_	13_	14
CMD TX RSP RX	60 51	60 55	60 58	60 58	60 59	60 57	60 57	60 60	60 60	60 59	60 60	60 59	58 43	60 60
RSP RX DEL UD ENT RO	Õ	Ŏ	0	0	0	8	0	0	0	0	8	8	1 1	0
Radio#	15	16	17	18	19	20	21	22	23	24	25	26		
CMD TX	<del></del> -	60	60	60	60	60	60	60	59	60	60	60		
RSP RX DEL UD	60	60 0	59	60	54 0	60 0	58 0	59 0	60 0	59 0	59 0	59 0		
ENT RO	ŏ	ŏ	ŏ	ŏ	Ŏ	Ō	Ō	0	0	0	0	0		

# (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	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 <b>48</b> 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	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 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 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	psed	Frames	420						
Radi	o#	01	02	03	04	05	06	07	_08_	09	10	11	12	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,	[Tota]	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 0	53 38 1 1	60 60 0	60 60 0	60 60 0	60 59 0 0	60 59 0
Rad	io#	15	16	17	18	19	20	21	22	23	<del>24</del> _	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	Frames	s <b>54</b> 0	) = <b>==</b> =					
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 0	60 60 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>	_ <del>24</del>	_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	000	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	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	) <b>==</b> ==					
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	<b>0</b> 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	ar <b>y</b> ==	====	==								
======= Radio#	Test 01	Data 02	Summ 03	ary == 04	<b>0</b> 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 <b>49</b> 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 <sub>1</sub>	psed 06	Frames	180 08	09	10	11_	12	13	14
										10 60 60 0	11 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 47	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	<u>25</u>	<u> 26</u>		
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	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	psed 1	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	50 <b>49</b> 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	0 59 0	0 59 0
Radio#	15	16	17_	18	19_	20_	21	22	23	24	25_	26		
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	50 49 0 0	50 50 0		
==== Sta	art Fra	ame	120,	Tota]	Ela	psed	Frames	s 180	====					
==== Sta Radio#	ort Fra	ame 02_	120, 03	Total	Ela	psed 06	Frames	s 180 _08	<b>====</b>	10_	11_	<u>12</u>	_13_	14
			•			-				10 0 60 0	0 60 0	0 60 0	0 60 0 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 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 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 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 upsed 48 48 48 0	07 42 42 0 0 21 44 44 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	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	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 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	<del>24</del> _	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	<b>#</b>	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 <b>4</b> 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 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		

<b>a.</b>			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		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	<del>2</del>	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	<b>780</b>	====					
==== 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	5Õ	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	J	·
Radio#	15	16	17	18_	19	<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		

==== Sta	rt Fra	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	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		
==== Sta	rt Fra	ame	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 ra Total nu Total nu Total nu	ımber imber	of fi	L UPI	T fran	nes = nes =	30 11								

==== Star	t Fra	me	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	t Fra	ume	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	ary ==	====	==								
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	ume 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	60 60 0	60 55 0 0	60 59 0 0	60 56 0	60 59 0	60 57 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	Elaj	sed	Frames	120	=== <b>=</b>					
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 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 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	Ela	psed	Frames	180	====					
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 58 0 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 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>=</b>					
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 0	60 59 0	60 60 0	60 57 0 0	60 60 0	60 58 0 0	60 60 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									60	60	60	60		

# (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 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	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 <sup>1</sup> 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	<b>===</b> =	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 E1a 05 35 59 0	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	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	ame 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 0	60 57 0 0	60 60 0	60 59 0	60 60 0	59 49 0 0	60 57 0 0	59 57 0		
== <b>==</b> Sta	rt Fr	ame 3	7220,	Total	l 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 <b>54</b> 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 60 0	60 60 0	60 60 0	60 60 0	60 60 0	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	=== <b>=</b>					
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	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	o#_	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 Fr	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 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	<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 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		01	02	03	04	05	06	07	80	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_			
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			02	03	04	05	06		08	09	10_		12	13	14
CMD RSP DEL ENT	TX RX UD RQ	0	60 56 0 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	59 0	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 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 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		
== <b>==</b> St	art Fr	ame 3	7700,	Total	Ela	psed	Frames	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	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 =	== <b>=</b>					
Radio#	01	02	03	04	05	06	07	08	09	10	11	12_	13_	14
CMD TX RSP RX	0	0	0	0	8	60 60	60 60	60 60	60 60	60 60	60 60	60 58	60 60	60 59
DEL UD ENT RQ	ŏ	ŏ	Ŏ	Ŏ	Ŏ	0	0	0	0	8	0	8	8	8
Radio#	15	16	17	18	19	20	21	22_	23	24	25_	26	27	28
CMD TX RSP RX	60 60	60 60	55 46	60 60	60 60	60 59	60 60	60 60	0	8	0	60 0	0	0
RSP RX DEL UD ENT RO	00	80	1 1	8	ŏ	ő	ő	ŏ	ŏ	ŏ	ŏ	Ŏ	Ŏ	0 0 0
Radio#	29	30	31	32	•	v	•	•	_	_				
CMD TX	60	0	6 <u>0</u>	60										
RSP RX DEL UD	0	0	0	0										
ĒNT RQ	0	0	0	0										
==== Sta	rt Fra											4.0	40	4.4
Radio#	01_	02	03	04	05	06	07	08	09	10	11	12	<u>13</u> 60	- <u>14</u> 60
CMD TX RSP RX	0	8	8	0	0	60 60	60 60	60 59	60 60	60 60	60 60	60 59	60	58 0
DEL UD Ent rq	0	8	8	0	0	0	8	8	0	0	8	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 60	60 48	60 60	60 59	60 60	60 58	60 60	0	0	0	60 Q	o o	0
DEL UD Ent ro	0	0	0	0	0	0	0	8	0	8	0	0	8	ŏ
Radio#	29	30	31_	32										
CMD TX RSP RX	60 0	0	60 0	60 0										
RSP RX DEL UD ENT RQ	ŏ	ŏ	ŏ	ŏ										
•	-		4000	Tata	ı Ele	d	Frame	- 18A						
==== Sta Radio#	01	ame 4. 02	4920, 03	04	05	06	07	08	09	10	11	12	13	14
CMD TX		<u></u> _				60	<u></u> -	60	60	60	60	60	60	60
RSP RX DEL UD	ŏ	ŏ	ŏ	ŏ	ŏ	60 0	60 0	56 0	60 0	58 0	58 0	56 0	60 0	48 0
ENT RQ	ŏ	ŏ	0	Ō	0	Ō	Ō	Ō	Ō	Ó	0	0	0	0
Radio#	15	16	17_	18	19_		21	22_	23_	24	25_	26	27_	28
CMD TX RSP RX	60 60	60 59	56 48	60 60	60 60	60 60	60 60	60 60	0	0	0	60 0	0	0
DEL UD ENT RQ	0	0	0	0	0	0	0	8	0	0	0	0	0	ŏ
Radio#	29	30	31	32										
CMD TX RSP RX	60 0	8	60 0	60 0										
DEL UD ENT RO	ŏ	ŏ	ŏ	ŏ										
	•	•	-	-										

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

#### \*\* Data from file 09041043.log

==== Star	t 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 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	60 60 0	36 60 0 0	60 60 0	60 58 0	60 60 0	39 40 0
Radio#	15	16	17	18	19	20	21	_22	23	24	<u> 25</u> .	26	_27	28
CMD RX RSP TX DEL UD ENT RQ	38 39 0 0	36 44 0 0	24 0 0 0	31 0 0 0	30 0 0 0	28 0 0 0	27 0 0 0	24 0 0 0	0 0 0	0 0 0	0 0 0	23 0 0 0	0	0 0 0
Radio#	29	30	31_	32										
CMD RX RSP TX DEL UD ENT RQ	20 0 0 0	0 0 0	19 0 0 0	19 0 0 0										
==== Sta	rt Fra	ume 44	1860,	Total	Ela	psed I	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	0	0	0 0 0	0 0 0	60 60 0	60 60 0	60 60 0	60 60 0	45 58 0 0	60 60 0	60 59 0	60 59 0	47 45 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	46 44 0 0	44 51 0 0	43 0 0 0	42 0 0 0	39 0 0 0	38 0 0 0	37 0 0 0	37 0 0 0	0 0 0	0 0 0	0 0 0	36 0 0 0	0 0 0	0 0 0
Radio#	29	30	31	32										
CMD RX RSP TX DEL UD ENT RQ	36 0 0	0 0 0	36 0 0 0	36 0 0										
==== Sta	rt Fr	ame 4	4920,	Total	l Ela	psed	Frame	s 180	====					
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 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 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 5 <b>4</b> 0 0	60 60 0	56 0 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	0000
Radio#	29	30	31	32										
CMD RX RSP TX DEL UD ENT RQ	60 0 0	000	59 0 0	59 0 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	Rad10# 15 10 17 10 13 20 21 12 15 15 15 15 15 15 15 15 15 15 15 15 15
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 50 50 50 50 50 50 50 50 50
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 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 0 0 0 0 0 60 60 60 59 60 60 60 59 87 87 7X 0 0 0 0 0 60 60 59 59 59 59 59 59 57 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 58 60 60 60 60 60 0 0 0 0 60 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 59 59 59 60 59 60 60 60 60 60 RSP TX 0 0 0 0 0 60 60 60 60 60 54 60 60 60 EU 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 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 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										
==== 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 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	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	60 0 0	60 0 0										
==== St	art Fra	ame 4	5280,	Total	Ela	psed 1	Frame	540	====					
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 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	0000	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	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	0000	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	58 0 0	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	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	Radio# 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 Č Č Č Č	•
==== 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 1	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	·	v
CMD TX	<u></u>	0	60	60										
ŘŠP RX DEL UD	0	0	8	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	<del></del> -	<del></del> -	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	P1.		Emama	- 000						
==== St		ame 4 02	564U, 03	10ta) 04	05	.pseq 06	o7	08	09	10	11	12	13	14
Radio#_ CMD TX	<u>01</u> _	02-	03	0		60	60	60	60	<del></del> -	60	60	<del></del>	60
RSP RX	ŏ	ŏ	ö	ŏ	ŏ	5 <u>9</u>	59 0	59 0	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	ŏ	ő	ŏ	0	Õ	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										

==== Stan	rt Fra	ume 45	520,	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 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	<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 8 <b>4</b> 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	0000	0 0 0	60 60 0	60 60 0	60 60 0	60 60 0	60 60 0	60 60 0 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 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	60 60 0	60 60 0	60 60 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 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 <b>4</b> 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 <b>y</b> ==		==								
====== Radio#	= Test 01	Data 02	Summ	ary == 04	05	== 06	07_	08	09	10	11	12_	13	14
				•			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 ==	====	==								
Radio#	01	02	03	04	05	06	07	08	09_	10_	11_	12_	13_	14
CMD RX RSP TX DEL UD ENT RQ	01 0 0 0	02 0 0 0	03 0 0 0	04 0 0 0	05 0 0 0	959 960 0	959 959 0 0	959 958 958 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 0	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 =	:== <b>=</b>					
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 <b>160</b> ,	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	_2 <b>4</b>	_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 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 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 60 51 41 60 35 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 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 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	Rad10# 13 10 1/ 10 13 23 21 22 22 22 22 22 22 22 22 22 22 22 22
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 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	CMP 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>	25		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 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	32										
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 0 0										

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==== Sta	rt Fr	ame 5	7000,	Total	Ela	psed	Frame	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	60 56 0 0	60 57 0 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	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										
=======	Test	Data	Summ	ary ==	====	==								
====== Radio#_	Test	Data 02	Summ 03	ary ==	05	== 06	07	_08_	09	10	11	12	13	14
				•			956 932 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	14 947 873 1
Radio# CMD TX RSP RX DEL UD	01 0 0	02 0 0	03 0 0	04 0 0	05 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
Radio# CMD TX RSP RX DEL UD ENT RQ	01 0 0 0	02 0 0 0 0	03 0 0 0	04 0 0 0 0	05 0 0 0	956 906 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
Radio#CMD TX RSP RX DEL UD ENT RQ Radio# CMD TX RSP RX DEL UD	01 0 0 0 0 15 956 951	02 0 0 0 0 0 16 956 918	03 0 0 0 0 17 952 872 1	04 0 0 0 0 18 956 956	05 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

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 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
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	0	0	0	0	0	959 933	958 946	948 936	828 803	949 948	940 938	691 550	958 958	456 949 0
ENT RQ	ŏ	0	0	0	0	0	8	0 1	0	0	0 1	8	0	1
		0 0 16			0 0 19									28
ENT RQ	Ō	0	Ó	Ō	0	Ŏ	Ō	1	Ō	1	1	Ŏ	Ō	1
ENT RQ Radio# CMD RX RSP TX DEL UD	15 460 959 0	0 16 459 4 0	17 456 0	18 456 0	19 455 0	20 453 0 0	0 21 453 0 0	1 - 22 - 451 0 0	0 23 0 0	1 -24 0 0 0	1 25 0 0	26 451 0 0	0 27 0 0 0	1 28 0

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

Frame range = 56100 -> 57059
Total number of frames = 960
Total number of DEL UPDT frames = 0
Total number of ENT RQST frames = 4

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### (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	ő
ENT RQ Radio#	15	16	17	18	19	20	21	22	23	24	25	26	27	28
CMD TX	60	60	60	<del></del>	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	0	0	0	0 22	0 23	0 24	0 25	0 26	0 27	
Radio#	15	16	17	18	19 60	<u>20</u>	<sup>21</sup>	60	<u></u>		<u></u>	60	<u></u> -	28
CMD TX RSP RX DEL UD	60 60	60 59	60 52 0	60 60	60	60	60	ĕŏ	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 RQ	ŏ	ŏ	ŏ	ŏ										
•	_	-					_	400						
==== Sta			1020,			•	Frames			40	4.4	12	13	14
Radio#	01	02_	03	04	05	06_	07	08	09	<u>10</u> _ 60	<u>11</u> 60	<u>1</u> 2-	<u>13</u> -	
CMD TX RSP RX	0	0	0	0	0	60 60	60 60	60 60	60 60	60	60	58	60	60 53 0
DEL UD Ent rq	8	0	8	0	0	0	0	8	0	8	0	ŏ	8	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 ENT RQ	ő	8	1	ő	ő	ŏ	ŏ	ŏ	ŏ	ŏ	Ŏ	Ŏ	Ŏ	Ö
Radio#	29	30	31	32	v	v	v	v	v	v	v	v	•	•
CMD TX	60	0	60	60										
RSP RX DEL UD	0	0	0	0										
ĒNT ŘQ	Ŏ	Ŏ	Ō	Ō										

## (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	0	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 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
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	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	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 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	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 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 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	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	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 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	000	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 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 <b>X</b>	955 959 0 0	955 9 <b>47</b> 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

#### === Start Frame 11640, Total Elapsed Frames 60 ===

Radio #	1	2	3	4	5	6	7	8	9	10	11	12	13	14
CMD TX	30	60 50	60 57	60	60	60	60	60	60	60	60	60	60	60
RSP RX DEL UD	17 1	59 0	57 0	60 0	48 0	59 0	60 0	60 0	60 0	60 0	60 0	60 0	60 0	60 0
ENT RQ	Ö	Ō	Ō	Ö	Ö	Ö	Ö	Ö	Ö	Ö	Ō	Ö	Ö	Ö
Radio #	15	16	17	18	19	20	21	22	23	24	25	26		
CMD TX RSP RX	60 60	60 60	60 60	60 60	60 60	60 56	60 49	60 60	60 60	60 59	60 60	60 60		
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0		
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0		
011		44700	<b>.</b>				. 400							
=== Start F Radio #	rame	11700 2	, Tota	II Elap 4	sed F	rame 6	s 120 7	<b>===</b> 8	9	10	11	12	13	14
CMD TX	0	60	60	60	51	60	60	60	60	60	60	60	60	60
RSP RX DEL UD	0	60 0	60 0	60 0	42 1	60 0	60 0	60 0	60 0	60 0	58 0	60 0	60 0	60 0
ENT RQ	0	0	0	0	1	Ö	0	0	0	0	0	0	0	0
Radio #	15	16	17	18	19	20	21	22	23	24	25	26		
CMD TX	60	60	60	60	60	51	51	60	60	60	60	60		
RSP RX DEL UD	59 0	60 0	60 0	60 0	60 0	43 0	37 0	60 0	60 0	59 0	60 0	60 0		
ENT RQ	0	Ô	Ô	Ö	Ö	ő	Ö	ő	ő	0	ő	Ö		
=== Start I Radio #	Frame	11 <b>760</b> 2	, Tota	I Elap	sed F	rame 6	s 180 7	<b>===</b> 8	9	10	11	12	13	14
CMD TX	30	60	60	60	51	60	60	60	60	60	60	60	60	60
RSP RX	24	60	58	60	42 1	55	60	60	60	60	58	60	60	60
DEL UD ENT RQ	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Radio #	15	16	17	18	19	20	21	22	23	24	25	26		
CMD TX	60	60	60	60	60	51	51	60	60	60	60	60		
RSP RX	59	60	60	60	60	39	41	60	60	60	60	60		
DEL UD ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0		
	ı °	Ü	·	ŭ	ŭ	ŭ	Ü	Ü	Ü	Ů	Ü	Ü		
=== Start F	Frame	11820	, Tota	l Elap	sed F	rame	s 240	===						
Radio #	1	2	3	4	5	6	7	8	9	10	11	12	13	14
CMD TX RSP RX	35 20	60 60	60 57	60 60	51 42	60 55	60 60	60 60	60 60	60 60	60 50	60 60	60 60	60 60
DEL UD	1	0	0	0	1	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Radio #	15	16	17	18	19	20	21	22	23	24	25	26		
CMD TX RSP RX	60 59	60 60	60 60	60 60	60 60	51 39	60 59	60 60	60 60	60 60	60 60	60 60		
DEL UD	0	0	0	0	0	1	0	0	0	0	0	0		
ENT RQ	0	0	0	0	0	1	0	0	0	0	0	0		

