

NATIONAL TRANSPORTATION SAFETY BOARD
Vehicle Recorder Division
Washington, D.C. 20594

March 29, 2021

Mobile Phone Records

Specialist's Factual Report By W. Deven Chen

1. EVENT

Location: Prichard, Alabama
Date: November 17, 2020
Vehicle: Alabama Export Railroad (ALE) freight train
NTSB Number: RRD21LR005

2. DETAILS OF DEVICE INVESTIGATION

On February 24, 2021, the NTSB's Vehicle Recorder Division received mobile phone records associated with the following phone number:

User: Alabama Export Railroad freight train engineer
Service Provider: AT&T

The mobile phone records were received electronically from the Investigator-In-Charge (IIC). The records contained mobile phone usage history between 7:00:00 and 15:00:00 on November 17, 2020 central standard time (CST). The train engineer started the train at around 14:13, and the accident occurred at around 14:30 CST.

2.1. Mobile Phone Records Description

Mobile phone records are produced by a telecommunications service provider documenting the details of telephone calls, text messages, picture/video messages, data usage, and other transactions. The exact information provided varies depending on the provider.

2.2. Operator Phone Records

2.2.1. Phone Call Activity

Table 1 summarizes the phone call activity. Time stamps are provided in central standard time. The records between 14:00 to 14:59 are highlighted in yellow.

Table 1: Phone Call Activity.

TIME (CST)	DURATION (mm:ss)	DIRECTION
8:12:37	0:23	Incoming
9:35:17	0:23	Incoming
9:38:13	0:19	Outgoing
9:38:43	0:20	Outgoing
9:38:45	0:22	Outgoing
9:40:04	0:06	Incoming
9:57:04	0:01	Outgoing
9:57:11	0:01	Outgoing
9:57:58	0:22	Outgoing
9:58:07	0:04	Incoming
9:59:37	0:05	Outgoing
10:19:26	0:21	Outgoing
10:31:37	0:07	Incoming
10:41:23	0:09	Incoming
11:05:54	0:06	Outgoing
11:21:39	0:10	Incoming
13:21:14	0:14	Incoming
13:50:43	0:27	Outgoing
14:00:58	0:07	Incoming
14:41:26	0:14	Outgoing
14:42:31	0:23	Outgoing
14:44:20	0:02	Incoming
15:01:31	0:22	Outgoing
15:01:48	0:10	Outgoing
15:09:06	0:05	Outgoing

2.2.2. Text and Picture/Video Message Activity

Table 2 summarizes text message activity. Time stamps are provided in central standard time. The records between 14:00 to 14:59 are highlighted in yellow.

Table 2: Text Message Activity.

TIME (CST)	DIRECTION
8:36:50	Incoming
9:15:18	Outgoing
9:15:18	Outgoing
9:15:18	Outgoing
9:15:18	Outgoing
9:15:18	Outgoing
9:17:55	Incoming

TIME (CST)	DIRECTION
9:17:57	Incoming
9:17:58	Incoming
9:56:08	Outgoing
9:56:08	Outgoing
9:56:08	Outgoing
9:56:08	Outgoing
9:56:08	Outgoing
9:56:08	Outgoing
9:56:08	Outgoing
9:57:23	Incoming
9:57:23	Incoming
9:57:25	Incoming
10:03:05	Incoming
10:09:14	Incoming
10:09:15	Incoming
10:30:35	Incoming
10:30:36	Incoming
11:12:10	Outgoing
12:19:30	Incoming
12:19:31	Incoming
12:19:32	Incoming
14:34:47	Incoming
14:34:49	Outgoing
14:40:59	Incoming

2.2.3. Internet Connection Activity

Table 3 summarizes the internet connection activity. Time stamps are provided in central standard time. The records between 14:00 to 14:59 are highlighted in yellow. However, it is not possible to distinguish between user-initiated data activity and automatic background data activity by the device’s operating system or installed applications.

Below are the definitions/explanations from AT&T on the terms used in Table 3.

Bytes Up: The number of bytes sent from mobile station to the network.

Bytes Down: The number of bytes from the network to the mobile station.

Table 3: Internet Connection Activity.

TIME (CST)	DURATION	BYTES UP	BYTES DOWN
7:07:05	60:00	7788	3932
7:08:05	8:35	8733096	11329265
7:16:40	0:57	10551704	9448965

TIME (CST)	DURATION	BYTES UP	BYTES DOWN
7:17:37	1:11	12789292	7211174
7:18:48	0:59	10275219	9725001
7:19:47	0:56	10062336	9940980
7:20:43	0:59	10936116	9066747
7:21:42	0:59	10681376	9318812
7:22:41	1:01	11125774	8875130
7:23:42	4:10	4546802	15485425
7:27:52	52:03	6623623	13408898
8:07:05	60:00	11208	8364
8:12:16	0:20	0	8858
8:19:55	0:57	10351445	9649552
8:20:52	55:19	11171207	8771205
9:07:05	60:00	87404	72828
9:16:11	0:00	2084	2079
9:16:11	4:21	5359193	14642463
9:20:32	34:38	2838556	17278984
9:34:56	0:20	0	8925
9:37:54	0:24	7095	14751
9:38:23	0:25	6733	10518
9:40:01	2:47	503565	255020
9:55:10	0:13	390824	19627451
9:55:23	0:14	315478	19689841
9:55:37	0:14	199444	19804325
9:55:51	24:00	3657566	16402492
9:57:02	0:06	9661	10171
9:57:10	0:08	24639	22247
9:57:36	0:25	8715	8344
9:58:04	0:39	111433	93117
9:59:32	1:32	256001	282088
10:07:05	60:00	31364	26744
10:19:06	0:20	240	0
10:19:51	0:57	1898768	18150565
10:20:48	2:01	9805800	10213567
10:22:49	1:32	16412463	3588304
10:24:21	1:40	16173293	3829951
10:26:01	1:31	16559746	3442039
10:27:32	1:30	16412862	3587209
10:29:02	21:09	15322485	4716023
10:31:32	8:50	1168088	1658368
10:41:17	0:47	108560	112603
10:50:11	1:03	11471240	8529459
10:51:14	1:03	11608662	8392519

TIME (CST)	DURATION	BYTES UP	BYTES DOWN
10:52:17	17:34	8783997	11217713
11:05:49	3:51	615129	797325
11:07:05	60:00	15800	15024
11:09:51	37:31	1306050	4392110
11:21:31	1:40	362121	234002
11:47:22	28:49	1964690	13987486
12:07:05	41:58	11724	6016
12:16:11	8:53	3401676	16609287
12:25:04	23:59	428677	567168
12:53:07	2:30	1513354	18587309
12:53:08	60:00	25074	21579
12:55:37	24:42	2241801	17855547
13:20:19	38:51	537741	4668087
13:21:03	3:15	540771	459522
13:50:16	0:27	0	520
13:53:08	34:20	14068	11812
13:59:10	9:34	8601081	11399944
14:00:52	1:28	146716	231734
14:08:44	1:03	10907414	9093298
14:09:47	1:15	13333176	6669882
14:11:02	1:07	12013664	7988457
14:12:09	14:38	4038748	7985895
14:26:47	0:42	68038	601058
14:40:26	3:00	2023343	6790785
14:40:27	2:59	32698	27936
14:41:13	0:48	160343	89984
14:42:08	0:25	4031	4764
14:59:25	9:26	587356	6842127
14:59:26	60:00	107462	98214
15:01:09	0:26	5222	9431
15:01:38	0:52	140605	95213
15:08:51	37:30	2617569	1066253
15:09:01	1:21	229121	207115