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

#### === Start Frame 11640, Total Elapsed Frames 60 ===

			-,											
Radio #	1	2	3	4	5	6	7	8	9	10	11	12	13	14
CMD TX	30	56	56	60	4	56	60	60	0	0	0	0	0	0
RSP RX	20	54	52	60	60	51	60	60	0	0	60	60	55	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Radio #	15	16	17	18	19	20	21	22	23	24	25	26		
CMD TX	0	60	60	60	60	0	0	60	60	60	60	60		
RSP RX	Ö	60	60	60	60	55	57	60	60	59	60	60		
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0		
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0		
=== Start F	Frama	11700	Tota	l Elan	scod E	romo	- 120							
Radio #	1	2	3	4	5	6	7	 8	9	10	11	12	13	14
CMD TX	Ö	59	59	60	31	59	60	60	ŏ	0	0	0	0	0
RSP RX	0	60	60	60	51	59	60	60	0	0	60	60	60	0
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Radio #	15	16	17	18	19	20	21	22	23	24	25	26		
CMD TX		60	60	60	60	2	2	60	60	60	60	60		
RSP RX	8	60	60	60	60	51	51	60	60	60	60	60		
DEL UD						0	0		0			0		
ENT RQ	8	8	8	8	8	1	1	8	0	8	8	0		
=== Start F	rame	11760	, Tota	l Elap	sed F	rame	s 180							
Radio #	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Radio #	1 30	2 58	3 59	4 · 60	5 60	6 59	7 60	8 60	0	0	0	0	0	0
Radio # CMD TX RSP RX	30 24	58 60	59 57	4	5 60 60	59 53	7 60 60	60 60	0		0 60	0 60	0 60	
Radio # CMD TX RSP RX DEL UD	30 24 0	58 60 0	59 57 0	60 60	5 60 60 0	59 53 0	7 60 60 0	8 60 60 0	0 0 0	0	0 60 0	0 60 0	0 60 0	0
Radio # CMD TX RSP RX	30 24	58 60	59 57	4 · 60	5 60 60	59 53	7 60 60	60 60	0	0	0 60	0 60	0 60	0
Radio # CMD TX RSP RX DEL UD ENT RQ  Radio #	30 24 0	58 60 0 0	3 59 57 0 0	60 60 8 18	5 60 60 0 0	59 53 0 0	7 60 60 0 0	8 60 60 0	0 0 0 0	0 0 8 24	0 60 0 0	0 60 0 0	0 60 0	0
Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX	1 30 24 0 0	2 58 60 0 0 16	3 59 57 0 0 17	8 18 60	5 60 60 0 0 19	6 59 53 0 0 20	7 60 60 0 0 21 28	8 60 60 0 0	0 0 0 0 23	0 0 8 24 60	0 60 0 0 25	0 60 0 0 26	0 60 0	0
Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX RSP RX	30 24 0 0	2 58 60 0 0 16 60 60	3 59 57 0 0	4 60 60 8 18 60 60	5 60 60 0 0 19 60 60	6 59 53 0 0 20 29 49	7 60 60 0 0 21 28 51	8 60 60 0	0 0 0 0	0 0 8 24 60 60	0 60 0 0 25 60	0 60 0 0	0 60 0	0
Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX RSP RX DEL UD	1 30 24 0 0 15	2 58 60 0 0 16 60 60	3 59 57 0 0 17 60 60	8 18 60 60 0	5 60 0 0 19 60 60	6 59 53 0 0 20 20 19 49 0	7 60 60 0 0 21 28 51 0	8 60 60 0 0 22	0 0 0 0 23 60 60	0 0 8 24 60 60 0	0 60 0 0 25 60 60	0 60 0 0 26 60	0 60 0	0
Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX RSP RX	1 30 24 0 0	2 58 60 0 0 16 60 60	3 59 57 0 0 17	4 60 60 8 18 60 60	5 60 60 0 0 19 60 60	6 59 53 0 0 20 29 49	7 60 60 0 0 21 28 51	8 60 60 0 0	0 0 0 0 23	0 0 8 24 60 60	0 60 0 0 25 60	0 60 0 0 26	0 60 0	0
Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX RSP RX DEL UD ENT RQ	1 30 24 0 0 15 8	2 58 60 0 0 16 60 60 0	3 59 57 0 0 17 60 60	8 18 60 60 0 0	5 60 0 0 19 60 60 0	6 59 53 0 0 20 19 49 0 2	7 60 60 0 0 21 28 51 0	8 60 60 0 0 22 88 8	0 0 0 0 23 60 60	0 0 8 24 60 60 0	0 60 0 0 25 60 60	0 60 0 0 26 60	0 60 0	0
Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX RSP RX DEL UD ENT RQ  === Start F	1 30 24 0 0 15 8 8	2 58 60 0 0 16 60 60 0	3 59 57 0 0 17 60 60 8	4 60 60 8 18 60 60 0	5 60 0 0 19 60 60 0	6 59 53 0 0 20 19 49 0 2	7 60 60 0 0 21 28 51 0 1	8 60 60 0 22 88 8	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	0 60 0 0	0 0 8
Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX RSP RX DEL UD ENT RQ ENT RQ  === Start F Radio #	1 30 24 0 0 15 8 8	2 58 60 0 0 16 60 60 0 0	3 59 57 0 0 17 60 60 8	4 60 60 8 18 60 60 0 0	5 60 60 0 0 19 60 60 0	6 59 53 0 0 20 19 49 0 2	7 60 60 0 0 21 28 51 0 1	8 60 60 0 22 88 8	0 0 0 0 23 60 60 8	0 0 8 24 60 60 0 0	0 60 0 0 25 60 60 0	0 60 0 0 26 60 60 8	0 60 0 0	0 0 8
Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX RSP RX DEL UD ENT RQ  === Start R Radio # CMD TX	1 30 24 0 0 15 8 8	2 58 60 0 0 16 60 60 0 0	3 59 57 0 0 17 60 60 8 8	4 60 60 8 18 60 60 0 0	5 60 60 0 0 19 60 60 0 0	59 53 0 0 20 19 49 0 2	7 60 60 0 0 21 28 51 0 1 s <b>240</b> 7	8 60 60 0 0 22 88 8 === 8 60	0 0 0 0 23 60 60 8	0 0 8 24 60 60 0 0	0 60 0 0 25 60 60 0	0 60 0 0 26 60 60 8	0 60 0 0	0 0 8 8
Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX RSP RX DEL UD ENT RQ ENT RQ  === Start F Radio #	1 30 24 0 0 15 8 8	2 58 60 0 0 16 60 60 0 0	3 59 57 0 0 17 60 60 8	4 60 60 8 18 60 60 0 0	5 60 60 0 0 19 60 60 0	6 59 53 0 0 20 19 49 0 2	7 60 60 0 0 21 28 51 0 1	8 60 60 0 22 88 8	0 0 0 0 23 60 60 8	0 0 8 24 60 60 0 0	0 60 0 0 25 60 60 0	0 60 0 0 26 60 60 8	0 60 0 0	0 0 8
Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX RSP RX DEL UD ENT RQ  === Start F Radio # CMD TX RSP RX RSP RX	1 30 24 0 0 15 8 8 8	2 58 60 0 0 16 60 60 0 0 11820 2 56 60	3 59 57 0 0 17 60 60 8 <b>8</b> <b>9, Tota</b> 3 59	4 60 60 8 18 60 60 0 0	5 60 60 0 0 19 60 60 0 0 0 essed F 5	59 53 0 0 20 19 49 0 2 Frame 6 59 55	7 60 60 0 0 21 28 51 0 1 s <b>240</b> 7 60 60	8 60 60 0 22 88 8 8 === 8 60 60	0 0 0 0 23 60 60 8	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
Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX RSP RX RSP RX DEL UD ENT RQ  === Start F Radio # CMD TX RSP RX DEL UD ENT RQ	1 30 24 0 0 15 8 8 8 Frame 1 35 20 0	2 58 60 0 0 16 60 0 0 11820 2 56 60 0 0	3 59 57 0 0 17 60 60 8 , <b>Tota</b> 3 57 0	4 60 60 8 18 60 60 0 0	5 60 60 0 19 60 60 0 0 <b>osed F</b> 5 60 60 0	6 59 53 0 0 20 19 49 0 2 	7 60 60 0 0 21 28 51 0 1 1 s 240 7 60 60 0	8 60 60 0 22 88 8 8 === 8 60 60 0	0 0 0 0 23 60 60 8 8	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 12 0 60 0	0 60 0 0	0 0 8 8
Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX RSP RX DEL UD ENT RQ  === Start F Radio # CMD TX RSP RX DEL UD ENT RQ  ENT RQ  RADIO # RADIO # RADIO # RADIO # RADIO # RADIO # RADIO # RADIO # RADIO #	1 30 24 0 0 15 8 8 8 Frame 1 35 20 0	2 58 60 0 0 16 60 60 0 0 11820 2 56 60 0 0	3 59 57 0 0 17 60 60 8 <b>7</b> <b>7</b> 0 0 17	4 60 60 8 18 60 60 0 0 0 18 18	5 60 60 0 19 60 60 0 0 seed F 5 60 60 0	6 59 53 0 0 20 19 49 0 2 55 0 0	7 60 60 0 0 21 28 51 0 1 s <b>240</b> 7 60 60 0 0	8 60 60 0 22 88 8 8 === 8 60 60 0	0 0 0 0 23 60 60 8 9 0 0 0	0 0 8 24 60 60 0 0 0	0 60 0 0 25 60 60 0 0	0 60 0 0 26 60 60 8 12 0 60 0 0	0 60 0 0	0 0 8 8
Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX RSP RX DEL UD ENT RQ  === Start F Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX RSP RX DEL UD ENT RQ  Radio #	1 30 24 0 0 15 8 8 8 Frame 1 35 20 0 0	2 58 60 0 0 16 60 0 0 11820 2 56 60 0 0	3 59 57 0 0 17 60 60 8 8 59 57 0 0	4 60 60 8 18 60 60 0 0 0 1 Elap 4 60 60 0 0	5 60 0 0 19 60 60 0 0 0 0 0 19 19 60 60 0 0 0	59 53 0 0 20 19 49 0 2 55 0 0 0 2 2	7 60 60 0 0 21 28 51 0 1 1 s 240 7 60 60 0 0	8 60 0 0 22 88 8 8 60 0 0 0	0 0 0 0 23 60 60 8 8	0 0 8 24 60 60 0 0 0	0 60 0 0 25 60 60 0 0 11 0 60 0 0	0 60 0 0 26 60 8 8 12 0 60 0 0	0 60 0 0	0 0 8 8
Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX RSP RX DEL UD ENT RQ  === Start F Radio # CMD TX RSP RX DEL UD ENT RQ  ENT RQ  RADIO # RADIO # RADIO # RADIO # RADIO # RADIO # RADIO # RADIO # RADIO #	1 30 24 0 0 15 8 8 8 Frame 1 35 20 0	2 58 60 0 0 16 60 60 0 0 11820 2 56 60 0 0	3 59 57 0 0 17 60 60 8 <b>7</b> <b>7</b> 0 0 17	4 60 60 8 18 60 60 0 0 0 18 18	5 60 60 0 19 60 60 0 0 seed F 5 60 60 0	6 59 53 0 0 20 19 49 0 2 55 0 0	7 60 60 0 0 21 28 51 0 1 s <b>240</b> 7 60 60 0 0	8 60 60 0 22 88 8 8 === 8 60 60 0	0 0 0 0 23 60 60 8 9 0 0 0	0 0 8 24 60 60 0 0 0	0 60 0 0 25 60 60 0 0	0 60 0 0 26 60 60 8 12 0 60 0 0	0 60 0 0	0 0 8 8

<sup>\*\*</sup> Data from file 09161418.log

<sup>\*\*</sup> Data from file 09161418.log

#### === Start Frame 11880, Total Elapsed Frames 300 ===

Radio #	1	2	3	4	5	6	7	8	9	10	11	12	13	14
CMD TX	21	60	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	11	59	60	60	60	59	60	60	60	60	55	60	60	60
DEL UD	1	0	0	0	0		0	0	0	0	0	0	0	
ENT RQ	0	0	0	0	0	8	0	0	0	0	0	0	0	8
'-														
Radio #	15	16	17	18	19	20	21	22	23	24	25	26		
CMD TX	60	60	60	60	60	60	60	60	60	60	60	60		
RSP RX	56	60	60	60	60	59	59	58	58	58	59	58		
DEL UD	0	0		0	0	0		0			0	0		
ENT RQ	0	0	8	0	0	0	8	0	8	8	0	0		

#### === Start Frame 11940, Total Elapsed Frames 360 ===

Ota			,, .	olu. L	upou	u u.		~~	_						
Radio #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
CMD TX	20	60	60	60	60	60	60	60	60	60	60	60	60	60	
RSP RX	10	59	58	60	59	56	60	60	60	60	60	60	59	59	
DEL UD	1				0				0	0		0	0	0	
ENT RQ	0	8	8	8	0	8	8	8	0	0	8	0	0	0	
	JI.														
Radio #	15	16	17	18	19	20	21	22	23	24	25	26			
CMD TX	60	60	60	60	60	60	60	60	60	60	60	60			
RSP RX	54	60	60	60	60	60	60	60	60	60	60	59			
DEL UD			0		0		0	0	0	0	0	0			
ENT RQ	8	8	0	8	0	8	0	0	0	0	0	0			

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

Radio #	1	2	3	4	5	6	7	8	9	10	11	12	13	14
CMD TX	136	360	360	360	351	360	360	360	360	360	360	360	360	360
RSP RX	82	351	350	360	329	344	360	360	360	360	341	360	358	359
DEL UD	4	0	0	0	1	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	1	0	0	0	0	0	0	0	0	0
•														
Radio #	15	16	17	18	19	20	21	22	23	24	25	26		
CMD TX	360	360	360	360	360	333	342	360	360	360	360	360		
RSP RX	348	360	360	360	360	296	305	358	358	357	359	357		
DEL UD			0	0	0	3	2	0	0	0	0			
ENT RQ	8	8	0	0	0	2	0	0	0	0	0	8		

Frame range = 11640 -> 11999
Total number of frames = 360
Total number of DEL UPDT frames = 10
Total number of EBT RQST frames = 3

#### === Start Frame 11880, Total Elapsed Frames 300 ===

Radio #	1	2	3	4	5	6	7	8	9	10	11	12	13	14
CMD TX RSP RX	21 11	55 56	57 56	60 60	60 60	56 55	60 60	60 60	0 8	0	0 60	0 60	0 59	0
DEL UD ENT RQ	8	0	0	0	0	8	8	8	8	0	8	8	0	0
				-						-			Ü	Ů
Radio #	15 0	16 60	17 60	18 60	19 60	20 60	21 60	22 60	23 60	24 60	25 60	26 60		
RSP RX	ľ	60	60	60	60	60	58	58	58	58	59	58		
DEL UD	8			0	0	0	0	0	0	0	0	0		
ENT RQ	0	8	8	0	0	0	0	0	0	0	0	0		
=== Sta														
Radio #	1 20	2 57	57	4 60	5 47	6	7 60	8	9	10	11 60	12	13 0	14
CMD TX RSP RX	10	57 59	57 57	60	60	57 51	60	60 60	8	8	60	60	59	U
DEL UD		00	0,	00	0	0	0	00	Ü	Ü	0	00	0	8
ENT RQ	8	8	8	8	0	0	0	8	8	8	0	8	0	0
Radio #	15	16	17	18	19	20	21	22	23	24	25	26		
CMD TX		60	60	60	60	58	41		60	60	60	60		
RSP RX	8	60	60	60	60	59	60	88	60	60	60	59		
DEL UD ENT RQ	8	0	0	0	8	8	0	0	8	8	0	0		
LIVI IVQ		U	U	U	U	Ü	U	U	U	U	U	U		
		<b>-</b>	<b>D</b>											
Radio #	 I 1	= 1 <b>est</b> 2	Data 3	Sumn 4	nary≕ 5	<b>====</b>	7	8	9	10	11	12	13	14
CMD TX	136	341	347	360	262	346	360	360	ő	- 10	0	0	0	<u> </u>
RSP RX	85	349	339	360	351	324	360	360	0	8	360	360	353	
DEL UD	_		0	0	0	0	0	0				0	•	6
ENT RQ	8	8	0	0	10	0	0	0	8	8	8	0	8	0
	15	16	17	18	19	20	21	22	23	24	25	26		
Radio #				360	360	171	191	360	360	360	360	360		
CMD TX	0	360	360						250	257				
CMD TX RSP RX	0	360	360	360	360	320	336	358	358	357	390	351		
CMD TX									358 0 0	357 0 0				

Frame range = 11640 -> 11999
Total number of frames = 360
Total number of DEL UPDT frames = 0
Total number of EBT RQST frames = 7

** Da	ata from	file	09161	1447	.loa
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#### === Start Frame 15160, Total Elapsed Frames 60 ===

=== 31	art Frai	ne 15	100, 1	otai E	iapse	ed Fra	mes e	50 ===	•					
Radio #	1	2	3	4	5	6	7	8	9	10	11	12	13	14
CMD TX RSP RX	1	60 59	60 56	60 60	60 60	60 57	60 60	60 60	60 60	60 60	60 54	60 60	60 59	60 60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	8
Radio #	15 60	16 60	17 60	18 60	19 60	20 45	21 60	22 60	23 60	24 60	25 60	26 60		
RSP RX	52	59	60	49	60	35	60	59	59	59	59	59		
DEL UD ENT RQ	0	0	8	0	0	1 0	0	0	0	0	0	0		
LIVI IVO	·	Ü	Ü	Ü	Ü	Ü	Ü	Ü	Ü	Ū	Ü	Ü		
=== Sta	rt Fran	ne 152	220, T	otal E	lapse	d Frai	nes 1	20 ==	=					
Radio #	1	2	3	4	5	6	7	8	9	10	11	12	13	14
CMD TX RSP RX	41 28	60 60	60 58	60 59	60 60	60 58	60 59	60 60	60 60	60 60	60 57	60 60	60 60	60 60
DEL UD ENT RQ	1 0	0	0	0	0	0	0	0	0	0	0	0	0	0
		-	-	-	-		-	-	-	-	-		U	U
Radio #	15 52	16 60	17 60	18 60	19 60	20 60	21 60	22 60	23 60	24 60	25 60	26 60		
RSP RX	49	59	59	54	59	59	59	58	58	58	59	58		
DEL UD ENT RQ	1	0	0	0	0	0	0	0	0	0	0	0		
'														
=== Sta														
=== Sta Radio # CMD TX	rt Fran	ne 152 2 60	2 <b>80</b> , T	otal E 4 60	lapse 5	<b>d Fra</b> i 6	nes 1 7 60	<b>80 ==</b> 8 60	= 9 60	10 60	11 60	12 60	13 60	14 60
Radio # CMD TX RSP RX	0 0	60 59	60 54	60 58	60 59	60 57	7 60 59	60 59	9 60 59	60 59	60 59	60 59	60 59	60 59
Radio #	0	2 60	60	4 60	5 60	6 60	7 60	8 60	9 60	60	60	60	60	60
Radio # CMD TX RSP RX DEL UD ENT RQ	0 0 0 0	60 59 0	3 60 54 0 0	60 58 0 0	5 60 59 0	60 57 0	7 60 59 0	8 60 59 0	9 60 59 0	60 59 0	60 59 0	60 59 0	60 59 0	60 59 0
Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX	1 0 0 0 0 0	2 60 59 0 0 16	3 60 54 0 0	4 60 58 0 0 18	5 60 59 0 0 19	6 60 57 0 0	7 60 59 0 0	8 60 59 0 0	9 60 59 0 0 23	60 59 0 0 24	60 59 0 0 25	60 59 0 0 26	60 59 0	60 59 0
Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX RSP RX	1 0 0 0 0 0 15 60 54	2 60 59 0 0 16 60 59	3 60 54 0 0 17 60 59	4 60 58 0 0 18 60 57	5 60 59 0 0 19 60 59	6 60 57 0 0 20 60 58	7 60 59 0 0 21 60 53	8 60 59 0 0 22 60 58	9 60 59 0 0 23 60 59	60 59 0 0 24 60 58	60 59 0 0 25 60 58	60 59 0 0 26 60 59	60 59 0	60 59 0
Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX	1 0 0 0 0 0	2 60 59 0 0 16	3 60 54 0 0	4 60 58 0 0 18	5 60 59 0 0 19	6 60 57 0 0	7 60 59 0 0	8 60 59 0 0	9 60 59 0 0 23	60 59 0 0 24	60 59 0 0 25	60 59 0 0 26	60 59 0	60 59 0
Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX RSP RX DEL UD ENT RQ	1 0 0 0 0 0 15 60 54 0	2 60 59 0 0 16 60 59 0	3 60 54 0 0 17 60 59 0	4 60 58 0 0 18 60 57 0	5 60 59 0 0 19 60 59 0	6 60 57 0 0 20 60 58 0	7 60 59 0 0 21 60 53 0	8 60 59 0 0 22 60 58 0	9 60 59 0 0 23 60 59 0	60 59 0 0 24 60 58 0	60 59 0 0 25 60 58 0	60 59 0 0 26 60 59 0	60 59 0	60 59 0
Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX RSP RX DEL UD ENT RQ  === Sta	1 0 0 0 0 0 15 60 54 0 0	2 60 59 0 0 16 60 59 0	3 60 54 0 0 17 60 59 0	4 60 58 0 0 18 60 57 0 0	5 60 59 0 0 19 60 59 0	6 60 57 0 0 20 60 58 0 0	7 60 59 0 0 21 60 53 0	8 60 59 0 0 22 60 58 0 0	9 60 59 0 0 23 60 59 0	60 59 0 0 24 60 58 0	60 59 0 0 25 60 58 0	60 59 0 0 26 60 59 0	60 59 0 0	60 59 0 0
Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX RSP RX DEL UD ENT RQ  === Sta Radio # CMD TX	1 0 0 0 0 15 60 54 0 0	2 60 59 0 0 16 60 59 0 0	3 60 54 0 0 17 60 59 0 0 840, T	4 60 58 0 0 18 60 57 0 0 0 <b>o</b> tal E	5 60 59 0 0 19 60 59 0 0	6 60 57 0 0 20 60 58 0 0	7 60 59 0 0 21 60 53 0 0	8 60 59 0 0 22 60 58 0 0	9 60 59 0 0 23 60 59 0 0	60 59 0 0 24 60 58 0 0	60 59 0 0 25 60 58 0 0	60 59 0 0 26 60 59 0 0	60 59 0 0	60 59 0 0
Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX RSP RX DEL UD ENT RQ  === Sta Radio # CMD TX RSP RX	1 0 0 0 0 15 60 54 0 0	2 60 59 0 0 16 60 59 0 0	3 60 54 0 0 17 60 59 0 0 840, T	4 60 58 0 0 18 60 57 0 0 0 <b>otal E</b>	5 60 59 0 0 19 60 59 0 0	6 60 57 0 0 20 60 58 0 0 0 d Frai 6 60 57	7 60 59 0 0 21 60 53 0 0 0 mes 2 7 60 59	8 60 59 0 0 22 60 58 0 0	9 60 59 0 0 23 60 59 0 0	60 59 0 0 24 60 58 0 0	60 59 0 0 25 60 58 0 0	60 59 0 0 26 60 59 0 0	60 59 0 0	60 59 0 0
Radio # CMD TX RSP RX DEL UD ENT RQ Radio # CMD TX RSP RX DEL UD ENT RQ  === Sta Radio # CMD TX	1 0 0 0 0 15 60 54 0 0	2 60 59 0 0 16 60 59 0 0	3 60 54 0 0 17 60 59 0 0 840, T	4 60 58 0 0 18 60 57 0 0 0 <b>o</b> tal E	5 60 59 0 0 19 60 59 0 0	6 60 57 0 0 20 60 58 0 0	7 60 59 0 0 21 60 53 0 0	8 60 59 0 0 22 60 58 0 0	9 60 59 0 0 23 60 59 0 0	60 59 0 0 24 60 58 0 0	60 59 0 0 25 60 58 0 0	60 59 0 0 26 60 59 0 0	60 59 0 0	60 59 0 0
Radio # 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	1 0 0 0 0 15 60 54 0 0	2 60 59 0 0 16 60 59 0 0 0 me 153 2 60 59 0	3 60 54 0 0 17 60 59 0 0 840, T	4 60 58 0 0 18 60 57 0 0 <b>otal E</b> 4 60 58 0	5 60 59 0 0 19 60 59 0 0 lapse 5 60 59 0	6 60 57 0 0 20 60 58 0 0 0 <b>d Frai</b> 6 60 57 0	7 60 59 0 0 21 60 53 0 0 mes 2 7 60 59 0	8 60 59 0 0 22 60 58 0 0	9 60 59 0 0 23 60 59 0 0	60 59 0 0 24 60 58 0 0	60 59 0 0 25 60 58 0 0	60 59 0 0 26 60 59 0 0	60 59 0 0	60 59 0 0
Radio # 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 # CMD TX RSP RX DEL UD ENT RQ  Radio #	1 0 0 0 0 15 60 54 0 0 0 rt Fran 1 0 0 0	2 60 59 0 0 16 60 59 0 0 0 0 16 59 0 0 0	3 60 54 0 0 17 60 59 0 0 3 40, T. 3 60 54 0 0	4 60 58 0 0 18 60 57 0 0 0 <b>ootal E</b> 4 60 58 0 0	5 60 59 0 0 19 60 59 0 0 1apse 5 60 59 0	6 60 57 0 20 60 58 0 0 0 <b>d Frai</b> 6 60 57 0	7 60 59 0 0 21 60 53 0 0 0 mes 2 7 60 59 0 0	8 60 59 0 0 22 60 58 0 0 0 40 == 8 60 59 0 0	9 60 59 0 0 23 60 59 0 0 0 = 9 60 59 0 0 23 60 59 0 0	60 59 0 0 24 60 58 0 0 0	60 59 0 0 25 60 58 0 0 11 60 59 0 0	60 59 0 0 26 60 59 0 0 12 60 59 0 0	60 59 0 0	60 59 0 0
Radio # 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 # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX RSP RX DEL UD ENT RQ	1 0 0 0 0 15 60 54 0 0 0 0 15 60 54 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2 60 59 0 0 0 16 60 59 0 0 0 0 16 60 59 0 0 0 0	3 60 54 0 0 17 60 59 0 0 0 340, T 3 60 54 0 0 0	4 60 58 0 0 18 60 57 0 0 0 0 0 0 0 18 60 57 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	5 60 59 0 0 19 60 59 0 0 0 19 60 59 0 0 0	6 60 57 0 0 20 60 58 0 0 0 <b>d Frai</b> 6 57 0 0 0	7 60 59 0 0 21 60 53 0 0 0 mes 2 7 60 59 0 0 0	8 60 59 0 0 22 60 58 0 0 0 440 == 8 60 59 0 0 0	9 60 59 0 0 23 60 59 0 0 0	60 59 0 0 24 60 58 0 0 0	60 59 0 0 25 60 58 0 0 0	60 59 0 0 26 60 59 0 0 12 60 59 0 0	60 59 0 0	60 59 0 0
Radio # 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 # CMD TX RSP RX DEL UD ENT RQ  Radio #	1 0 0 0 0 54 0 0 rt Fran 1 0 0 0	2 60 59 0 0 16 60 59 0 0 0	3 60 54 0 0 17 60 59 0 0 340, T. 3 60 0 17 7 60 0 0	4 60 58 0 0 18 60 57 0 0 0 0 0 18 4 60 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	5 60 59 0 0 19 60 59 0 0 0 lapse 59 0 0 0	6 60 57 0 0 20 60 58 0 0 0 <b>6</b> 60 57 0 0 0	7 60 59 0 0 21 60 53 0 0 0 0 mess 2 7 60 0 0 0 0	8 60 59 0 0 22 60 58 0 0 0 440 == 8 60 59 0 0	9 60 59 0 0 23 60 59 0 0 0 = 9 60 59 0 0 23 60 59 0 0 0	60 59 0 0 24 60 58 0 0 0 10 60 59 0 0 24 60 59 0 0	60 59 0 0 25 60 58 0 0 11 60 59 0 0 25 60 58 59 60 59 60 59 60 60 59 60 60 60 60 60 60 60 60 60 60 60 60 60	60 59 0 0 26 60 59 0 0 12 60 59 0 0 26 60 59 0 0	60 59 0 0	60 59 0 0

#### \*\* Data from file 09161452.log

#### === Start Frame 15160, Total Elapsed Frames 60 ===

	Radio #	1	2	3	4	5	6	7	8	9	10	11	12	13	14
	CMD TX RSP RX	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 45
	DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	43
-	ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Radio #	15	16	17	18	19	20	21	22	23	24	25	26		
	CMD TX RSP RX	58 0	60 60	60 60	60 59	60 60	45 41	60 60	60 59	60 59	60 59	60 59	60 59		
	DEL UD	0	0	0	0	0	0	0	0	0	0	0	0		
-	ENT RQ	0	0	0	0	0	2	0	0	0	0	0	0		
	=== Sta Radio #			2 <b>20</b> , T	otal E	lapse 5		mes 1 7		<b>=</b> 9	10	11	12	13	14
(	CMD TX	40	2 58	58	60	58	6 58	60	8 60	57	57	57	57	57	57
	RSP RX	27	57	6	59	56	5	58	58	0	0	59	59	20	42
	DEL UD ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0
				17			20	24	22	22	24				
7	Radio # CMD TX	15 49	16 60	17 60	18 60	19 60	20 59	21 59	60	23 60	60	25 60	26 60		
- 1	RSP RX	16	60	60	57	60	56	60	59	59	59	60	59		
	DEL UD ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0		
	ENI KQ	U	U	U	U	U	U	U	U	U	U	U	U		
	=== Sta	rt Fran	ne 152	280. T	otal E	lapse	d Fra	nes 1	80 ==	=					
_	=== Sta Radio #	1	2	3	4	5	6	7	8	9	10	11	12	13	14
	Radio # CMD TX	0	2 60	60	4 60	- 60	6 60	7 60	8 60	9 59	59	59	59	59	59
- 1	Radio #	1	2	3	4	5	6	7	8	9					
ı	Radio # CMD TX RSP RX	0 0	60 59	60 10	60 59	60 55	60 57	7 60 60	60 60	9 59 0	59 0	59 60	59 60	59 22	59 57
	Radio # CMD TX RSP RX DEL UD ENT RQ Radio #	0 0 0 0 0	2 60 59 0 0	3 60 10 0 0	60 59 0 0	5 60 55 0 0	60 57 0 0	7 60 60 0 0	8 60 60 0 0	9 59 0 0 0	59 0 0 0	59 60 0 0	59 60 0 0	59 22 0	59 57 0
1	Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX	1 0 0 0 0 0	2 60 59 0 0 16	3 60 10 0 0 17 60	4 60 59 0 0 18	5 60 55 0 0 19	6 57 0 0 20	7 60 60 0 0 21 59	8 60 60 0 0	9 59 0 0 0 23	59 0 0 0 24	59 60 0 0 25	59 60 0 0 26	59 22 0	59 57 0
     	Radio # CMD TX RSP RX DEL UD ENT RQ Radio #	0 0 0 0 0	2 60 59 0 0	3 60 10 0 0	60 59 0 0	5 60 55 0 0	60 57 0 0	7 60 60 0 0	8 60 60 0 0	9 59 0 0 0	59 0 0 0	59 60 0 0	59 60 0 0	59 22 0	59 57 0
7	Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX RSP RX	1 0 0 0 0 0 15 59 0	2 60 59 0 0 16 60 60	3 60 10 0 0 17 60 60	4 60 59 0 0 18 60 59	5 60 55 0 0 19 60 60	6 60 57 0 0 20 29 47	7 60 60 0 0 21 59 59	8 60 0 0 22 60 60	9 59 0 0 0 23 60 60	59 0 0 0 24 60 60	59 60 0 0 25 60 60	59 60 0 0 26 60	59 22 0	59 57 0
7	Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX RSP RX DEL UD	1 0 0 0 0 15 59 0	2 60 59 0 0 16 60 60	3 60 10 0 0 17 60 60 0	4 60 59 0 0 18 60 59 0	5 60 55 0 0 19 60 60 0	6 60 57 0 0 20 59 47 0	7 60 60 0 0 21 59 59 0	8 60 0 0 22 60 60 0	9 0 0 0 23 60 60 0	59 0 0 0 24 60 60	59 60 0 0 25 60 60	59 60 0 0 26 60 60	59 22 0	59 57 0
7	Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX RSP RX DEL UD ENT RQ ENT RQ  === Sta	1 0 0 0 0 15 59 0 0 0	2 60 59 0 0 16 60 0 0	3 60 10 0 0 17 60 60 0	4 60 59 0 0 18 60 59 0 0	5 60 55 0 0 19 60 60 0	6 60 57 0 0 20 59 47 0 0	7 60 60 0 0 21 59 59 0 0	8 60 0 0 0 22 60 60 0	9 59 0 0 0 23 60 60 0	59 0 0 0 24 60 60 0	59 60 0 25 60 60 0	59 60 0 0 26 60 60 0	59 22 0 0	59 57 0 0
 	Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX RSP RX DEL UD ENT RQ  === Sta Radio #	1 0 0 0 0 15 59 0 0 0	2 60 59 0 0 16 60 60 0	3 60 10 0 0 17 60 60 0 0	4 60 59 0 0 18 60 59 0 0	5 60 55 0 0 19 60 60 0	6 60 57 0 0 20 59 47 0 0	7 60 60 0 0 21 59 59 0 0	8 60 0 0 0 22 60 60 0 0	9 59 0 0 0 23 60 60 0 0	59 0 0 0 24 60 60 0	59 60 0 0 25 60 60 0	59 60 0 0 26 60 60 0	59 22 0 0	59 57 0 0
	Radio # CMD TX RSP RX DEL UD ENT RQ Radio # CMD TX RSP RX DEL UD ENT RQ  === Sta Radio # CMD TX RSP RX	1 0 0 0 0 15 59 0 0 0	2 60 59 0 0 16 60 60 0 0	3 60 10 0 0 17 60 60 0 0 340, T 3 58 8	4 60 59 0 0 18 60 59 0 0 0 <b>otal E</b>	5 60 55 0 0 19 60 60 0 0	6 57 0 0 20 59 47 0 0 <b>d Fra</b> i 6 58	7 60 60 0 0 21 59 59 0 0 0 mes 2 7 60 60	8 60 60 0 0 22 60 60 0 0	9 59 0 0 0 23 60 60 0 0	59 0 0 0 24 60 60 0 0	59 60 0 0 25 60 60 0 0	59 60 0 0 26 60 60 0 0	59 22 0 0	59 57 0 0
	Radio #  CMD TX RSP RX DEL UD ENT RQ  Radio #  CMD TX RSP RX DEL UD DEL UD ENT RQ  === Sta Radio #  CMD TX RADIO TX RADI	1 0 0 0 15 59 0 0 0 rt Fran	2 60 59 0 0 16 60 60 0 0 me 153 2 56 58 0	3 60 10 0 0 17 60 60 0 0 840, T 3 58 8 0	4 60 59 0 0 18 60 59 0 0 <b>otal E</b> 4 60 60 0	5 60 55 0 0 19 60 60 0 0	6 60 57 0 0 20 59 47 0 0 <b>d Fra</b> l 6 58 10 0	7 60 60 0 21 59 59 0 0 mes 2 7 60 60 0	8 60 60 0 0 22 60 60 0 0	9 59 0 0 23 60 60 0 0	59 0 0 0 24 60 60 0 0	59 60 0 25 60 60 0 0	59 60 0 0 26 60 60 0 0	59 22 0 0 13 57 20 0	59 57 0 0
	Radio # CMD TX RSP RX DEL UD ENT RQ Radio # CMD TX RSP RX DEL UD ENT RQ  === Sta Radio # CMD TX RSP RX	1 0 0 0 0 15 59 0 0 0	2 60 59 0 0 16 60 60 0 0	3 60 10 0 0 17 60 60 0 0 340, T 3 58 8 0	4 60 59 0 0 18 60 59 0 0 0 <b>otal E</b>	5 60 55 0 0 19 60 60 0 0	6 60 57 0 0 20 59 47 0 0 <b>d Fra</b> 6 58 10 0	7 60 60 0 0 21 59 0 0 0 mes 2 7 60 60 0	8 60 60 0 0 22 60 60 0 0	9 59 0 0 0 23 60 60 0 0	59 0 0 24 60 60 0 0	59 60 0 25 60 60 0 0	59 60 0 0 26 60 60 0 0	59 22 0 0	59 57 0 0
	Radio # 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  === Sta Radio # CMD TX RSP RX DEL UD ENT RQ Radio #	1 0 0 0 0 15 59 0 0 0 0 rt Fran 1 0 0 0	2 60 59 0 0 16 60 0 0 0 me 153 2 56 58 0 0	3 60 10 0 0 17 60 60 0 0 840, T 3 58 8 0 0	4 60 59 0 0 18 60 59 0 0 <b>otal E</b> 4 60 60 0 0	5 60 55 0 0 19 60 60 0 0 0	6 60 57 0 20 59 47 0 0 <b>d Fra</b> 6 58 10 0	7 60 60 0 0 21 59 0 0 0 0 mess 2 7 60 60 0 0	8 60 60 0 22 60 60 0 0 240 == 8 60 60 0 0	9 59 0 0 23 60 60 0 0	59 0 0 0 24 60 60 0 0 10 57 0 0	59 60 0 25 60 60 0 0 11 57 60 0 0	59 60 0 26 60 0 0 12 57 60 0 0	59 22 0 0 13 57 20 0	59 57 0 0
	Radio # 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 # CMD TX RSP RX R	1 0 0 0 0 15 59 0 0 0 0 0 <b>rt Fran</b> 1 0 0 0	2 60 59 0 0 16 60 0 0 0 0 0 15: 2 56 58 0 0 0	3 60 10 0 0 17 60 60 0 0 3 340, T 3 58 8 0 0	4 60 59 0 0 18 60 59 0 0 0 <b>otal E</b> 4 60 60 0 0	5 60 55 0 0 19 60 60 0 0 0 lapse 5 56 60 0 0	6 60 57 0 0 20 59 47 0 0 <b>d Fra</b> 6 58 10 0	7 60 60 0 0 21 59 0 0 0 mess 2 7 60 60 0 0	8 60 0 0 22 60 60 0 0 40 === 8 60 60 0 0	9 59 0 0 0 23 60 60 0 0 0 = 9 57 0 0 0 23 60 60 0 0	59 0 0 24 60 60 0 0	59 60 0 25 60 60 0 0 11 57 60 0 0	59 60 0 26 60 0 0 12 57 60 0 0	59 22 0 0 13 57 20 0	59 57 0 0
	Radio # 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  === Sta Radio # CMD TX RSP RX DEL UD ENT RQ Radio #	1 0 0 0 0 15 59 0 0 0 0 rt Fran 1 0 0 0	2 60 59 0 0 16 60 0 0 0 me 153 2 56 58 0 0	3 60 10 0 0 17 60 60 0 0 840, T 3 58 8 0 0	4 60 59 0 0 18 60 59 0 0 <b>otal E</b> 4 60 60 0 0	5 60 55 0 0 19 60 60 0 0 0	6 60 57 0 0 20 59 47 0 0 0 <b>d Frai</b> 6 58 10 0 0	7 60 60 0 0 21 59 0 0 0 0 mess 2 7 60 60 0 0	8 60 60 0 22 60 60 0 0 240 == 8 60 60 0 0	9 59 0 0 23 60 60 0 0	59 0 0 24 60 60 0 0 10 57 0 0 0 24 60	59 60 0 25 60 60 0 0	59 60 0 26 60 0 0 12 57 60 0 0	59 22 0 0 13 57 20 0	59 57 0 0

=== Sta	rt Fran	ne 15	400, 1	otal E	Elapse	ed Fra	mes :	300 ==	==					
Radio #	1	2	3	4	5	6	7	8	9	10	11	12	13	14
CMD TX	0	60	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX DEL UD	0	60	57	60	60	59	60	60	60	59	60	60	60	60 0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LIVI IVQ	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		
CMD TX	60	60	60	60	60	60	60	60	60	60	60	60		
RSP RX	60	60	60	60	60	59	51	60	60	60	60	60		
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0		
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0		
=== Sta	rt Frai	ne 15	460. T	otal E	Elapse	ed Fra	mes :	360 ==	=					
Radio #	1	2	3	4	5	6	7	8	9	10	11	12	13	14
CMD TX	0	60	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	0	60	60	59	60	60	60	60	59	60	60	60	60	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Radio #	15	16	17	18	19	20	21	22	23	24	25	26		
CMD TX	60	60	60	60	60	60	51	60	60	60	60	60		
RSP RX	60	60	60	60	60	47	42	60	60	60	60	60		
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0		
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0		
=====Te	et Da	la Sur	nmarı	<i>,</i>										
Radio #	1	2	3	4	5	6	7	8	9	10	11	12	13	14
CMD TX	42	360	360	360	360	360	360	360	360	360	360	360	360	360
RSP RX	29	358	344	356	359	351	358	359	358	358	350	359	358	359
DEL UD	1	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Radio #	15	16	17	18	19	20	21	22	23	24	25	26		
CMD TX	352	350	360	360	360	345	351	360	360	360	360	360		
RSP RX	335	357	358	357	357	317	320	355	356	355	356	356		
DEL UD	1	0	0	0	0	1	1	0	0	0	0	0		
ENT RQ	1	0	0	0	0	0	0	0	0	0	0	0		

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

RSP RX	=== Sta	rt Fran	ne 15	400, 1	otal I	Elapse	d Fra	mes 3	300 ==	=					
RSP RX															
Radio #   15 16 17 18 19 20 21 22 23 24 25 26															
ENT RQ															
Radio # 15 16 17 18 19 20 21 22 23 24 25 26  CMD TX 59 60 60 60 60 59 59 60 60 60 60 60 60  RSP RX 0 60 60 59 60 50 58 60 60 60 60 60 60  DEL UD 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  ENT RQ 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0				-			-								
CMD TX	ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RSP RX	Radio #	15	16	17	18	19	20	21	22	23	24	25	26		
DEL UD		59	60	60	60	60	59		60	60	60	60	60		
ENT RQ		0	60		59	60	50	58	60	60	60	60	60		
=== Start Frame 15460, Total Elapsed Frames360 ===  Radio #															
Radio #	ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0		
Radio #															
Radio #	=== Sta	rt Fra	me 15	460.	Total I	Elaps	ed Fra	mes3	60 ==	=					
RSP RX											10	11	12	13	14
Radio #   1 2 3 4 5 6 7 8 9 10 11 12 13 14										60	60				60
ENT RQ															
Radio # 15 16 17 18 19 20 21 22 23 24 25 26  CMD TX 60 60 60 60 60 60 60 51 60 60 60 60 60  RSP RX 0 60 60 60 60 60 46 51 60 60 60 60 60  DEL UD 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0  ENT RQ 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0															
CMD TX	ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CMD TX	Radio #	15	16	17	18	19	20	21	22	23	24	25	26		
DEL UD		60	60	60	60	60	60	51	60	60	60	60	60		
ENT RQ 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0	RSP RX	0	60	60	60	60	46	51	60	60	60	60	60		
Radio #   1   2   3   4   5   6   7   8   9   10   11   12   13   14	DEL UD	0	0	0	0	0	0	0	0	0	0	0	0		
Radio #     1     2     3     4     5     6     7     8     9     10     11     12     13     14       CMD TX     41     350     354     360     350     352     360     360     351     351     350     350     350     350       RSP RX     27     345     68     356     334     65     357     357     0     0     359     358     145     295       DEL UD     0 <td>ENT RQ</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>1</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td></td> <td></td>	ENT RQ	0	0	0	0	0	0	1	0	0	0	0	0		
Radio #     1     2     3     4     5     6     7     8     9     10     11     12     13     14       CMD TX     41     350     354     360     350     352     360     360     351     351     350     350     350     350       RSP RX     27     345     68     356     334     65     357     357     0     0     359     358     145     295       DEL UD     0 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>															
Radio #     1     2     3     4     5     6     7     8     9     10     11     12     13     14       CMD TX     41     350     354     360     350     352     360     360     351     351     350     350     350     350       RSP RX     27     345     68     356     334     65     357     357     0     0     359     358     145     295       DEL UD     0 <td>Ta</td> <td>et Dat</td> <td>a Sun</td> <td>marv</td> <td></td>	Ta	et Dat	a Sun	marv											
RSP RX							6	7	8	9	10	11	12	13	14
DEL UD 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	CMD TX	41	350	354	360	350	352	360	360	351	351	350	350	350	350
ENT RQ         0         0         0         0         10         0 </td <td>RSP RX</td> <td>27</td> <td>345</td> <td>68</td> <td>356</td> <td>334</td> <td>65</td> <td>357</td> <td>357</td> <td>0</td> <td>0</td> <td>359</td> <td>358</td> <td>145</td> <td>295</td>	RSP RX	27	345	68	356	334	65	357	357	0	0	359	358	145	295
Radio # 15 16 17 18 19 20 21 22 23 24 25 26 CMD TX 342 360 360 360 360 360 360 360 360 360 360															
CMD TX 342 360 360 360 360 339 345 360 360 360 360 360	ENT RQ	0	0	0	0	10	0	0	0	0	0	0	0	0	0
CMD TX 342 360 360 360 360 339 345 360 360 360 360 360	Radio #	15	16	17	18	19	20	21	22	23	24	25	26		
RSP RX   16 360 360 352 359 274 344 358 358 358 359 358															
DEL UD 0 0 0 0 0 0 0 0 0 0															
ENT RQ 0 0 8 0 0 2 1 0 0 0 0	ENT RQ	0	0	8	0	0	2	1	0	0	0	0	0		

Frame range = 15160 -> 15519 Total number of frames = 360 Total number of DEL UPDT frames = 0 Total number of EBT RQST frames = 3

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

#### === Start Frame 13860, Total Elapsed Frames 60 ===

Radio #	1	2	3	4	5	6	7	8	9	10	11	12	13	14
CMD TX	31	60	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	21	60	59	60	60	58	60	60	60	60	47	60	60	60
DEL UD ENT RQ	1 0	0	0	0	0	0	0	0	0	0	0	0	0	0
LIVI IVQ	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		
CMD TX	60 59	60 41	60 60	60 59	60 59	5 42	51 42	60	60 57	60 58	60	60 56		
RSP RX DEL UD	0	0	0	0	0	42	42	57 0	0	0	60 0	00		
ENT RQ	ő	Ö	Ö	ő	Ö	ő	ő	Ö	Ö	ő	ő	ő		
•														
=== Start F	-ramo	13020	Tota	l Elan	ead E	ramo	e 120							
Radio #	1	2	3	4	5	6	7	<b></b>	9	10	11	12	13	14
CMD TX	17	60	60	60	51	60	60	60	60	60	60	60	60	60
RSP RX	7	60	60	60	42	60	60	60	60	60	39	60	60	60
DEL UD ENT RQ	1 0	0	0	0	1	0	0	0	0	0	0	0	0	0
ENI KQ	U	U	U	U	1	U	U	U	U	U	U	U	U	U
Radio #	15	16	17	18	19	20	21	22	23	24	25	26		
CMD TX RSP RX	60 57	41	60 60	60	60	60 60	60 60	60	60 59	60 59	60	60		
DEL UD	0	19 0	0	60 0	59 0	0	0	59 0	0	0	60 0	60 0		
		0	ő	ő	ő	ő	ő	ő	ő	ő	ő	ő		
ENT RQ	0													
ENI RQ	U													
•		13980	. Tota	l Flan	sed F	rame	s 180							
=== Start F		1 <b>3980</b> 2	, Tota 3	ıl Elap 4	sed F	rame	<b>s 180</b> 7	<b>===</b> 8	9	10	11	12	13	14
=== Start F Radio # CMD TX	rame 1 25	2 60	60	4 60	5 60	6 60	7 60	8 60	60	60	60	60	60	60
=== Start F Radio # CMD TX RSP RX	Frame 1 25 16	60 60	60 58	60 60	5 60 60	60 56	7 60 60	8 60 60	60 60	60 60	60 53	60 60	60 60	60 60
=== Start F Radio # CMD TX RSP RX DEL UD	Frame 1 25 16 0	60 60 0	60 58 0	60 60 0	5 60 60 0	6 60 56 0	7 60 60 0	8 60 60 0	60 60 0	60 60 0	60 53 0	60 60 0	60 60 0	60 60 0
=== Start F Radio # CMD TX RSP RX DEL UD ENT RQ	7 1 25 16 0 0	60 60 0	3 60 58 0 0	60 60 0	5 60 60 0	60 56 0	7 60 60 0	8 60 60 0	60 60 0	60 60 0	60 53 0 0	60 60 0	60 60	60 60
=== Start F Radio # CMD TX RSP RX DEL UD ENT RQ Radio #	7 1 25 16 0 0 15	2 60 60 0 0	3 60 58 0 0	60 60 0 0	5 60 60 0 0	6 60 56 0 0	7 60 60 0 0	8 60 60 0 0	60 60 0 0	60 60 0 0	60 53 0 0	60 60 0 0	60 60 0	60 60 0
=== Start F Radio # CMD TX RSP RX DEL UD ENT RQ Radio # CMD TX	7 1 25 16 0 0 15 60	2 60 60 0 0 16 57	3 60 58 0 0 17 60	4 60 60 0 0 18 60	5 60 60 0 0 19	6 60 56 0 0 20	7 60 60 0 0 21	8 60 60 0 0	60 60 0 0 23	60 60 0 0 24	60 53 0 0 25	60 60 0 0 26	60 60 0	60 60 0
=== Start F Radio # CMD TX RSP RX DEL UD ENT RQ Radio #	7 1 25 16 0 0 15	2 60 60 0 0	3 60 58 0 0	60 60 0 0	5 60 60 0 0	6 60 56 0 0	7 60 60 0 0	8 60 60 0 0	60 60 0 0	60 60 0 0	60 53 0 0	60 60 0 0	60 60 0	60 60 0
=== Start F Radio # CMD TX RSP RX DEL UD ENT RQ Radio # CMD TX RSP RX	Frame 1 25 16 0 0 15 60 51	2 60 60 0 0 16 57 57	3 60 58 0 0 17 60 60	4 60 60 0 0 18 60 60	5 60 60 0 0 19 60 60	6 60 56 0 0 20 60 59	7 60 60 0 0 21 60 60	8 60 0 0 0 22 60 60	60 60 0 0 23 60 60	60 60 0 0 24 60	60 53 0 0 25 60	60 60 0 0 26 60	60 60 0	60 60 0
=== Start F Radio # CMD TX RSP RX DEL UD ENT RQ Radio # CMD TX RSP RX DEL UD	Frame 1 25 16 0 0 15 60 51 0	2 60 60 0 0 16 57 57 0	3 60 58 0 0 17 60 60 0	4 60 60 0 0 18 60 60 0	5 60 0 0 19 60 60	6 60 56 0 0 20 60 59 0	7 60 60 0 0 21 60 60 0	8 60 0 0 22 60 60 0	60 60 0 0 23 60 60	60 60 0 0 24 60 60	60 53 0 0 25 60 60	60 60 0 0 26 60 60	60 60 0	60 60 0
=== Start F Radio # CMD TX RSP RX DEL UD ENT RQ Radio # CMD TX RSP RX DEL UD	1 25 16 0 0 15 60 51 0 0	2 60 60 0 0 16 57 57 0	3 60 58 0 0 17 60 60 0	4 60 60 0 0 18 60 60 0	5 60 60 0 0 19 60 60 0	6 60 56 0 0 20 60 59 0	7 60 60 0 0 21 60 60 0	8 60 60 0 0 22 60 60 0	60 60 0 0 23 60 60	60 60 0 0 24 60 60	60 53 0 0 25 60 60	60 60 0 0 26 60 60	60 60 0	60 60 0
=== Start F Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX RSP RX DEL UD ENT RQ ENT RQ  === Start F Radio #	Frame  1  25  16  0  0  15  60  51  0  0	2 60 60 0 0 16 57 57 0 0	3 60 58 0 0 17 60 60 0	4 60 60 0 0 18 60 60 0 0	5 60 60 0 0 19 60 60 0 0	6 60 56 0 0 20 60 59 0 0	7 60 60 0 0 21 60 60 0 0	8 60 60 0 0 22 60 60 0 0	60 60 0 0 23 60 60 0	60 60 0 0 24 60 60 0	60 53 0 0 25 60 60 0	60 60 0 0 26 60 60 0	60 60 0 0	60 60 0 0
=== Start F Radio # CMD TX RSP RX DEL UD ENT RQ Radio # CMD TX RSP RX DEL UD ENT RQ  === Start F Radio # CMD TX	Frame 1 5	2 60 60 0 0 16 57 57 0 0	3 60 58 0 0 17 60 60 0 0, <b>Tota</b>	4 60 60 0 0 18 60 60 0 0	5 60 60 0 0 19 60 60 0 0	6 60 56 0 0 20 60 59 0 0	7 60 60 0 0 21 60 60 0 0 0 ss <b>240</b> 7	8 60 60 0 0 22 60 60 0 0	60 60 0 0 23 60 60 0 0	60 60 0 0 24 60 60 0	60 53 0 0 25 60 60 0 0	60 60 0 0 26 60 60 0 0	60 60 0 0	60 60 0 0
=== Start F Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX RSP RX DEL UD ENT RQ  === Start F Radio # CMD TX RSP RX DEL UD ENT RQ	Frame 1 25 60 51 0 0	2 60 60 0 0 16 57 57 0 0 14040 2 60 60	3 60 58 0 0 17 60 60 0 0, <b>Tota</b> 3 60 59	4 60 60 0 0 18 60 60 0 0	5 60 60 0 0 19 60 60 0 0 esed F 5	6 60 56 0 0 20 60 59 0 0 0	7 60 60 0 0 21 60 60 0 0 s <b>240</b> 7 60 60	8 60 60 0 0 22 60 60 0 0	60 60 0 0 23 60 60 0 0	60 60 0 0 24 60 60 0 0	60 53 0 0 25 60 60 0 0	60 60 0 0 26 60 60 0 0	60 60 0 0	60 0 0 0
=== Start F Radio # CMD TX RSP RX DEL UD ENT RQ Radio # CMD TX RSP RX DEL UD ENT RQ  === Start F Radio # CMD TX	Frame 1 5	2 60 60 0 0 16 57 57 0 0	3 60 58 0 0 17 60 60 0 0, <b>Tota</b>	4 60 60 0 0 18 60 60 0 0	5 60 60 0 0 19 60 60 0 0	6 60 56 0 0 20 60 59 0 0	7 60 60 0 0 21 60 60 0 0 0 ss <b>240</b> 7	8 60 60 0 0 22 60 60 0 0	60 60 0 0 23 60 60 0 0	60 60 0 0 24 60 60 0	60 53 0 0 25 60 60 0 0	60 60 0 0 26 60 60 0 0	60 60 0 0	60 60 0 0
=== Start F Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX RSP RX DEL UD ENT RQ  === Start F Radio # CMD TX RSP RX DEL UD ENT RQ	Frame 1 5 0 1 0 0	2 60 60 0 0 16 57 57 0 0 14040 2 60 60 0	3 60 58 0 0 17 60 60 0 0 0, <b>Tota</b> 3 69 0	4 60 60 0 0 18 60 60 0 0	5 60 60 0 0 19 60 60 0 0 esed F 5 60 60 0	6 60 56 0 0 59 0 0 0	7 60 60 0 0 21 60 60 0 0 s <b>240</b> 7 60 60 0 0	8 60 60 0 0 22 60 60 0 0	60 60 0 0 23 60 60 0 0	60 60 0 0 24 60 60 0 0	60 53 0 0 25 60 60 0 0	60 60 0 0 26 60 60 0 0	13 60 60 0	60 0 0 0 14 60 60 0
=== Start F Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX RSP RX DEL UD ENT RQ  === Start F Radio # CMD TX RSP RX DEL UD ENT RQ  ENT RQ  Radio # CMD TX RSP RX DEL UD ENT RQ  Radio #	1 25 16 0 0 15 60 51 0 0 15 5 0 1 0 1 5 1 0 1 1 5 1 0 1 1 5 1 5	2 60 60 0 16 57 57 0 0 14040 2 60 60 0 0	3 60 58 0 0 17 60 60 0 0 , <b>Tota</b> 3 60 59 0	4 60 60 0 0 18 60 60 0 0 0 18 Elap 4 60 60 0 0	5 60 0 0 19 60 60 0 0 0 seed F 5 60 60 0 0	6 60 56 0 20 60 59 0 0	7 60 60 0 0 21 60 60 0 0 s <b>240</b> 7 60 60 0 0	8 60 60 0 22 60 60 0 0	60 60 0 0 23 60 60 0 0 9 60 60 0 0	60 60 0 0 24 60 60 0 0	60 53 0 0 25 60 60 0 0 11 60 50 0	60 60 0 0 26 60 0 0 12 60 60 0 0	13 60 60 0	60 0 0 0 14 60 60 0
=== Start F Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX RSP RX DEL UD ENT RQ  === Start F Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX RSP RX RSP RX	Frame 1 5 0 1 0 0	2 60 60 0 0 16 57 57 0 0 14040 2 60 60 0	3 60 58 0 0 17 60 60 0 0 0, <b>Tota</b> 3 69 0	4 60 60 0 0 18 60 60 0 0	5 60 60 0 0 19 60 60 0 0 esed F 5 60 60 0	6 60 56 0 0 59 0 0 0	7 60 60 0 0 21 60 60 0 0 s <b>240</b> 7 60 60 0 0	8 60 60 0 0 22 60 60 0 0	60 60 0 0 23 60 60 0 0	60 60 0 0 24 60 60 0 0	60 53 0 0 25 60 60 0 0	60 60 0 0 26 60 60 0 0	13 60 60 0	60 0 0 0 14 60 60 0
=== Start F Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX RSP RX DEL UD ENT RQ  === Start F Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX RSP RX DEL UD ENT RQ	Frame 1 25 16 0 0 0 15 60 51 0 0 1 15 60 1 1 0 0 1 1 5 60 60 50 0 1 1 5 60 60 50 0 0 1 1 5 60 60 60 60 60 60 60 60 60 60 60 60 60	2 60 60 0 0 16 57 57 0 0 14040 2 60 60 0 0	3 60 58 0 0 17 60 60 0 0 0 0 7 7 60 59 0 0 0 17 60 60 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	4 60 60 0 0 18 Elap 4 60 60 0 0 18 60 60 0 0	5 60 0 0 19 60 60 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	6 60 56 0 0 59 0 0 59 0 0 59 0 0 59 0 0 59 0 0 59 0 0	7 60 60 0 0 21 60 60 0 0 0 8 8 240 7 60 60 0 0 0	8 60 0 0 22 60 60 0 0 0 22 60 55 0	60 60 0 0 23 60 60 0 0 0 9 60 60 0 0 0	60 60 0 0 24 60 60 0 0 0 10 60 59 0 0	60 53 0 0 25 60 60 0 0 0 0 25 60 0 0 0 0	60 60 0 0 26 60 60 0 0 0 26 60 60 0 0 0	13 60 60 0	60 0 0 0 14 60 60 0
=== Start F Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX RSP RX DEL UD ENT RQ  === Start F Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX RSP RX RSP RX	Frame 1 25 16 0 0 15 60 51 0 0 15 60 1 0 15 60 1 0 15 60 59	2 60 60 0 0 16 57 57 57 0 0 14040 2 60 60 0 0	3 60 58 0 0 17 60 60 0 0 0 0 0 0 17 7 60 60 0 0 0	4 60 60 0 0 18 60 60 0 0 0 18 Elap 4 60 60 0 0	5 60 0 0 19 60 60 0 0 0 seed F 5 60 60 0 0	6 60 56 0 0 60 59 0 0 0 Frame 6 60 59 0 0 0	7 60 60 0 0 21 60 60 0 7 60 60 0 0 21 60 60 0 2 7	8 60 0 0 0 22 60 60 0 0 0	60 60 0 0 23 60 60 0 0 9 60 60 0 0 23 60 60 57	60 60 0 0 24 60 60 0 0 0 10 60 59 0 0 24 60 57	60 53 0 0 25 60 60 0 0 0 11 60 50 0 0 25 60 50 50 50 50 50 50 50 50 50 50 50 50 50	60 60 0 0 26 60 60 0 0 12 60 60 0 0 0	13 60 60 0	60 0 0 0 14 60 60 0

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

#### === Start Frame 13860, Total Elapsed Frames 60 ===

Start	i iaiiie	13000	J, 10t	ai Lia	pseu	I I allie	3 00							
Radio #	1	2	3	4	5	6	7	8	9	10	11	12	13	14
CMD TX	31	55	56 50	60	54	55 50	60	60	0	0	0	0	0	0
RSP RX DEL UD	21 0	60 0	59 0	60 0	60 0	58 0	60 0	60 0	0	0	60 0	60 0	60 0	0
ENT RQ	2	Ő	ő	Ö	ő	ő	ő	ŏ	ő	ő	ő	ő	ŏ	Ö
Radio #	15	16	17	18	19	20	21	22	23	24	25	26		
CMD TX	0	60	60	60	60	32	36	60	60	60	60	60		
RSP RX	0	60	60	60	59	32	45	57	57	58	60	56		
DEL UD ENT RQ	0	0	0	0	0	0	0 1	0	0	0	0	0		
LIVI IVQ		O	O	Ü	O	O		O	O	O	O	Ū		
=== Start F	Frame	13920	. Tota	l Elan	sed F	rame	s 120	===						
Radio #	1	2	3	4	5	6	7	8	9	10	11	12	13	14
CMD TX RSP RX	17 7	50 53	53 49	60 59	50 60	52 47	60 59	60 59	0	0	0 57	0 59	0 56	0 57
DEL UD	0	0	49	59 0	0	0	59 0	59 0	0	0	0	59 0	96 0	0
ENT RQ	Ö	Ō	Ō	Ö	1	Ö	Ö	Ō	Ō	Ō	Ö	Ö	Ō	Ö
Radio #	15	16	17	18	19	20	21	22	23	24	25	26		
CMD TX	0	40	60	60	60	60	60	60	60	60	60	60		
RSP RX DEL UD	0	39 0	59 0	60 0	59 0	58 0	60 0	59 0	59 0	59 0	60 0	60 0		
ENT RQ	Ö	3	Ö	Ö	Ö	Ö	Ö	ő	Ö	Ö	Ö	Ö		
=== Start I Radio #	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Radio #	1 25	<u>2</u> 53	3 54	4 59	5 53	6 54	7 58	8 57	0	0	0	0	0	0
Radio #	1	2	3	4	5	6	7	8						
Radio # CMD TX RSP RX	25 16	53 53	54 50	59 57	53 60	6 54 49	7 58 57	57 60	0	0	0 60	0 60	0 60	0
Radio # CMD TX RSP RX DEL UD ENT RQ Radio #	25 16 0 1	53 53 0 0	3 54 50 0 0	59 57 0 0	5 53 60 0 0	6 54 49 0 0	7 58 57 0 0	8 57 60 0 0	0 0 0 0	0 0 0 0	0 60 0 0	0 60 0 0	0 60 0	0
Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX	1 25 16 0 1 1 15	2 53 53 0 0 16 55	3 54 50 0 0 17 57	4 59 57 0 0 18	5 53 60 0 0 19	6 54 49 0 0 20	7 58 57 0 0 21 60	8 57 60 0 0 22 60	0 0 0 0 23	0 0 0 0 24	0 60 0 0 25	0 60 0 0 26	0 60 0	0
Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX RSP RX	1 25 16 0 1 1 15 0	2 53 53 0 0 16 55 57	3 54 50 0 0	59 57 0 0	5 53 60 0 0 19 60 60	6 54 49 0 0 20 57 55	7 58 57 0 0	8 57 60 0 0	0 0 0 0	0 0 0 0	0 60 0 0	0 60 0 0 26 60	0 60 0	0
Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX	1 25 16 0 1 1 15	2 53 53 0 0 16 55	3 54 50 0 0 17 57 60	4 59 57 0 0 18 60 60	5 53 60 0 0 19	6 54 49 0 0 20	7 58 57 0 0 21 60 60	8 57 60 0 0 22 60 60	0 0 0 0 23 60 60	0 0 0 0 24 60 60	0 60 0 0 25 60	0 60 0 0 26	0 60 0	0
Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX RSP RX DEL UD	1 25 16 0 1 1 15 0 0	2 53 53 0 0 16 55 57 0	3 54 50 0 0 17 57 60 0	4 59 57 0 0 18 60 60 0	5 53 60 0 0 19 60 60	6 54 49 0 0 20 57 55 0	7 58 57 0 0 21 60 60 0	8 57 60 0 0 22 60 60 0	0 0 0 0 23 60 60	0 0 0 0 24 60 60	0 60 0 0 25 60 60	0 60 0 0 26 60 60	0 60 0	0
Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX RSP RX DEL UD ENT RQ  === Start F	1 25 16 0 1 1 15 0 0 0 0 0 Frame	2 53 53 0 0 16 55 57 0 3	3 54 50 0 0 17 57 60 0	59 57 0 0 18 60 60 0	5 53 60 0 0 19 60 60 0	6 54 49 0 0 20 57 55 0 0	7 58 57 0 0 21 60 60 0	8 57 60 0 0 22 60 60 0	0 0 0 0 23 60 60 0	0 0 0 0 24 60 60 0	0 60 0 0 25 60 60 0	0 60 0 0 26 60 60 0	0 60 0 0	0 0 8
Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX RSP RX DEL UD ENT RQ ENT RQ  === Start F Radio #	1 25 16 0 1 1 15 0 0 0 0	2 53 53 0 0 16 55 57 0 3	3 54 50 0 0 17 57 60 0 0	4 59 57 0 0 18 60 60 0 0	5 53 60 0 0 19 60 60 0 0	6 54 49 0 0 20 57 55 0 0	7 58 57 0 0 21 60 60 0 0	8 57 60 0 0 22 60 60 0 0	0 0 0 0 23 60 60 0	0 0 0 0 24 60 60 0	0 60 0 0 25 60 60 0	0 60 0 0 26 60 60 0	0 60 0 0	0 0 8
Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX RSP RX DEL UD ENT RQ  === Start F	1 25 16 0 1 1 15 0 0 0 0 0 Frame	2 53 53 0 0 16 55 57 0 3	3 54 50 0 0 17 57 60 0	59 57 0 0 18 60 60 0	5 53 60 0 0 19 60 60 0	6 54 49 0 0 20 57 55 0 0	7 58 57 0 0 21 60 60 0	8 57 60 0 0 22 60 60 0	0 0 0 0 23 60 60 0	0 0 0 0 24 60 60 0	0 60 0 0 25 60 60 0	0 60 0 0 26 60 60 0	0 60 0 0	0 0 8
Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX RSP RX DEL UD ENT RQ  === Start F Radio # CMD TX RSP RX DEL UD ENT RQ	1 25 16 0 1 1 15 0 0 0 0 Frame 1 5 0 0 0	2 53 53 0 0 16 55 57 0 3 14040 2 55 54 0	3 54 50 0 0 17 57 60 0 0 0, <b>Tota</b> 3 57 52 0	4 59 57 0 0 18 60 60 0 0 0 1 Elap 4 60 57 0	5 53 60 0 0 19 60 60 0 0 0 <b>o</b> <b>o</b> <b>o</b> <b>o</b> <b>o</b> <b>o</b> <b>o</b> <b>o</b> <b>o</b> <b>o</b>	6 54 49 0 0 57 55 0 0 •••••6 56 52 0	7 58 57 0 0 21 60 60 0 0 s <b>240</b> 7 60 57 0	8 57 60 0 0 22 60 60 0 0	0 0 0 0 23 60 60 0 0	0 0 0 0 24 60 60 0 0	0 60 0 0 25 60 60 0 0	0 60 0 0 26 60 60 0 0	0 60 0 0	0 0 8 8 14 0 60 0
Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX RSP RX DEL UD ENT RQ  === Start F Radio # CMD TX RSP RX	1 25 16 0 1 1 15 0 0 0 0 Frame 1 5 0	2 53 53 0 0 16 55 57 0 3 14040 2 55 54	3 54 50 0 0 17 57 60 0 0 7 7 7 57 57 57 57 57 57	4 59 57 0 0 18 60 60 0 0 0 1 Elap 4 60 57	5 53 60 0 0 19 60 60 0 0 0 essed F 5	54 49 0 0 57 55 0 0	7 58 57 0 0 21 60 60 0 0 0 s <b>240</b> 7 60 57	8 57 60 0 0 22 60 60 0 0	0 0 0 0 23 60 60 0 0	0 0 0 0 24 60 60 0 0	0 60 0 0 25 60 60 0 0	0 60 0 0 26 60 60 0 0	0 60 0 0	0 0 8 8
Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX RSP RX DEL UD ENT RQ  === Start F Radio # CMD TX RSP RX DEL UD ENT RQ  ENT RQ  RADIO # RADIO # RADIO # RADIO # RADIO # RADIO # RADIO # RADIO # RADIO # RADIO #	1 25 16 0 1 1 5 0 0 0 0 Frame 1 5 0 0 0 0 15	2 53 53 0 0 16 55 57 0 3 14040 2 55 54 0 0	3 54 50 0 0 17 57 60 0 0 0 , <b>Tota</b> 3 57 52 0 0	4 59 57 0 0 18 60 60 0 0 0 1 Elap 4 60 57 0 0	5 53 60 0 0 19 60 60 0 0 0 seed F 5 55 60 0	6 54 49 0 0 57 55 0 0 0 Frame 6 56 52 0 0	7 58 57 0 0 21 60 60 0 0 s <b>240</b> 7 60 57 0	8 57 60 0 0 22 60 60 0 0	0 0 0 0 23 60 60 0 0	0 0 0 0 24 60 60 0 0	0 60 0 0 25 60 60 0 0	0 60 0 0 26 60 0 0 12 0 60 0 0	0 60 0 0	0 0 8 8 14 0 60 0
Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX RSP RX DEL UD ENT RQ  === Start I Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX RSP RX DEL UD ENT RQ  Radio #	1 25 16 0 0 1 1 5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2 53 53 0 0 16 55 57 0 3 14040 2 55 54 0 0	3 54 50 0 0 17 57 60 0 0 0 , Tota 3 57 52 0 0	4 59 57 0 0 18 60 60 0 0 1 Elap 4 60 57 0 0 18 60 60 0 0 0 18 60 60 60 60 60 60 60 60 60 60 60 60 60	5 53 60 0 19 60 60 0 0 0 seed F 5 55 60 0 0	54 49 0 0 57 55 0 0 0 	7 58 57 0 0 21 60 60 0 0 7 60 57 0 0 21 60	8 57 60 0 0 22 60 60 0 0 0	0 0 0 0 23 60 60 0 0 0	0 0 0 0 0 24 60 60 0 0 0	0 60 0 0 25 60 60 0 0 11 0 56 0 0	0 60 0 0 26 60 0 0 0 12 0 60 0 0 0	0 60 0 0	0 0 8 8 14 0 60 0
Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX RSP RX DEL UD ENT RQ  === Start F Radio # CMD TX RSP RX DEL UD ENT RQ  ENT RQ  RADIO # RADIO # RADIO # RADIO # RADIO # RADIO # RADIO # RADIO # RADIO # RADIO #	1 25 16 0 1 1 5 0 0 0 0 Frame 1 5 0 0 0 0 15	2 53 53 0 0 16 55 57 0 3 14040 2 55 54 0 0	3 54 50 0 0 17 57 60 0 0 0, <b>Tota</b> 3 57 52 0 0	4 59 57 0 0 18 60 60 0 0 0 1 Elap 4 60 57 0 0	5 53 60 0 0 19 60 60 0 0 0 seed F 5 55 60 0	6 54 49 0 0 57 55 0 0 0 Frame 6 56 52 0 0	7 58 57 0 0 21 60 60 0 0 s <b>240</b> 7 60 57 0	8 57 60 0 0 22 60 60 0 0	0 0 0 0 23 60 60 0 0	0 0 0 0 24 60 60 0 0	0 60 0 0 25 60 60 0 0	0 60 0 0 26 60 0 0 12 0 60 0 0	0 60 0 0	0 0 8 8 14 0 60 0
Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX RSP RX DEL UD ENT RQ  === Start F Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX RSP RX CMD TX RSP RX RSP RX RSP RX RSP RX RSP RX	1 25 16 0 1 1 15 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2 53 53 0 0 16 55 57 0 3 3 144040 2 55 54 0 0 0	3 54 50 0 0 17 57 60 0 0 0 , Tota 3 57 52 0 0 0	4 59 57 0 0 18 60 60 0 0 18 18 60 60 60 60 60 60 60 60 60 60 60 60 60	5 53 60 0 0 19 60 60 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	6 54 49 0 0 57 55 0 0 0 	7 58 57 0 0 21 60 60 0 0 7 60 57 0 0	8 57 60 0 0 22 60 60 0 0 0 0 22 8 60 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 23 60 60 0 0 0 0 0 0 23 60 60 60 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 24 60 60 0 0 0 0 0 0 24 60 60 0 0 0 0	0 60 0 0 25 60 60 0 0 56 0 0 25 60 60 0 56 0 0 56 0 0 0	0 60 0 0 26 60 60 0 0 0 12 0 60 0 0 0 26 60 0 0 0 0 0 0 0 0 0 0 0	0 60 0 0	0 0 8 8 14 0 60 0

<sup>\*\*</sup> Data from file 09161436.log

<sup>\*\*</sup> Data from file 09161439.log

#### === Start Frame 14100, Total Elapsed Frames 300 ===

Radio #	1	2	3	4	5	6	7	8	9	10	11	12	13	14
CMD TX	0	60	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX DEL UD	0	60 0	60 0	60 0	60 0	58 0	60 0	60 0	60 0	60 0	55 0	60 0	60 0	60
ENT RQ	ő	ő	ő	ő	ő	ő	ő	ő	ő	ő	ő	ő	ő	8
Radio #	15	16	17	18	19	20	21	22	23	24	25	26		
CMD TX RSP RX	60 60	60 60	60 60	60 60	60 60	60 51	60 59	60 60	60 60	60 60	60 59	60 58		
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0		
ENT RQ	Ö	Ö	Ö	Ö	Ő	ő	Ö	Ö	Ö	Ö	Ö	ő		
'														
=== Sta	rt Frai	me 14	160. T	otal E	Elapse	d Fra	mes :	360 ==	=					
Radio #	1	2	3	4	5	6	7	8	9	10	11	12	13	14
CMD TX	0	60	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	0	60	59	60	60	59	60	60	60	60	59	60	60	60
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	8	0	0	0	0	0	0	0	0	0	0
Radio #	15	16	17	18	19	20	21	22	23	24	25	26		
CMD TX	60	60	60	60	60	60	60	60	60	60	60	60		
RSP RX	59	59	60	60	60	50	53	60	60	60	60	60		
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0		
ENT RQ	0	0	U	U	0	U	U	0	0	0	0	0		
=====T6														
Radio #	1	2	3	4	5	6	7	8	9	10	11	12	13	14
CMD TX RSP RX	78 44	360 360	360 355	360 360	360 360	360 350	360 360	360 360	360 360	360 359	360 318	360 360	360 360	360 360
DEL UD	3	360	333	300	360	350	360	360	300	359	0	360	300	300
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LIVITIO	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		
CMD TX	360	338	360	360	360	351	351	360	360	360	360	360		
RSP RX	345	296	360	359	357	314	34	351	353	354	359	354		
DEL UD ENT RQ	0	2	0	0	0	1	1	0	0	0	0	0		

Frame range = 13860 -> 14219 Total number of frames = 360 Total number of DEL UPDT frames = 7 Total number of EBT RQST frames = 0

#### === Start Frame 14100, Total Elapsed Frames 300 ===

Radio #	1	2	3	4	5	6	7	8	9	10	11	12	13	14
CMD TX RSP RX	0	50 58	53 56	59 59	50 60	52 54	59 59	58 60	0	0	0 58	0 59	0 58	0 58
DEL UD	0	0	0	0	0	0	0	0	0	Ö	0	0	0	0
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Radio #	15	16	17	18	19	20	21	22	23	24	25	26		
CMD TX	0	58	58	60	60	0	60	60	60	60	60	60		
RSP RX DEL UD	0	60 0	60 0	60 0	60 0	0	60 0	60 0	60 0	60 0	60 0	60 0		
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0		
LIVI IVO	·	Ü	Ů	Ü	Ü	Ū	Ū	Ū	Ū	Ů	Ü	Ü		
=== Sta	rt Fran	me 14	160. T	otal F	Flanse	ed Fra	mes :	360 ==	-=					
Radio #	1	2	3	4	5	6	7	8	9	10	11	12	13	14
CMD TX	0	56	57	60	55	57	60	60	0	0	0	0	0	0
RSP RX	0	55	51	57	60	50	57	60	0	0	58	58	55	59
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	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		
CMD TX RSP RX	0	59	59	60	60	0	40	60	60	60	60	60		
DEL UD	0	60 0	60 0	60 0	60 600	0	47 0	60 0	60 0	60 0	60 0	60 0		
ENT RQ	0	0	0	0	000	0	0	0	0	0	0	0		
LIVI IVO		Ü	Ů	Ü	Ü	Ū	Ū	Ū	Ū	Ū	Ū	Ü		
		-Toet	Data	Sumn	narv–									
Radio #	l 1	2	3	4	5	<b></b> 6	7	8	9	10	11	12	13	14
CMD TX	78	319	330	358	317	326	357	355	0	0	0	0	0	0
RSP RX	44	333	317	349	360	310	349	359	0	0	347	353	240	351
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	3	0	0	0	0	0	0	0	0	0	0	0	0	0
Radio #	15	16	17	18	19	20	21	22	23	24	25	26		
CMD TX	0	332	352	360	360	157	316	360	360	360	360	360		
RSP RX	0	336	359	60	357	152	331	351	353	354	359	354		
DEL UD ENT RQ	0	0 6	0	0	0	0	0	0	0	0	0	0		
EINI KU	U	О	U	U	U	U	- 1	U	U	U	U	U		

Frame range = 13860 -> 14219
Total number of frames = 360
Total number of DEL UPDT frames = 0
Total number of EBT RQST frames =10

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

#### === Start Frame 3515, Total Elapsed Frames 60 ===

#### (Cell 4) HE & Radio #22: Data collected at Radio #16

#### === Start Frame 3515, Total Elapsed Frames 60 ===

Radio # CMD TX RSP RX DEL UD ENT RQ	1 0 0 0	2 0 1 0 0	3 0 0 0	4 0 0 0 0	5 1 0 0	6 0 0 0	7 0 0 0 0	8 0 0 0	9 0 0 0	10 0 0 0	11 0 0 0	12 0 0 0 0	13 0 2 0 0	14 0 0 0
Radio # CMD TX RSP RX DEL UD ENT RQ	15 0 14 0	16 0 60 0	17 60 57 0	18 60 60 0	19 60 43 0	20 0 33 0 0	21 60 60 0	22 60 60 0	23 60 60 0	24 60 59 0	25 60 60 0	26 60 60 0		
011							. 400							
=== Start Radio #	1	2	3	4	5	6	7	8	9	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 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 #	15	16	17	18	19	20	21	22	23	24	25	26		
CMD TX RSP RX DEL UD ENT RQ	0 1 0 0	0 45 0 0	56 48 0 0	53 52 0 0	52 25 0 0	0 1 0 0	11 11 0 1	60 60 0	60 60 0	60 60 0	60 60 0	58 60 0 0		
=== Start	Frame	3635	. Tota	l Elan	sed F	rame	s 180	===						
Radio #	1	2	3	4	5	6	7	8	9	10 0	11 2	12 0	13 0	1 <u>4</u>
CMD TX			U	U						-				
RSP RX DEL UD ENT RQ	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	2 0 0	0 0 0	0 0 0	0 0 0
DEL UD	0 0 0	0	0 0 17	0 0 18	0 0 19	0 0	0 0	0 0 22	0 0 23	0 0	0 0 25	0 0 26	0	0
DEL UD ENT RQ	0 0 0	0 0	0	0	0	0	0	0	0	0	0	0	0	0
DEL UD ENT RQ Radio # CMD TX RSP RX DEL UD ENT RQ	0 0 0 15 0 6 0	0 0 0 16 0 59 0 0	0 0 17 56 46 0 0	0 0 18 56 49 0 0	0 0 19 49 34 0 0	0 0 20 0 9 0 0	0 0 21 60 60 0	0 0 22 60 60 0 0	0 0 23 60 60 0	0 0 24 60 60 0	0 0 25 60 60 0	26 52 60 0	0	0 0
DEL UD ENT RQ Radio # CMD TX RSP RX DEL UD	0 0 0 15 0 6 0	0 0 0 16 0 59 0	0 0 17 56 46 0	0 0 18 56 49 0	0 0 19 49 34 0 0	0 0 20 0 9 0	0 0 21 60 60 0	0 0 22 60 60 0	0 0 23 60 60 0	0 0 24 60 60 0	0 0 25 60 60 0	0 0 26 52 60 0	0	0
Radio # CMD TX RSP RX DEL UD ENT RQ  Radio #	0 0 0 15 0 6 0 0	0 0 0 16 0 59 0 0	0 0 17 56 46 0 0	0 0 18 56 49 0 0	0 0 19 49 34 0 0	0 0 20 0 9 0 0	0 0 21 60 60 0 0	0 0 22 60 60 0 0	0 0 23 60 60 0 0	0 0 24 60 60 0 0	0 0 25 60 60 0 0	0 0 26 52 60 0 0	0 0	0 0
Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX RSP RX DEL UD ENT RQ	0 0 0 15 0 6 0 0	0 0 0 16 0 59 0 0 0 <b>Test</b> 2	0 0 17 56 46 0 0 <b>Data</b>	0 0 18 56 49 0 0 0 Sumn 4 0 0	19 49 34 0 0	0 0 0 20 0 9 0 0 0	0 0 21 60 60 0 0	0 0 22 60 60 0 0	0 0 23 60 60 0 0	0 0 24 60 60 0 0	0 0 25 60 60 0 0	0 0 0 26 52 60 0 0	13 0 2 0	14 0 0 0

<sup>\*\*</sup> Data from file 09161310.log

<sup>\*\*</sup> Data from file 09161310.log

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

#### === Start Frame 5970, Total Elapsed Frames 60 ===

Radio #	1	2	3	4	5	6	7	8	9	10	11	12	13	14
CMD TX	3	60	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX DEL UD	2	60 0	59 0	60 0	60 0	59 0	60 0	60 0	60 0	60 0	53 0	60 0	59 0	60 0
ENT RQ	ő	Ö	Ö	Ö	Ö	ő	Ö	Ö	Ö	Ö	Ö	ő	Ö	Ö
Radio #	15	16	17	18	19	20	21	22	23	24	25	26		
CMD TX RSP RX	60 60	60 60	60 60	60 60	60 60	60 60	60 60	60 60	60 60	60 59	60 60	60 60		
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0		
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0		
	_													
=== Start Radio #	Frame 1	<b>5970</b> ,	Total	Elap:	sed F	rames 6	: 1 <b>20</b> : 7	<b>===</b> 8	9	10	11	12	13	14
CMD TX	50	60	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	34	60	57	60	60	60	60	60	60	59	59	60	60	60
DEL UD ENT RQ	1	0	0	0	0	0	0	0	0	0	0	0	0	0
				•				-			-	-	·	Ü
Radio #	15 60	16 60	17 60	18 60	19 60	20 60	21 60	22 60	23 60	24 60	25 60	26 60		
RSP RX	58	60	60	60	60	60	60	59	59	59	60	59		
DEL UD	0	2	0	0	0	0	0	0	0	0	0	0		
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0		
Start	Frame	6030	Total	Flan	sad F	ramos	180 -							
=== Start Radio #	Frame	<b>6030</b> ,	Total	Elap:	sed F	rames	1 <b>80</b> :	<b>===</b> 8	9	10	11	12	13	14
Radio #	33	60	3 60	4 60	5 60	6 60	7 60	8 60	60	60	61	60	60	60
Radio # CMD TX RSP RX	33 25	60 60	60 58	60 60	5 60 59	60 55	7 60 60	8 60 60	60 60	60 60	61 51	60 60	60 59	60 60
Radio #	33	60	3 60	4 60	5 60	6 60	7 60	8 60	60	60	61	60	60	60
Radio # CMD TX RSP RX DEL UD ENT RQ Radio #	33 25 1 0	60 60 0 0	3 60 58 0 0	60 60 0 0	5 60 59 0 0	6 60 55 0 0	7 60 60 0 0	8 60 60 0 0	60 60 0 0	60 60 0 0	61 51 0 0	60 60 0 0	60 59 0	60 60 0
Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX	1 33 25 1 0 15	2 60 60 0 0 16	3 60 58 0 0 17 60	60 60 0 0 18	5 60 59 0 0 19	6 60 55 0 0	7 60 60 0 0 21	8 60 60 0 0	60 60 0 0 23	60 60 0 0 24	61 51 0 0 25	60 60 0 0 26	60 59 0	60 60 0
Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX RSP RX	1 33 25 1 0 15 60 60	2 60 60 0 0 16 60 60	3 60 58 0 0 17 60 60	4 60 60 0 0 18 60 60	5 60 59 0 0 19 60 59	6 60 55 0 0 20 60 60	7 60 60 0 0 21 60 60	8 60 60 0 0 22 60 59	60 60 0 0 23 60 59	60 60 0 0 24 60 59	61 51 0 0 25 60	60 60 0 0 26 60 59	60 59 0	60 60 0
Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX	1 33 25 1 0 15	2 60 60 0 0 16	3 60 58 0 0 17 60	60 60 0 0 18	5 60 59 0 0 19	6 60 55 0 0	7 60 60 0 0 21	8 60 60 0 0	60 60 0 0 23	60 60 0 0 24	61 51 0 0 25	60 60 0 0 26	60 59 0	60 60 0
Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX RSP RX DEL UD ENT RQ	1 33 25 1 0 15 60 60 0	2 60 60 0 0 16 60 60 0	3 60 58 0 0 17 60 60 0	4 60 60 0 0 18 60 60 0	5 60 59 0 0 19 60 59 0	6 60 55 0 0 20 60 60 0	7 60 60 0 0 21 60 60 0	8 60 60 0 0 22 60 59 0	60 60 0 0 23 60 59 0	60 60 0 0 24 60 59 0	61 51 0 0 25 60 60	60 60 0 0 26 60 59 0	60 59 0	60 60 0
Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX RSP RX DEL UD ENT RQ  === Start	1 33 25 1 0 15 60 60 0	2 60 60 0 0 16 60 60 0	3 60 58 0 0 17 60 60 0	4 60 60 0 0 18 60 60 0	5 60 59 0 0 19 60 59 0	6 60 55 0 0 20 60 60 0	7 60 60 0 0 21 60 60 0	8 60 60 0 0 22 60 59 0	60 60 0 0 23 60 59 0	60 60 0 0 24 60 59 0	61 51 0 0 25 60 60 0	60 60 0 0 26 60 59 0	60 59 0 0	60 60 0 0
Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX RSP RX DEL UD ENT RQ	1 33 25 1 0 15 60 60 0	2 60 60 0 0 16 60 60 0	3 60 58 0 0 17 60 60 0	4 60 60 0 0 18 60 60 0	5 60 59 0 0 19 60 59 0	6 60 55 0 0 20 60 60 0	7 60 60 0 0 21 60 60 0	8 60 60 0 0 22 60 59 0	60 60 0 0 23 60 59 0	60 60 0 0 24 60 59 0	61 51 0 0 25 60 60	60 60 0 0 26 60 59 0	60 59 0	60 60 0
Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX RSP RX DEL UD ENT RQ  === Start Radio # CMD TX RSP RX	1 33 25 1 0 15 60 60 0 0	2 60 60 0 0 16 60 60 0 0 0	3 60 58 0 0 17 60 60 0 0 Total 3 60 53	4 60 60 0 0 18 60 60 0 0 Elap 4 60 60	5 60 59 0 0 19 60 59 0 0 sed F 5 60 60	6 60 55 0 0 20 60 60 0 0 rames 6 60 60	7 60 60 0 0 21 60 60 0 7 60 60 60	8 60 60 0 0 22 60 59 0 0	60 60 0 0 23 60 59 0 0	60 60 0 0 24 60 59 0 0	61 51 0 0 25 60 60 0 0 11 60 56	60 60 0 0 26 60 59 0 0	60 59 0 0	60 60 0 0
Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX RSP RX DEL UD ENT RQ  === Start Radio # CMD TX RSP RX DEL UD ENT RQ	1 33 25 1 0 15 60 60 0 0	2 60 60 0 0 16 60 0 0 60 60 0 0	3 60 58 0 0 17 60 60 0 0 Total 3 60 53 0	4 60 60 0 0 18 60 60 0 0	5 60 59 0 0 19 60 59 0 0 sed F 5 60 60 1	6 60 55 0 0 20 60 60 0 0 rames 6 60 60 0	7 60 60 0 0 21 60 60 0 0 5 240: 7 60 60 0	8 60 60 0 0 22 60 59 0 0	60 60 0 0 23 60 59 0 0	60 60 0 0 24 60 59 0 0	61 51 0 0 25 60 60 0 0 11 60 56 1	60 60 0 0 26 60 59 0 0	13 60 60 0	60 60 0 0
Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX RSP RX DEL UD ENT RQ  === Start Radio # CMD TX RSP RX DEL UD ENT RQ	1 33 25 1 0 15 60 60 0 0 0	2 60 60 0 0 16 60 0 0 0 <b>6090,</b> 2 60 60 0 0	3 60 58 0 0 17 60 60 0 0 Total 3 60 53 0	4 60 60 0 0 18 60 60 0 0 1 Elap 4 60 60 60 0	5 60 59 0 0 19 60 59 0 0 sed F 5 60 60 1 0	6 60 55 0 0 20 60 60 0 0 rames 6 60 60 60 0	7 60 60 0 0 21 60 60 0 0 7 60 60 60 0 0	8 60 60 0 0 22 60 59 0 0	60 60 0 0 23 60 59 0 0 9 60 60 0	60 60 0 0 24 60 59 0 0	61 51 0 0 25 60 60 0 0 11 60 56 1 0	60 60 0 0 26 60 59 0 0	60 59 0 0	60 60 0 0
Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX RSP RX DEL UD ENT RQ  === Start Radio # CMD TX RSP RX DEL UD ENT RQ  ENT RQ  RADIO # RADIO # RADIO # RADIO # RADIO # RADIO # RADIO #	1 33 25 1 0 15 60 60 0 0 0 Frame 1 0 0	2 60 60 0 0 16 60 60 0 0 <b>6090</b> , 2 60 60 0	3 60 58 0 0 17 60 60 0 0 Total 3 60 53 0	4 60 60 0 0 18 60 60 0 0 0 18 60 60 0 0	5 60 59 0 19 60 59 0 0 sed F 5 60 60 1 0	6 60 55 0 0 20 60 60 0 0 rames 6 60 60 0	7 60 60 0 0 21 60 60 0 0 7 60 60 0 0	8 60 60 0 0 22 60 59 0 0	60 60 0 0 23 60 59 0 0	60 60 0 0 24 60 59 0 0	61 51 0 0 25 60 60 0 0 11 60 56 1 0	60 60 0 0 26 60 59 0 0	13 60 60 0	60 60 0 0
Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX RSP RX DEL UD ENT RQ  === Start Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX RSP RX DEL UD ENT RQ	1 33 25 1 0 15 60 60 0 0 0 Frame 1 0 0 0 0	2 60 60 0 0 16 60 60 0 0 0 0 60 60 0 0 0	3 60 58 0 0 17 60 60 0 0 Total 3 60 0 0 17 60 60 0 0	4 60 60 0 0 18 60 60 0 0 0 18 60 60 0 0 0	5 60 59 0 0 19 60 59 0 0 0 8sed F 5 60 60 1 0 1 9 60 0 0 0 0	6 60 55 0 0 60 60 60 60 0 0 0	7 60 60 0 0 21 60 60 0 0 7 60 60 0 0 0	8 60 0 0 0 22 60 59 0 0 0 8 60 0 0 0 2 2 2 60 0 0 0 0 0 0 0 0 0 0 0	60 60 0 0 23 60 59 0 0 9 60 60 0 0	60 60 0 0 24 60 59 0 0 0 10 60 60 0 0 24 60 60 60 60 60 60 60 60 60 60 60 60 60	61 51 0 0 25 60 60 0 0 11 60 56 1 0 25 60 60 60 60 60 60 60 60 60 60 60 60 60	60 60 0 0 26 60 59 0 0 12 60 60 0 0	13 60 60 0	60 60 0 0
Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX RSP RX DEL UD ENT RQ  === Start Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX RSP RX DEL UD ENT RQ  Radio #	1 33 25 1 0 15 60 60 0 0 0 Frame 1 0 0 0	2 60 60 0 0 16 60 0 0 0 60 0 0 0 0 16 60 0 0 0	3 60 58 0 0 17 60 60 0 0 Total 3 60 53 0 0	4 60 60 0 0 18 60 60 0 0 0 18 60 60 0 0 18 60 60 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	5 60 59 0 0 19 60 59 0 0 0 <b>ssed F</b> 5 60 60 1 0	6 60 555 0 0 60 60 0 0 0 rames 6 60 60 0 0 0	7 60 60 0 0 21 60 60 0 0 0 5 240 5 7 60 60 0 0 0	8 60 60 0 0 22 60 59 0 0 0	60 60 0 0 23 60 59 0 0 9 60 60 0 0	60 60 0 0 24 60 59 0 0 10 60 60 0 0	61 51 0 0 25 60 60 0 0 11 60 56 1 0	60 60 0 0 26 60 59 0 0 12 60 60 0 0	13 60 60 0	60 60 0 0

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

#### === Start Frame 5970, Total Elapsed Frames 60 ===

Radio # CMD TX RSP RX DEL UD ENT RQ	1 0 0 0 0	0 0 0 0	3 0 0 0 0	0 0 0 0	5 0 0 0	6 0 0 0	7 0 0 0 0	8 0 0 0	9 0 0 0	10 0 0 0	11 0 0 0 0	12 0 0 0 0	13 0 0 0 0	14 0 0 0 0
Radio # CMD TX RSP RX DEL UD ENT RQ	15 0 0 0 0	16 0 0 0	17 0 0 0 0	18 0 0 0	19 0 0 0	20 0 8 0 0	21 60 60 0	60 60 0	23 60 60 0	24 60 59 0	25 60 60 0	26 0 60 0		
=== Start	Erama	<b>5070</b>	Total	Elan	and E	ramar	. 120							
Radio #	1	2 0	3	4	5	6	7	=== 8	9	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 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 #	15	16	17	18	19	20	21	22	23	24	25	26		
CMD TX RSP RX DEL UD ENT RQ	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	0 10 0 0	60 60 0	59 59 0 0	59 59 0 0	59 59 0 0	59 60 0	0 59 0 0		
=== Start Radio #	1	2	3	4	5	6	7	8	9	10	11	12	13	14
									9 0 0 0	10 0 0 0	11 0 0 0 0	12 0 0 0 0	13 0 0 0 0	14 0 0 0 0
Radio # CMD TX RSP RX DEL UD	0 0 0	0 0 0	3 0 0 0	0 0 0	5 0 0 0	6 0 0 0	7 0 0 0	8 0 0 0	0 0 0	0 0	0 0 0	0 0 0	0 0 0	0 0 0
Radio # CMD TX RSP RX DEL UD ENT RQ	0 0 0 0	0 0 0 0	3 0 0 0	0 0 0 0	5 0 0 0	6 0 0 0	7 0 0 0 0	8 0 0 0	0 0 0	0 0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX RSP RX DEL UD ENT RQ  ===Start	1 0 0 0 0 15 0 0 0	2 0 0 0 0 0 16 0 0 0	3 0 0 0 0 17 0 0 0 0	4 0 0 0 0 0 18 0 0 0 0	5 0 0 0 0 19 0 0 0	6 0 0 0 0 20 0 4 0 0	7 0 0 0 0 21 60 60 0	8 0 0 0 0 22 59 59 0 0	0 0 0 0 23 59 59 0	0 0 0 0 24 59 59 0	0 0 0 0 25 59 60 0	0 0 0 0 26 0 59 0	0 0 0 0	0 0 0 0
Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX RSP RX DEL UD ENT RQ ENT RQ	1 0 0 0 0 15 0 0 0	2 0 0 0 0 0 16 0 0 0	3 0 0 0 0 17 0 0 0 0	4 0 0 0 0 0 18 0 0 0 0	5 0 0 0 0 19 0 0 0 0	6 0 0 0 0 20 0 4 0 0	7 0 0 0 0 0 21 60 60 0 0	8 0 0 0 0 22 59 59 0 0	0 0 0 0 23 59 59 0 0	0 0 0 0 24 59 59 0 0	0 0 0 0 25 59 60 0	0 0 0 0 26 0 59 0	0 0 0 0	0 0 0 0
Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX RSP RX DEL UD ENT RQ  ===Start	1 0 0 0 0 15 0 0 0	2 0 0 0 0 0 16 0 0 0	3 0 0 0 0 17 0 0 0 0	4 0 0 0 0 0 18 0 0 0 0	5 0 0 0 0 19 0 0 0	6 0 0 0 0 20 0 4 0 0	7 0 0 0 0 21 60 60 0	8 0 0 0 0 22 59 59 0 0	0 0 0 0 23 59 59 0	0 0 0 0 24 59 59 0	0 0 0 0 25 59 60 0	0 0 0 0 26 0 59 0	0 0 0 0	0 0 0 0
Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX RSP RX DEL UD ENT RQ  ===Start   Radio # CMD TX RSP RX DEL UD ENT RQ	1 0 0 0 0 15 0 0 0 0	2 0 0 0 0 16 0 0 0 0 0	3 0 0 0 0 17 0 0 0 0 0 <b>Total</b> 3 3 0 0	4 0 0 0 0 18 0 0 0 0 0 0	5 0 0 0 19 0 0 0 0 seed Fi	6 0 0 0 20 0 4 0 0 0	7 0 0 0 0 21 60 60 0 0 0 240 = 7	8 0 0 0 0 22 59 59 0 0	0 0 0 0 23 59 59 0 0	0 0 0 0 24 59 59 0 0	0 0 0 0 25 59 60 0 0	0 0 0 0 59 0 0 12	0 0 0 0	0 0 0 0

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<sup>\*\*</sup> Data from file 09161330.log

<sup>\*\*</sup> Data from file 09161335.log

=== Start	Eramo	6150	Total	Flancod	Eramoe	300

Radio #	1	2	3	4	5	6	7	8	9	10	11	12	13	14
CMD TX	0	60	60	60	60	60	60	60	60	60	60	60	60	60
RSP RX	0	60	58	60	60	59	60	60	60	60	47	60	60	60
DEL UD	0	0	0	0	0		0	0	0	0	0	0	0	
ENT RQ	0	0	0	0	0	8	0	0	0	0	0	0	0	8
Radio #	15	16	17	18	19	20	21	22	23	24	25	26		
CMD TX	60	60	60	60	60	60	60	60	60	60	60	60		
RSP RX	60	60	60	60	60	59	59	58	58	58	59	58		
DEL UD	0	0		0	0	0		0			0	0		
ENT RQ	0	0	8	0	0	0	8	0	8	8	0	0		
=== Sta	art Frai	me 62	10, To	tal El	apsec	l Fran	nes 36	60 ===	=					
Radio #	1	2	3	4	5	6	7	8	9	10	11	12	13	14

14
60
60
0
0

art Frai	me 62	70, To	otal El	apsed	d Fran	nes 36	50 ===	-					
1	2	3	4	5	6	7	8	9	10	11	12	13	14
26	42	42	42	42	42	42	42	42	42	42	42	42	42
9	42	40	42	42	42	42	42	42	42	35	42	42	42
2	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
15	16	17	18	19	20	21	22	23	24	25	26		
42	42	42	42	42	42	42	42	42	42	42	42		
42	42	42	42	42	42	42	42	42	41	42	42		
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 26 9 2 0 15 42 42 0	1 2 26 42 9 42 2 0 0 0 15 16 42 42 42 42 0 0	1 2 3 26 42 42 9 42 40 2 0 0 0 0 0 15 16 17 42 42 42 42 42 42 0 0 0	1         2         3         4           26         42         42         42         42           9         42         40         42         2           2         0         0         0         0         0           0         0         0         0         0         0         0           15         16         17         18         42         42         42         42           42         42         42         42         42         42         42           42         42         42         42         42         0         0         0         0	1         2         3         4         5           26         42         42         42         42         42           9         42         40         42         42           2         0         0         0         0         0           0         0         0         0         0         0         0           15         16         17         18         19           42         42         42         42         42           42         42         42         42         42           0         0         0         0         0         0	1         2         3         4         5         6           26         42         42         42         42         42         42           9         42         40         42         42         42           2         0         0         0         0         0         0         0           0         0         0         0         0         0         0         0         0           15         16         17         18         19         20         20         42	1         2         3         4         5         6         7           26         42	1         2         3         4         5         6         7         8           26         42	26         42         23           15         16         17         18         19         20         21         22         23           42 <td>1         2         3         4         5         6         7         8         9         10           26         42</td> <td>1         2         3         4         5         6         7         8         9         10         11           26         42</td> <td>1         2         3         4         5         6         7         8         9         10         11         12           26         42</td> <td>1         2         3         4         5         6         7         8         9         10         11         12         13           26         42</td>	1         2         3         4         5         6         7         8         9         10           26         42	1         2         3         4         5         6         7         8         9         10         11           26         42	1         2         3         4         5         6         7         8         9         10         11         12           26         42	1         2         3         4         5         6         7         8         9         10         11         12         13           26         42

=====Te	est Da	ta Sur	nmar	/====	===									
Radio #	1	2	3	4	5	6	7	8	9	10	11	12	13	14
CMD TX	114	402	402	402	402	402	402	402	402	402	402	402	402	402
RSP RX	72	402	382	401	401	401	401	402	402	401	349	402	402	402
DEL UD	4	0	0	0	1	0	0	0	0	0	0	0	0	0
ENT RQ	0	0	0	0	1	0	0	0	0	0	0	0	0	0
•														
Radio #	15	16	17	18	19	20	21	22	23	24	25	26		
CMD TX	402	402	402	402	402	402	402	402	402	402	402	402		
RSP RX	398	401	401	401	399	402	401	399	399	396	40	399		
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0		
ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0		

Frame range = 11640 -> 11999
Total number of frames = 360
Total number of DEL UPDT frames = 10
Total number of EBT RQST frames = 3

#### === Start Frame 6150, Total Elapsed Frames 300 ===

Radio #	1	2	3	4	5	6	7	8	9	10	11	12	13	14
CMD TX RSP RX	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DEL UD ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Radio #	15	16	17	18	19	20	21	22	23	24	25	26		
CMD TX RSP RX	0	0	0 34	0	0	0 60	60 60	60 60	60 60	60 60	60 60	41 60		
DEL UD ENT RQ	0	0	0	0	0	0	0	0	0	0	0	0 0		
_														
=== Sta Radio #	art Fran   1	<b>ne 62</b> 2	10, To	otal El 4	apse 5	d Frai	nes 3 7	<b>60 ==</b> 8	<b>=</b> 9	10	11	12	13	14
CMD TX	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RSP RX DEL UD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENT RQ	ő	Ö	Ö	Ö	Ö	Ö	Ö	Ö	Ö	Ö	Ö	Ö	Ö	Ö
Radio #	15	16	17	18	19	20	21	22	23	24	25	26		
CMD TX RSP RX	0	0	0 36	0	0	0 54	60 60	60 60	60 60	60 59	60 60	39 60		
DEL UD	0	0	0	0	0	0	0	0	0	0	0	0		
ENT RQ	U	U	U	U	U	U	U	U	U	U	U	U		
•			-a -				_							
=== Sta	art Fran	ne 62	270, 10	otal El	apse	d Frai	nes 3	6U ==	=					
Radio #	1	2	3	4	5	6	7	8	9	10	11	12	13	14
										10 0 0	11 0 0	12 0 0	13 0 0	0
Radio # CMD TX RSP RX DEL UD	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	6 0 0 0	7 0 0 0	8 0 0 0	9 0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
Radio # CMD TX RSP RX	0 0 0 0	0 0 0 0	3 0 0 0	0 0 0 0	0 0 0 0	6 0 0 0	7 0 0 0 0	8 0 0 0	9 0 0 0	0 0 0 0	0 0 0	0 0 0	0	0
Radio # CMD TX RSP RX DEL UD ENT RQ Radio #	0 0 0 0 0	0 0 0 0	3 0 0 0 0	4 0 0 0 0	5 0 0 0 0	6 0 0 0 0	7 0 0 0 0	8 0 0 0 0	9 0 0 0 0	0 0 0 0 0	0 0 0 0	0 0 0 0	0 0 0	0 0 0
Radio # CMD TX RSP RX DEL UD ENT RQ	0 0 0 0	0 0 0 0	3 0 0 0	0 0 0 0	0 0 0 0	6 0 0 0	7 0 0 0 0	8 0 0 0	9 0 0 0	0 0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX RSP RX DEL UD	1 0 0 0 0 0 15 0 0	2 0 0 0 0 16 0 0	3 0 0 0 0 17 0 29 0	4 0 0 0 0 0 18 0 0	5 0 0 0 0 19 0 0	6 0 0 0 0 20 20 48 0	7 0 0 0 0 21 51 51 0	8 0 0 0 0 22 51 51 0	9 0 0 0 0 23 51 51 0	0 0 0 0 24 51 50 0	0 0 0 0 25 51 51 0	0 0 0 0 26 38 51 0	0 0 0	0 0 0
Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX RSP RX	1 0 0 0 0 0	2 0 0 0 0 0	3 0 0 0 0 17 0 29	4 0 0 0 0 0	5 0 0 0 0 0 19	6 0 0 0 0 20 20	7 0 0 0 0 21 51 51	8 0 0 0 0 22 51 51	9 0 0 0 0 23 51 51	0 0 0 0 0 24 51 50	0 0 0 0 25 51 51	0 0 0 0 26 38 51	0 0 0	0 0 0
Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX RSP RX DEL UD ENT RQ ENT RQ	1 0 0 0 0 0 15 0 0 0	2 0 0 0 0 16 0 0 0	3 0 0 0 0 17 0 29 0 0	4 0 0 0 0 18 0 0 0	5 0 0 0 0 19 0 0 0	6 0 0 0 20 0 48 0	7 0 0 0 0 21 51 51 0	8 0 0 0 22 51 51 0	9 0 0 0 23 51 51 0	0 0 0 0 24 51 50 0	0 0 0 0 25 51 51 0	0 0 0 0 26 38 51 0	0 0 0 0	0 0 0 0
Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX RSP RX DEL UD ENT RQ ENT RQ	1 0 0 0 0 0 1 15 0 0 0	2 0 0 0 0 16 0 0 0 0	3 0 0 0 0 17 0 29 0 0	4 0 0 0 0 18 0 0 0 0	5 0 0 0 0 19 0 0 0	6 0 0 0 20 48 0 0	7 0 0 0 21 51 51 0 0	8 0 0 0 22 51 51 0	9 0 0 0 23 51 51 0	0 0 0 0 24 51 50 0	0 0 0 0 25 51 51 0	0 0 0 0 26 38 51 0	0 0 0 0	0 0 0 0
Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX RSP RX DEL UD ENT RQ  == Radio # CMD TX RSP RX	1 0 0 0 0 15 0 0 0 0	2 0 0 0 0 16 0 0 0 0	3 0 0 0 0 17 0 29 0 0 0	4 0 0 0 0 18 0 0 0 0 0	5 0 0 0 0 19 0 0 0 0	6 0 0 0 0 48 0 0	7 0 0 0 0 21 51 51 0 0	8 0 0 0 22 51 51 0 0	9 0 0 0 23 51 51 0 0	0 0 0 0 24 51 50 0 0	0 0 0 0 25 51 51 0 0	0 0 0 0 26 38 51 0 0	0 0 0 0	0 0 0 0
Radio # CMD TX RSP RX DEL UD ENT RQ Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX	1 0 0 0 0 0 1 15 0 0 0 0	2 0 0 0 0 16 0 0 0 0	3 0 0 0 0 17 0 29 0 0	4 0 0 0 0 18 0 0 0 0	5 0 0 0 0 19 0 0 0 0	6 0 0 0 0 20 0 48 0 0	7 0 0 0 0 21 51 51 0 0	8 0 0 0 22 51 51 0 0	9 0 0 0 23 51 51 0 0	0 0 0 0 24 51 50 0	0 0 0 0 25 51 51 0 0	0 0 0 0 26 38 51 0 0	0 0 0 0	0 0 0 0
Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX RSP RX DEL UD ENT RQ	1 0 0 0 0 0 1 15 0 0 0 0	2 0 0 0 0 0 0 0 0 0 0 0	3 0 0 0 0 17 0 29 0 0 0	4 0 0 0 0 18 0 0 0 0 0 0	5 0 0 0 0 19 0 0 0 0	6 0 0 0 20 0 48 0 0	7 0 0 0 0 21 51 51 0 0	8 0 0 0 22 51 51 0 0	9 0 0 0 23 51 51 0 0	0 0 0 0 24 51 50 0 0	0 0 0 0 25 51 51 0 0	0 0 0 0 26 38 51 0 0	0 0 0 0	0 0 0 0
Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX RSP RX DEL UD ENT RQ  Radio #	1 0 0 0 0 0 15 0 0 0 0	2 0 0 0 0 16 0 0 0 0 0 0 0 0 0 0 0 0 0 0	3 0 0 0 0 17 0 29 0 0 0 <b>Data \$</b> 3 0 0 0	4 0 0 0 0 18 0 0 0 0 0 0 0 0 0 0 0 0 0 0	5 0 0 0 0 19 0 0 0 0 0 0 0	6 0 0 0 0 20 0 48 0 0 0 0 0 0 0 48 0 0 0 0 0 0 0 0	7 0 0 0 0 21 51 51 0 0 0 0 0	8 0 0 0 0 22 51 51 0 0 0 0 2 2 2 409	9 0 0 0 0 23 51 51 0 0 0 0 0 0 23 23 409	0 0 0 0 24 51 50 0 0 0	0 0 0 0 25 51 51 0 0	0 0 0 0 26 38 51 0 0 0	0 0 0 0	0 0 0 0
Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX RSP RX DEL UD ENT RQ  Radio # CMD TX RSP RX DEL UD ENT RQ  RADIO TX RSP RX DEL UD ENT RQ  RADIO #	1 0 0 0 0 15 0 0 0 0	2 0 0 0 0 16 0 0 0 0 0 0 0 0 0 0	3 0 0 0 0 17 0 29 0 0 0 <b>Data \$</b>	4 0 0 0 0 18 0 0 0 0 0 0 0 0 0	5 0 0 0 0 19 0 0 0 0 0 0	6 0 0 0 0 0 48 0 0 0	7 0 0 0 0 21 51 51 0 0	8 0 0 0 22 51 51 0 0	9 0 0 0 23 51 51 0 0	0 0 0 0 24 51 50 0 0	0 0 0 0 25 51 51 0 0	0 0 0 0 26 38 51 0 0	0 0 0 0	0 0 0 0

Frame range = 11640 -> 11999 Total number of frames = 360 Total number of DEL UPDT frames = 0 Total number of EBT RQST frames = 7

#### 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%.

#### 971019C1.LOG

		Totals		Frame		<b>V</b>	alues in 2-Mi	nute Perio	ds	
Radio	Good	Bad	Missed	Thruput	Avg	Max	Total	Avg	Max	Total
Address	Frames	Frames	Frames	(%)	Good	Good	Good	Bad	Bad	Bad
0	172257	303	240	99.824	11	86	656	1	2	63
1	166205	6355	240	96.317	1	1	14	44	132	705
2	164887	7673	240	95.553	1	2	21	34	262	698
3	168017	4543	240	97.367	1	4	81	9	225	638
4	136200	36360	240	78.929	1	3	14	58	269	705
5	169442	3118	240	98.193	1	4	135	5	73	584
6	160615	11945	240	93.077	1	4	56	15	269	663
7	170185	2375	240	98.624	1	5	157	4	36	562
8	170536	2024	240	98.827	1	5	159	4	31	560
9	150532	22028	240	87.235	1	1	11	59	168	708
10	170726	1834	240	98.937	1	11	309	2	21	410
11	169825	2735	240	98.415	1	6	159	4	63	560
12	171408	1152	240	99.332	1	7	328	2	11	391
13	168575	3985	240	97.691	1	7	184	4	45	535
14	160421	12139	240	92.965	1	1	16	39	259	703
15	171500	1060	240	99.386	1	9	365	1	15	354
16	168485	4075	240	97.639	1	1	44	14	72	675
17	168011	4549	240	97.364	1	5	47	16	169	672
18	159565	12995	240	92.469	1	6	67	14	207	652
19	162396	10164	240	94.11	1	3	96	8	92	623
20	168649	3911	240	97.734	1	4	98	7	112	621
21	169130	3430	240	98.012	1	4	145	5	31	574
22	168762	3798	240	97.799	1	2	119	6	62	600
23	170428	2132	240	98.764	1	8	267	2	14	452
24	168247	5313	240	96.921	1	4	100	8	59	619

#### 971019C2.LOG

		Totals		Frame			Values in 2-Mi	nute Perio	ds	
Radio	Good	Bad	Missed	Thruput	Avg	Max	Total	Avg	Max	Total
Address	Frames	Frames	Frames	(%)	Good	Good	Good	Bad	Bad	Bad
0	172286	274	240	99.841	18	126	683	1	2	36
1	149089	23471	240	86.398	0	0	0	359	450	719
2	152240	20320	240	88.224	0	0	0	359	450	719
3	151046	21514	240	87.532	1	1	1	239	450	718
4	154437	18123	240	89.498	0	0	0	389	450	719
5	154732	17828	240	89.669	1	1	1	239	450	718
6	160442	12118	240	92.978	1	1	2	179	450	717
7	158013	14547	240	91.57	1	1	1	239	450	718
8	160592	11968	240	93.064	1	1	12	50	369	707
9	163761	8799	240	94.901	1	2	9	78	376	710
10	169939	2621	240	98.481	1	6	212	3	48	527
11	166494	6066	240	96.485	1	2	42	16	85	677
12	168081	4479	240	97.404	1	2	28	25	166	691
13	169692	2868	240	98.338	1	4	124	6	36	595
14	167831	4729	240	97.26	1	10	188	5	50	531
15	161901	10659	240	93.823	1	2	18	41	216	701
16	167122	5438	240	96.849	1	2	17	39	229	702
17	147878	24682	240	85.697	1	1	1	239	450	718
18	169292	3268	240	98.106	1	10	263	3	15	456
19	153077	19483	240	88.709	1	3	16	50	241	703
20	160768	11792	240	93.166	1	1	2	179	450	717
21	162035	10525	240	93.901	0	0	0	359	450	719
22	159522	13038	240	92.444	0	0	0	359	450	719
23	156228	16332	240	90.535	0	0	0	359	450	719
24	155846	16714	240	90.314	1	1	2	179	269	717
25	142748	29812	240	82.724	1	1	1	239	450	718
26	138290	34270	240	80.14	0	0	0	359	450	719
27	163058	9502	240	94.494	1	2	15	44	341	704

#### 971019C3.LOG

		Totals		Frame		V	alues in 2-Mi	inute Perio	ds	
Radio	Good	Bad	Missed	Thruput	Avg	Max	Total	Avg	Max	Total
Address	Frames	Frames	Frames	(%)	Good	Good	Good	Bad	Bad	Bad
0	172276	284	240	99.835	14	132	673	1	2	46
1	168734	3826	240	97.783	1	3	61	12	72	658
2	159263	13297	240	92.294	1	1	5	102	269	715
3	169898	2662	240	98.457	1	3	123	6	38	596
4	170638	1922	240	98.886	1	5	187	4	26	532
5	167548	5012	240	97.096	1	2	25	26	129	694
6	170269	2291	240	98.672	1	5	147	5	40	572
7	169500	3060	240	98.227	1	3	119	6	148	600
8	149717	22843	240	86.762	0	0	0	359	450	719
9	171389	1171	240	99.321	2	8	360	2	18	359
10	169577	2983	240	98.271	1	3	111	6	90	608
11	168599	3961	240	97.705	1	2	67	10	86	652
12	169546	3014	240	98.253	1	3	85	9	47	634
13	168887	3673	240	97.871	1	3	81	9	90	638
14	167840	4720	240	97.265	1	2	66	11	151	653
15	170374	2186	240	98.733	1	5	14	5	40	565
16	170913	1648	240	99.046	1	6	215	3	28	504
17	168074	4486	240	97.4	1	4	118	6	188	601
18	171473	1087	240	99.37	2	11	413	1	14	306
19	171200	1360	240	99.212	1	7	275	3	27	444
20	171792	768	240	99.555	2	13	425	1	10	294
21	170311	2249	240	98.697	1	6	162	5	56	557
22	172037	523	240	99.697	3	23	510	1	5	209

#### 971019C4.LOG

		Totals		Frame		<b>\</b>	/alues in 2-Mi	nute Perio	ds	
Radio	Good	Bad	Missed	Thruput	Avg	Max	Total	Avg	Max	Total
Address	Frames	Frames	Frames	(%)	Good	Good	Good	Bad	Bad	Bad
0	172275	285	240	99.835	14	80	674	1	2	45
1	168405	4155	240	97.592	1	3	52	13	105	667
2	157502	15058	240	91.274	1	2	38	20	233	681
3	168847	3713	240	97.848	1	3	66	11	56	653
4	169510	3050	240	97.232	1	3	94	8	54	625
5	160789	11771	240	93.179	1	3	60	12	109	659
6	157668	15892	240	91.37	1	3	42	16	120	688
7	170341	2219	240	98.714	1	5	166	4	31	553
8	161286	11274	240	93.467	1	4	87	9	135	632
9	170184	2376	240	98.623	1	5	134	5	60	585
10	171526	1034	240	99.401	1	10	303	2	17	416
11	162858	9702	240	94.378	1	2	40	1	78	679
12	171105	1455	240	99.157	1	7	249	2	31	470
13	152162	20398	240	88.179	0	0	0	359	450	719
14	171047	1513	240	99.123	2	11	351	2	24	368
15	162354	10206	240	94.086	1	3	36	22	204	683
16	169408	3152	240	98.173	1	4	104	7	39	625
17	160382	12178	240	92.943	1	3	93	8	204	626
18	169284	3276	240	98.102	1	4	99	7	49	620
19	169263	3297	240	98.089	1	4	111	6	41	608
20	156829	15731	240	90.884	1	4	104	7	75	625
21	159731	12829	240	92.565	1	2	44	16	786	675
22	161858	10702	240	93.798	1	1	15	41	215	704
23	163612	8948	240	94.815	1	1	25	25	222	694
24	160975	11585	240	93.286	1	1	11	54	269	708
25	161117	11443	240	93.369	1	2	18	36	137	701
26	164823	7737	240	95.516	1	2	28	24	109	691

#### 971021C1.LOG

		Totals		Frame			Values in 2-M	inute Periods	s	
Radio	Good	Bad	Missed	Thruput	Avg	Max	Total	Avg	Max	Total
Address	Frames	Frames	Frames	(%)	Good	Good	Good	Bad	Bad	Bad
0	172242	318	240	99.816	13	95	664	1	2	55
1	158728	13832	240	91.984	1	2	22	31	132	697
2	161620	10940	240	93.660	1	2	10	78	243	709
3	164804	7756	240	95.505	1	3	62	12	390	657
4	152929	19631	240	88.624	1	4	41	20	240	678
5	167391	5169	240	97.005	1	3	56	13	151	663
6	154327	18233	240	89.434	1	4	18	50	243	701
7	170080	2480	240	98.563	1	4	168	4	47	551
8	170518	2042	240	98.817	1	4	171	4	47	548
9	152127	20433	240	88.159	1	1	16	39	213	703
10	171800	760	240	99.56	1	16	405	1	10	314
11	169573	2987	240	98.269	1	5	109	6	46	610
12	171603	957	240	99.445	1	9	310	2	12	409
13	169099	3461	240	97.994	1	5	120	6	57	599
14	160380	12180	240	92.942	1	5	53	15	175	666
15	171819	741	240	99.571	2	10	395	1	8	324
16	16618	6342	240	96.325	1	2	24	30	178	695
17	167429	5131	240	97.027	1	5	67	13	71	652
18	157260	15300	240	91.134	1	3	58	13	243	661
19	166284	6276	240	96.363	1	3	80	9	107	639
20	165081	7479	240	95.666	1	2	28	23	192	691
21	170324	2236	240	98.704	1	5	147	5	23	572
22	167392	5168	240	97.005	1	5	107	7	83	612
23	171213	1347	240	99.219	1	5	250	3	17	469
24	168265	4295	240	97.511	1	4	89	9	84	630

#### 971021C2.LOG

		Totals		Frame			Values in 2-Mi	nute Periods		
Radio	Good	Bad	Missed	Thruput	Avg	Max	Total	Avg	Max	Total
Address	Frames	Frames	Frames	(%)	Good	Good	Good	Bad	Bad	Bad
0	172288	512	0	99.704	20	105	686	1	2	34
1	143405	29395	0	82.989	0	0	0	720	720	720
2	146531	26269	0	84.798	1	1	4	143	625	716
3	143572	29228	0	83.086	0	0	0	720	720	720
4	148493	24307	0	85.933	1	1	8	79	625	712
5	143924	26876	0	84.447	1	1	6	102	628	714
6	151483	18233	0	89.434	1	4	18	50	243	701
7	149064	23736	0	86.264	1	1	1	359	619	719
8	153613	19187	0	88.896	1	1	9	71	625	711
9	155104	17696	0	89.759	1	1	3	179	541	717
10	171209	1591	0	99.079	1	11	29	2	14	426
11	163047	9753	0	94.356	1	2	24	29	198	696
12	159855	12945	0	92.509	1	2	15	47	347	705
13	169053	3747	0	97.832	1	2	67	11	194	653
14	165647	7153	0	95.861	1	5	90	9	192	630
15	164609	8191	0	95.26	1	2	20	38	137	700
16	163679	9121	0	94.722	1	1	7	89	253	713
17	144450	28350	0	83.594	1	1	1	359	690	719
18	170650	2150	0	98.756	1	7	312	2	16	408
19	148683	24117	0	86.043	1	1	2	239	391	718
20	154566	18234	0	89.448	1	1	2	239	568	718
21	154042	18758	0	89.145	0	0	0	720	720	720
22	148042	24758	0	85.672	1	1	2	239	533	718
23	143767	29033	0	83.198	0	0	0	720	720	720
24	76449	963510	0	44.241	0	0	0	720	720	720
25	137097	35703	0	79.339	0	0	0	720	720	720
26	131355	41445	0	76.016	0	0	0	720	720	720
27	155855	16945	0	90.194	0	0	0	720	720	720

971021C3.LOG

Radio Good Ba Address Frames Fram	d Missed l	Frame Thruput Ave (%) Good		in 2-Minu Total A Good B	te Periods vg Max ad Bad	Total Bad
0 172289 2 1 167877 547 2 165843 39 4 179689 18 5 165724 68 6 169611 159 7 166571 159 8 154979 18 9 171227 13 10 167316 42 11 168275 42 12 169245 33 11 164816 77 15 167535 59 14 164816 31 17 16628 47 18 167859 47 19 169881 26	71 240 83 240 17 240 17 240 80 240 36 240 36 240 89 240	99.843 96.827 97.730 98.931 997.731 998.935 996.229 89.221 996.221 997.961 997.961 997.961 997.961 997.961 997.961 997.961	1521241442Ø433224542582	692 27 122 53 180 15 658	20 337 13 27 337 170 170 170 170 170 170 170 170 170 17	

#### 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	672 244 638 66	27 28 13	181 121 97 112	47 695 695 656 631
756780	169895 162265 158413 170173 165692 170233	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 95	11 355 4 8 22 23	114 34	6556 6531 6501 6501 6501 6501 6501 6501 6501 650
10 11 12 13	171595 163965 171227 118633 171308	965 8595 1333 53927 1252	240 240	99.441 95.019 99.228 68.749	2 1 1 2	7593819357	323 32 253 3 <u>93</u>	143	93 21 125 20 446 25	687 466 716 416
12345678901234567890123456 11111111111222222	161191 169259 170407 170444 170235	11369 3301 2153 2116	240 240 240 240 240 240 240	93.412 98.087 98.752	1 1 1 1	4	303 27 90 165 152 139 90	294555	243 43 51 34 72	7162947098514629470985148
20 21 22 23	146426 159966 168786 169075 166447	2325 26134 12594 3774 3485 6113	240 240 240 240	98.653 84.855 92.702 97.813 97.9457 96.144	1 1 1 1	6 1 1 5 4 3 5 2	90 81 104 88 21 55 59	10 11 7 9 34	203 163 55 55 225	638 615 631 698
25 26	164180 169070	8380 3490	240 240 240	95.144 97.978	1	2	59 59	15 12	142 55	664 660

Radio <b>Address</b>	Good Frames	Totals Bad Frames	Missed Frames	Frame Thruput (%)	Avg 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 <b>91 988</b> <b>91.846</b>	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	į	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	İ İ	<b>ありむいいいいずつずり</b>	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 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	9 54	348 3 <b>4</b> 8	614 7 <b>0</b> 7

Radio	Good	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	Frames 171948 137760	372 34560	480 480		10	93	647	119	256 271	71 714
23	145206 152171 153561	27114 20149	480 480 480	84.265 88.307	1 1	1 2 2	22 12 17	119 36 54	250	714 696 706
4 5 6 2	150400 156198 159410	18759 21920 16122	480 480	87.279 90.644	<b>1</b>	100000v	23 19	88 30	256 <b>150</b> <b>256</b>	711 695 699 714
89	148942 170194	16122 12910 23378 2126	480 480 480	86.433 98.766	<u>i</u> 1	1 4 19	134 338	119 5	256 33 <b>30</b>	714 584 380 675
10 11 12	170582 155623 168973	1738 16697 3347	480 480 480	79.7844 79457 88.3114 88.12748 89.54769 90.54769 90.9359 90.9359 90.799	2 1 2	28 28	364 364 86	212888	281 21 48	354
13 14 15	164985 158521 157024	7335 13799 15296 18508	480 480 480	91.992 91.123	3 1	2 <u>8</u>	186 89 11	10 54 359	<b>159</b> <b>197</b> 298	532 629 707 718
16 17 18	153812 136038 153331	18508 36282 18989 29322	480 480 480	71	ģ	21 21 3	255	4	447 60 271 271	463
19 20 21	142998 146009 143557	29322 26311 28763 23732	480 480 480	82.984 84.731 83.308	1	1 1	17 20 20 63	38 38 179 89	<b>271</b> 267 <b>304</b>	701 698 716 212
22 23 24	148588 147134 142495	25186	480 480 480	83.308 86.228 85.384 82.692 82.802 81.933	i 1	1 2	2 <u>3</u>	143 30 359 359	<b>304</b> 181 447	716 712 715 696 718
1112345678901234567 1112345678901234567	142685 141187 146221	29825 29635 31133 26 <b>0</b> 99	480 480 480	82.802 81.933 84.854	<u> </u>	2 9 9	22 0 0 0	359 359	447 447	718 718

971023C3.LOG

		Totals		Frame		Values	in 2-Mi	inute	Period:	
Radio	Good	Bad	Missed	Thruput	Avg	Max	Total	Avg	Max	Total
Address	Frames	Frames	Frames	(%)	Good	Good	Good	Bad	Bad	Bad
					45			-	10	54
Õ	172015	_305	489	22.823	15	98	664	71	298	710
Ĭ	164631	7689	480 480	95.538 95.288	+	+	8	7 <u>1</u> 7 <u>9</u>	3 <u>5</u> 9	211
ž	164200 168234	8120 4086	388	97:629	ŧ	<b>う</b>	ΔĠ	iź	Ϋ́Ž	678
3	170340	1980	<b>700</b>	44'851	ŧ	4	162	4	ŻŌ	556
3	167828	4492	48 <b>0</b>	97:393	ī	2	<sup>-</sup> 25	26	20 72	693
š	168037	4283	480 480 480 480	98.851 97.393 97.515	1	2424227	40 162 25 56 35 4?	26 13 21 14	119	711 6778 5593 6683 6717 427
Ž	165077	7243 4938	480 480	95.797 97.134	ļ	2	3 <u>5</u>	21	173	683
8	167382	4938	480	97.134	ļ	2	4?	14	112	727
. 9	170978	1342 7314	480	99.221 95.756	ļ		2 <u>91</u> 57 58	.2	119	661
10	165006	7314	480 480	33.335	+	3	56	13	<b>-</b> 68	224
<del>1</del> 4	167828	4492	400	22.933	ŧ	ន័	43	14 12 16	9ž	660 675
15	168739 166097	3581 6223	480 480 480	97.393 97.922 96.389 94.927	Ť	თთთათთ	43 45	<u>16</u>	83	673
12	163579	8741	480	94.927	1	3	44	19	240	674
15	168645	3675	480 480	97.867	1	3	98	?	46	629
10 11 12 13 14 15 16 17	170052	2268	480	97.867 98.684 94.581	1	6	$\begin{array}{c} 163 \\ 113 \end{array}$	4	112 112	620 555 605 539 448 460
17	162982	9338	480 480	94.581	1	49	173	7	178	502
18	167204	5116	489	97.031 99.189	Z	3	179 270	5	1 <u>29</u> 33	222
12	170922	<u> </u>	480	99:084	+	ıģ	258	6 3 11	<b>1</b> 9	46a
ŽĀ	170742 167230	1578 5090	480 480	22.004	†	+3	<b>~67</b>	1 1	7 <b>9</b>	65 <u>1</u>
18 19 20 21 22	171722	598	480	97.046 99.653	3	17	475	-ī	14	243
<i>a a</i>	717126	470	700	22.000	•					

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	i 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	1 1 1	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	<b>ぜ</b> のいのいいののす	114 52 101 102 58 27	87588344 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 27 425 189	13 34 19 101 41	180 178 178 196 130	616 660 691 676 713 700
26	164498	7822	480	95.461	İ	24	39	<b>7</b> 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					